Book of Abstracts

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Understanding the determinants and implementation strategies for risk of frailty management in primary care in Australia

Presenter: Jenny Job

Co-authors: Deb Clark, Ruby Straus, Caroline Nicholson

Author institutions: Centre for Health System Reform and Integration, Mater Research-The University of Queensland, Sydney North Health Network

Abstract

PROBLEM: Frailty, linked with unnecessary hospital admissions and emergency department visits, is associated with substantial health care costs. Frailty often remains undetected in primary care and recommendations are to build frailty identification and management into primary care workflows to support those patients identified as pre-frail and frail. Our early research has found that incorporating screening into the health assessment for patients aged 75 and over is a feasible and acceptable method for identifying risk of frailty in primary care, yet barriers exist to patients accessing risk of frailty management options. This study aimed to understand 1) determinants, and 2) inform strategies to implement risk of frailty management in primary care.

APPROACH: Using the FRAIL Scale Tool practice staff screened eligible patients (≥75 yrs) for the five frailty indices (fatigue, resistance, ambulation, illness, weight loss), referred to the associated management options, and recorded patient barriers. Semi-structured qualitative interviews were conducted with practice staff and patients to understand determinants to implementing risk of frailty management in primary care. Interview transcripts were coded deductively guided by the Consolidated Framework for Implementation Research. The thematic analysis informed ERIC implementation strategies.

FINDINGS: The Tool was implemented by 33 general practices. Pre-frail (n=277) and frail (n=103) patients were predominantly referred for exercise interventions, medication reviews, and depression assessment. Qualitative interviews were conducted with 15 participants (n=13 practice staff, n=2 patient). Determinants of risk of frailty management implementation are related to knowledge and information about available resources, and partnerships and connection with allied health. Barriers to uptake by innovation recipients are health, cost, access, motivation, and acceptance of current state. Key implementation strategies identified are to access new funding, develop and distribute resource materials, and promote networking with local allied health.

CONSEQUENCES: Identification of determinants of risk of frailty management will inform implementation strategies for primary care to support patients to reverse or reduce frailty risk.

Funding acknowledgement:
This research study has been supported by an HCF Research Foundation grant.

Using realist approaches to explain and understand the optimal use of paramedics in primary care.

Presenter: Georgette Eaton

Co-authors: Geoff Wong; Stephanie Tierney; Veronika Williams; Kamal R Mahtani; Julia Williams

Author institutions: University of Oxford; University of Hertfordshire

Abstract

PROBLEM: In response to the unsustainable workload and workforce crises in primary care, paramedics (with their generalist clinical background acquired from ambulance service experience) are increasingly employed in primary care. However, the specific

contribution paramedics can offer to the primary care workforce has not been distinctly outlined.

APPROACH: A realist evaluation was undertaken, consisting of three inter-related research studies:- In Phase I, a mixed-methods cross-sectional survey of paramedics in primary care in the UK was conducted to comprehend the existing practices of paramedics within the NHS.- Phase II involved an analytic auto-netnography, where online conversations among paramedics in primary care were observed in order to understand paramedics' perceptions of their role.- Phase III consisted of focused observations were undertaken of paramedics working in primary care in 15 sites across England, Northern Ireland, Scotland, and Wales. 60 interviews were undertaken with paramedics (n=15), patients (or carers) who had received care from paramedics working in primary care (n=15), general practitioners who worked with paramedics (n=15), as well as other professionals employed in primary care, such as nurses and pharmacists, and administrative staff (n=15).

FINDINGS: The culmination of findings from each phase led to the development of a final programme theory, encompassing three conceptual categories: Expectations associated with paramedics in primary care, the transition of paramedics into primary care roles, and the roles and responsibilities of paramedics in primary care. Based on the evidence generated, there are four key recommendations regarding how paramedics work in primary care:1. A clear strategy for communication of the paramedic's role in primary care2. Developing a comprehensive curriculum framework for paramedics in primary care3. The need for an effective transition support structure4. Changes to legislation and policy

CONSEQUENCES: This research builds on previous work in this area, capturing the perspectives of the professionals who work with paramedics in primary care, patients they have seen, as well as of paramedics themselves. This research uses a novel approach to present empirical evidence of the role of paramedics in primary care across the UK, and offers insights into factors relating to their deployment, employment, and how they fit in within the wider primary care team. On this basis, we have produced a series of practice implementation recommendations - as well as highlighted areas for further research in this area.

Funding acknowledgement:
The project received seed-funding from NHS Health Education England (now known as NHS Workforce, Training, and Education) (ref: 190121). This project is funded by the National Institute for Health Research (NIHR) Doctoral Research Fellowship Award (NIHR300681). The views expressed are those of the author and not necessarily those of the NIHR, NHS Workforce, Training, and Education, or the Department of Health and Social Care.

Diagnostic accuracy of Prostate Specific Antigen (PSA) for prostate cancer detection in primary care: the ProsDetect study

Presenter: Dr Samuel W D Merriel

Co-authors: Dr Janice Hoang, Mr Petter Buttle, Mr John McGrath, Prof Fiona M Walter, Prof Gary Abel, Dr Garth Funston

Author institutions:
University of Manchester, University of Oxford, Royal Devon University Healthcare NHS Foundation Trust, Queen Mary University of London, University of Exeter

Abstract

PROBLEM: Prostate cancer is the most commonly diagnosed cancer type in the UK, affecting over 50,000 males each year. Over 80% of patients with prostate cancer start their diagnostic journey in primary care; either through asymptomatic, opportunistic PSA screening or symptomatic presentation with lower urinary tract symptoms (LUTS). A

recent systematic review demonstrated the virtual absence of any primary care evidence for the accuracy of PSA for prostate cancer detection in this setting.

APPROACH: A retrospective cohort study was undertaken including all males who underwent a PSA test between 01/01/2010 and 31/12/2016 within the Clinical Practice Research Datalink (CPRD) Aurum, with data linkage to the Office for National Statistics, National Cancer Registration and Analysis Service, and Hospital Episode Statistics. Performance characteristics of PSA were determined for any prostate cancer and clinically significant prostate cancer (Gleason score ≥ 7) against nationally recommended screening (PSA ≥ 3ng/mL) and age-adjusted thresholds (as per NICE guideline 12). The investigator team included a PPI co-investigator who chaired regular meetings with a PPI panel (two white males, one black male, one white female) to inform all aspects of the research from development to dissemination.

FINDINGS: 620,990 males aged between 18-109 (mean age 63, SD 12.4 years) were included in this study. 89.5% of participants were identified as having white ethnicity. Index of multiple deprivation ranged from 13.93% (86,408) in the least deprived decile to 7.96% (49,372) in the most deprived decile. Mean PSA level was 4.73ng/mL (range 0-11,883). 3.61% (22,394) men were diagnosed with prostate cancer within 24 months of a PSA test, 69.4% (15,539) of whom had clinically significant prostate cancer. PSA demonstrated high levels of accuracy for clinically significant prostate cancer (AUC 0.96) overall, with sensitivity rising with increasing age. No significant difference in accuracy was found between males with recorded symptoms vs presumed asymptomatic screening, or different ethnic groups.

CONSEQUENCES: This study represents the first to evaluate the performance of PSA for the detection of prostate cancer as it is currently used in UK primary care. PSA appears to be very accurate for identifying clinically significant prostate cancer across all age groups and ethnicities. Partial verification bias likely affects the estimation of false negative PSA test results, as males with a 'normal' PSA result would seldom have undergone further investigation for prostate cancer. Incorporating data on stage at diagnosis and treatment outcomes could inform a more targeted use of PSA in primary care to avoid worsening overdiagnosis and overtreatment in males who would be unlikely to benefit. The use of PSA for prostate cancer detection in the future will also need to take into account recent changes to the prostate cancer diagnostic pathway, including new MRI techniques.

Funding acknowledgement:
This project is funded by the NIHR Research for Patient Benefit programme (NIHR202734). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care. This research is linked to the CanTest Collaborative, which was funded by Cancer

How do parents help to keep children safe in general practice? An exploratory descriptive analysis of safety incident reports from England and Wales

Presenter: Thomas Purchase

Co-Authors: Lauren Donovan, Joy McFadzean, Jillian Beggs, Stuart Hellard, Philippa Rees, Andrew-Carson Stevens

Author institutions: Cardiff University, University College London, PRIME Centre Wales

Abstract

PROBLEM: Children are vulnerable to unsafe healthcare. They are dependent on others to recognise illness and to advocate on their behalf. Martha's Rule highlights the importance of enabling parents (families,

guardians, carers) to act as safety advocates for their children. Parents can play a key role in identifying and preventing patient safety incidents, which could lead to harm, whilst their child receives care. Our aim was to characterise the role of parents in mitigating patient safety incidents involving children, within a general practice setting.

APPROACH: Search terms, for example, *parent*, *dad*, *mother*, were applied to the National Reporting and Learning System (NRLS) database to identify safety reports involving children submitted between September 2014 and February 2023 (n=183,700 were available). Only reports captured from the 'General Practice' care setting in the NRLS were included. Two trained general practitioners reviewed and included reports for further analysis if parental involvement was directly related to a safety incident reported within general practice. Reports were coded using the Patient Safety (PISA) classification, in which the incident type, contributory factors, outcomes for the patient and harm severity were identified. An exploratory descriptive analysis summarised the relationships between coded variables and the parental role in identifying and mitigating safety incidents.

FINDINGS: A total of 1521 reports from general practice with a parental search term were identified, and 397 (26%) reports met the inclusion criteria for analysis. There was good inter-rater reliability between the coders for inclusion/exclusion of reports (Cohen's kappa coefficient 0.72). Parents helped mitigate safety incidents in 72% (287) of reports. Reports can contain more than one incident type, and 358 incident types were identified in total. The most frequent incident types with parental mitigatory involvement related to medications (164, 46%), specifically prescribing (81, 49%), dispensing (41, 25%), and vaccinations (16, 10%). The next top incident types involved diagnosis and assessment (15%, 55), administrative processes (11%, 38) and communication issues (11%, 38). The top mitigating factors (total 304) included parents identifying issues relating to medications (153, 50%), such as querying doses, spotting an incorrect medication, or chasing prescriptions. Parents frequently chased appointments and referrals (50, 16%) and made complaints or provided feedback (29, 9.5%) for organisations to learn from their concerns. Parents successfully prevented harm or further harm (e.g., disease progression) from occurring in 54% (154) of reports.

CONSEQUENCES: Parents play a key role in preventing a breadth of safety incidents and harms when their children receive healthcare in general practice. Our analysis has identified priority areas which will be discussed at workshops with parents and the public, to co-develop recommendations and strategies to deliver safer paediatric care, and support parents to act as safety advocates for their children.

Funding Acknowledgement: This research was funded by the Scientific Foundation Board of the Royal College of General Practitioners (Grant No SFB 2022-12).

1A.1

The Immune Defence study: a randomised trial evaluating nasal sprays and behavioural intervention approaches to reduce respiratory infections in primary care

Presenter: Paul Little

Co-Authors: Jane Vennik, Kate Rumsby, Taeko Becque, Nick Francis, Chistopher C. Butler, Alastair Hay, Lucy Yardley, Adam Geraghty

Author institutions: University of Southampton, University of Oxford, Bristol University

Abstract

PROBLEM: Respiratory infection (RTI) are the major cause of winter pressure in the NHS.

Limited evidence suggests that using common nasal sprays, or improving immune function through increasing physical activity and managing stress, could reduce respiratory infection (RTI) duration.

APPROACH: 13799 participants, from 332 GP practices, aged >=18 years with a co-morbidity/risk factor for infection, and/or recurrent infection in a normal year (>=3 RTIs), were randomised by online software to: i) usual care (n=3451) ii) Vicks First-Defence nasal spray (n=3448) iii) saline nasal spray (n=3450) , or iv) a brief behavioural website promoting physical activity and stress management (n=3450).

FINDINGS: In 6 months 54% (1637/2994) of the usual care group had incident infections, reduced by the behavioural website (adjusted risk ratio (RR) 0.95 (0.91 to 0.99) but not the sprays (Vicks 0.98 (0.94 to 1.03), saline 0.98 (0.94 to 1.02)). The usual care group had a mean of 8 RTI illness days which was reduced in both spray groups (Vicks 6.5 days adjusted incident rate ratio (IRR) 0.82, 95% CI 0.77 to 0.88), Saline 6.4 days (IRR 0.81, 95% CI 0.76 to 0.87), behavioural website 7.4 days (0.97, 95% CI 0.91 to 1.04)); for those reporting an infection it was 15,12,11.8 and 14 days respectively. All interventions reduced important harms - days of more severe symptoms and antibiotic courses - and both sprays reduced work days lost, but headache was more common with the Vicks spray (8% vs 4.8% usual care).

CONSEQUENCES: Advice to use either nasal spray at the first sign of an RTI reduced illness duration, and a behavioural website reduced incident infections. All interventions reduced severe symptoms and antibiotic use. If widely used these interventions could potentially improve antimicrobial stewardship, and reduce the impact of respiratory viruses for patients, the health service and the wider economy.

Funding Acknowledgement: This study is funded by the NIHR Programme Grants for Applied Research (RP-PG-0218-20005). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care. LY is an NIHR Senior Investigator and her research programme is partly supported by NIHR Applied Research Collaboration (ARC)-West and NIHR Health Protection Research Unit (HPRU) for Behavioural Science and Evaluation.

1A.2

Implementation of point-of-care tests in European primary care: a qualitative process evaluation with patients and clinicians in six countries

Presenter: Marta Wanat

Co-Authors: Marta Wanat1, Melanie Hoste2,3, Christopher Butler1, Alike van der Velden4, Sibyl Anthierens2, Sarah Tonkin-Crine1 on behalf of PRUDENCE trial

Author institutions: 1 Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, UK 2 Department of Family Medicine and Population Health, University of Antwerp, Antwerp, Belgium 3 Laboratory of Medical Microbiology, Vaccine & Infectious Disease Institute, University of Antwerp, Antwerp, Belgium 4 Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht,

Abstract

PROBLEM: Point-of-care tests (POCTs) are promoted for guiding antimicrobial prescribing for patients with community acquired acute respiratory tract infections (CA-RTI) in primary care because they may reduce uncertainty about the potential benefit of antibiotics for individual patients. The 10-country PRUDENCE trial is comparing prescribing and recovery outcomes for patients managed by clinicians in contrasting European settings with access to POC testing

for C-reactive Protein, Influenza, STREP A and SARS-CoV-2 testing, compared to care without such testing.

APPROACH: We conducted an embedded process evaluation in Belgium, Ireland, Georgia, Germany, Greece, and UK involving semi-structured interviews with purposively sampled patients who consulted for CA-RTI in primary care, and the recruiting primary care clinicians. Data was analysed using thematic analysis, with triangulation of clinician and patient data.

FINDINGS: Interviews with 56 patients and 32 clinicians showed that POCT can be implemented within a GP consultation and all types of POCTs are acceptable to both patients and clinicians. Patients saw the value of POCTs as either supporting or as the main component in determining their treatment plan, and valued the rapid nature of tests. Clinicians varied in the extent they saw value in POCTs; those who saw value in POCTs highlighted the uncertainty in diagnosing RTIs, and thus felt that POCTs gave them more confidence in their decision making. Others felt that POCTs were not essential, yet felt reassured when the test results were aligned with their initial diagnosis. Across both groups of clinicians, misalignment between the test result(s) and the initial diagnosis/treatment decision prompted them to question these, which at times led to them changing their treatment decision, or to question the diagnostic value of the test. Patients views on specific types of POCTs did not seem to vary, but clinicians expressed preferences for certain types of tests (CRP, influenza, STREP A or SARS-CoV-2), depending on their local context and experience of using the tests.

CONSEQUENCES: The study demonstrates that POCTs can be implemented in primary care settings for CA-ARI, with both patients and clinicians expressing overall acceptance of their use. While patients valued additional timely diagnostic information, for clinicians tests offered enhanced confidence in their decision making. Clinician preferences for specific types of POCTs highlight the importance of tailoring implementation of these tests to local contexts, clinician expertise and needs.

Funding Acknowledgement: EU Horizon

1A.3

A realist analysis of patient and clinician views and experiences in the randomised controlled efficacy trial of rapid respiratory microbiological point-of-care-testing in primary care (the RAPID-TEST RCT)

Presenter: Dr Rebecca Clarke

Co-Authors: Clarke, Rebecca; Brown, Emily; Mitchell, Paul; Zhu, Liang; Ridd, Matthew; Hay, Alastair; Yardley, Lucy.

Author institutions: University of Bristol

Abstract

PROBLEM: Antimicrobial resistance has been identified as a top 10 threat to public health. Rapid microbiological point-of-care tests (POCTRM) potentially present an opportunity to reduce unnecessary antibiotic exposure and antimicrobial resistance and modify future consulting behaviours. However, there is limited understanding of clinicians' and patients' attitudes towards POCTRM use in primary care and how POCTRM can be optimised to facilitate desired outcomes.

APPROACH: This multi-centre individually randomised controlled efficacy trial evaluates a multiplex POCTRM for suspected respiratory tract infections in primary care, with mixed-method investigation of microbial, behavioural and antibiotic mechanisms. Individual, in-depth interviews were conducted with 15 clinicians (8 General Practitioners, 4 Applied Nurse Practitioners, 1 Clinical Pharmacist, and 2 Paramedics) to explore their views on the value of the new microbial knowledge and how it may influence clinical reasoning and

participant management. Further interviews were conducted with 29 patients (21 adults, 8 parents) to explore their understanding of POCTRM and the implications for treatment and future consulting. Following an inductive thematic analysis, a realist approach was applied to interpret and explain how the specific settings or circumstances in which POCTRM were implemented (context) may influence how individuals respond (mechanism) and the intended or adverse outcomes from the interaction (outcome).

FINDINGS: Nineteen Context-Mechanism-Outcome (CMO) configurations were generated from the clinician interviews. Clinician CMOs explain how POCTRM used in different contexts (clinical knowledge and interpersonal skills, clinical identity, outcome expectancies, social pressure, environmental context) can trigger different responses (clinician knowledge and confidence, perceived patient knowledge and confidence, reduced clinician anxiety, reinforcement, stressors). The interaction between the context and mechanisms influences different outcomes on prescribing behaviours, therapeutic relationships, and perceived patient knowledge, confidence and satisfaction with care. For example, when clinicians fear adverse patient outcomes (context), viral or negative POCTRM can reduce clinicians' worry (mechanism) and reduce antibiotic prescribing (outcome). Seventeen patient CMO configurations were created from the patient interviews. Patient CMO configurations outline how contextual factors (patient knowledge, self-efficacy, anxiety, medication necessity beliefs, perceptions about clinician capability, environmental context) interact with patient mechanisms (confidence, empowerment, knowledge, action-planning, beliefs about resources, negative affect) to influence patient confidence in self-managing symptoms without antibiotics, satisfaction with care and future consulting behaviours. For example, when patients believe antibiotics are necessary (context), viral or negative POCTRM can enhance patients' confidence in diagnosis and treatment decisions (mechanism) and reduce re-presenting for the same illness (O).

CONSEQUENCES: Findings highlight how, why and in what contexts POCTRM will likely be most helpful to clinicians and facilitate positive patient outcomes. We set out a testable programme theory and recommendations to optimise POCTRM in primary care.

Funding Acknowledgement: Funded by NIHR (#NIHR131758)

1A.5

Exploring the role and implementation of Acute Respiratory Infection (ARI) Hubs in England: a qualitative study

Presenter: Aleksandra Borek

Co-Authors: Sarah Tonkin-Crine, Gail Hayward, Margaret Glogowska, Chris Butler, Sarah Walker, Matt Inada-Kim, Nick Francis, Monsey McLeod

Author institutions: University of Oxford (AB, STC, GH, MG, CB, SW), Royal Hampshire County Hospital & NHS England (MIK), University of Southampton (NF), NHS England & NHS Improvement (MM)

Abstract

PROBLEM: Acute respiratory infections (ARIs) pose significant challenges to healthcare services, leading to surges in general practitioner (GP) and Accident & Emergency (A&E) appointments, thus straining resources and impeding patient access. ARI hubs have emerged as a potential solution, aiming to provide timely care for ARI patients while alleviating pressures on other healthcare services.In January 2023, over 300 ARI hubs were rapidly established across England, with nearly 100 reopening in November 2023 and more reopening later this winter. This signals a

significant change in healthcare service provision for ARIs. Understanding the role and implementation of these hubs is crucial for informing future healthcare strategies and optimizing ARI management within communities.

APPROACH: This is a qualitative study. We have recruited professionals through the NHS ARI Hub Community of Practice (CoP) network, purposefully sampling to capture diverse perspectices from various hubs, locations and roles. Remote semi-structured interviews explore the experiences of setting up and working in the hubs, views on the role of hubs, perceived impacts on patients and healthcare services, and suggestions for improvements. Interviews are audio-recorded, transcribed and analysed thematically. This is complemented by the examination of NHS CoP presentations and reports to provide a broader context of ARI hub implementation in England. Patient and Public Involvement contributors have been involved throughout the study.

FINDINGS: Initial interviews with nine professionals about last winter's ARI hubs highlight the perceived important role of ARI hubs in augmenting healthcare system capacity and facilitating prompt, in-person assessments during seasonal surges. Hubs were established rapidly last winter through varied models, yet encountered challenges such as inadequate pre-planning, lack of sustainable funding, estate acquisition, workforce recruitment, and service integration. However, leveraging previous service models, fostering trust-based collaborations, and adaptive responsiveness to local demands emerged as key facilitators. Ongoing interviews aim to further elucidate views on and experiences of this year's ARI hub implementation.

CONSEQUENCES: ARI hubs are perceived to hold promise to mitigate seasonal healthcare pressures. Effective planning, leveraging existing infrastructure, and fostering collaborative networks are essential for the timely establishment of ARI hubs to address evolving infectious disease challenges.

Funding Acknowledgement: The study is funded by the NIHR School for Primary Care Research, with support from the NIHR Health Protection Research Unit in Healthcare Associated Infections and Antimicrobial Resistance.

1A.6

Understanding the role of Integrated Care Boards in primary care Antimicrobial Stewardship

Presenter: Tingting Zhang

Co-Authors: Ashley Hammond, Alastair Hay, Christie Cabral

Author institutions: All authors are from Bristol Medical School (PHS), University of Bristol

Abstract

PROBLEM: UK Antimicrobial Stewardship (AMS) strategies have been in place since 2016. Primary care antibiotic prescribing has fallen by around 40%, but rates vary considerably between areas, with higher prescribing in more deprived and northern locations. Integrated Care Boards (ICBs) play a key role in developing and promoting AMS strategies in primary care. Our study investigates the development and implementation of AMS policies in ICBs.

APPROACH: This qualitative study recruited a purposive sample of 12 ICBs across England with relatively high antibiotic prescribing rates. Semi-structured interviews are being conducted at each ICB with ICB and local Trust AMS leads, local primary care guideline leads, AMR senior responsible officers, and microbiologists. Interviews follow a topic guide that was developed with support of the PPI group and will be analysed thematically.

FINDINGS: ICBs implement a range of antimicrobial stewardship activities, which vary in scope and effort. Some regularly review and update the local primary care antibiotic prescribing guidelines, while others simply implement the national guideline. The ICB AMS teams used various activities to promote awareness and adherence to guidelines and other AMS initiatives among GP practice teams. These can include bulletins, educational sessions, changes to lab reports, audits and local incentive schemes. Multi-disciplinary groups including pharmacists, infection prevention control team and microbiologists are key to increasing the acceptance of new messages during educational sessions. Local incentive schemes have been effective in promoting a switch to prescribing practices in new guidelines. ICB AMS activities have been disrupted by Covid and by the merging of multiple CCGs into single ICBs and the subsequent restructuring of ICBs. There has been a shift to online delivery of educational sessions since Covid, which was difficult initially but has allowed larger numbers of participants in single sessions. ICBs (formed from as many as eight CCGs) reported difficulties in aligning multiple guidelines into one that was appropriate for the larger and more diverse geography. The implementation of AMS strategies was influenced by the structure of the team and whether sufficient staff with the right expertise had been retained and this varied between ICBs. Some ICBs have a strong internal structure for AMS work, such as an AMR board with different groups underneath specifically responsible for certain tasks, but others have just a couple of staff members responsible for their entire AMS programme, leading to inevitable delays and limiting the ability to influence local primary care prescribers.

CONSEQUENCES: ICBs play a key role in implementing antimicrobial stewardship strategies that will help achieve the objective of the AMR National Action Plan to control AMR in England by 2040. However, they need to be properly resourced to provide the needed support and incentives to bring about change.

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1B.1

What is the prevalence of opioid and antidepressant co-prescribing in primary care in England?

Presenter: Ruth H Jack

Co-Authors: Jake Butler, Rebecca M Joseph, Carol Coupland, Roger Knaggs, Debbie Butler, Dave Waldram, Louisa Gerrard, Tony Avery, Chris Hollis, Richard Morriss

Author institutions: University of Nottingham

Abstract

PROBLEM: Opioids are medicines that are prescribed to relieve pain, and antidepressants are medicines that are given for several reasons, including depression, anxiety, and other mental health conditions, as well as for pain relief. Taking antidepressants and opioids at the same time (called co-prescribing) might lead to some problems - for example, the medicines may not work as well together and there may be more side effects. However, little is known about the scale of co-prescription for these medicines. We wanted to find out how often people have overlapping opioid and antidepressant prescriptions in primary care, describing the medicines and length of co-prescribing, and which groups are more affected.

APPROACH: The original idea for the study came from public contributors. They were

taking multiple different medicines and were concerned that they and their prescribers did not have much information to base their prescribing decisions on, such as what to do if their pain or depression became worse. Three public contributors were part of the project team and provided insights on study design, methods, and interpretation.We used anonymised routinely collected primary care data from the Clinical Practice Research Datalink (CPRD) to describe the extent of opioid and antidepressant co-prescribing in over 4.3 million adults in England. We identified all primary care prescriptions of opioids and antidepressants between 2010 and 2019 and counted if an opioid and antidepressant prescription overlapped, and if so, how long for. People were censored at the first date of a record of cancer, terminal illness, heart failure or opioid misuse.

FINDINGS: We found that 304,029 (7%) people had an opioid and antidepressant co-prescribed at least once during the study period. Women, older people, White people and people living in more deprived areas were more likely to be co-prescribed opioids and antidepressants. Of people co-prescribed, prescriptions overlapped for at least 14 days for 273,361 (90%) people and at least 28 days for 204,565 (67%) people. The median length of co-prescription was 29 days (interquartile range: 17-51 days). The most commonly co-prescribed medicines were codeine and amitriptyline, co-prescribed 358,395 times to 104,579 people (including combinations with other opioids and antidepressants) and 235,017 times to 87,274 people without other opioids or antidepressants.

CONSEQUENCES: There is a substantial group of people co-prescribed opioids and antidepressants in England. This information will be useful to help GPs, policymakers and other researchers understand how many people in the UK may be at risk of harm from using both types of medicines at the same time, and which groups are particularly affected. It will also help researchers design studies about the safety of using these two medicines at the same time. Future research should determine whether there are higher risks of adverse events in these co-prescribed groups.

Funding Acknowledgement: This project is funded by the NIHR Applied Research Collaboration East Midlands (ARC EM). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

1B.2

Does computerised decision support reduce hazardous prescribing in general practice?

Presenter: Anthony Avery

Co-Authors: Pearl Mok, Niels Peek, Amy Taylor, Rachel Elliott, Stephen Roberts, Thomas Allen, Tjeerd van Staa, Aziz Sheikh, Darren Ashcroft

Author institutions: University of Nottingham, University of Manchester, University of Edinburgh

Abstract

PROBLEM: Prescribing errors are an important and expensive preventable cause of safety incidents, illness, hospitalisations and deaths. In England, they are estimated to contribute to 1,708 deaths annually at a cost of over £98 million, and a third of clinically significant errors occur in primary care.A number of studies (including systematic reviews) have indicated that well-designed computerised decision support can reduce prescribing errors, but there is a lack of evidence in primary care.As part of a NIHR Programme Grant for Applied Research we evaluated the rollout of a new computerised decision support system (OptimiseRx) to general practices in England to determine if this reduced hazardous prescribing.

APPROACH: We used an incomplete (not formally randomised) stepped-wedge design with control groups. We used data from all general practices that contributed data to ResearchOne database between 1st January 2011 and 31st December 2019, irrespective of whether they have ever implemented OptimiseRx. Practices that implemented OptimiseRx between 2014 and 2018 were counted as intervention practices, all other practices were counted as non-intervention practices. The inclusion of the latter enabled secular trends to be estimated and adjusted for in the analyses. We derived a composite outcome 48 prescribing safety indicators . Outcomes were analysed using binomial mixed regression analysis with a random intercept for each practice and adjusting for both secular trends over time and seasonal effects. Assessment points were 6 months, 12 months, and 24 months.

FINDINGS: Of the 409 practices participating in the study, 227 (56%) were intervention practices. At baseline 560,035 patients were at risk of being exposed to hazardous prescribing, and of these, 18,552 (3.31%) were actually exposed. Exposure to hazardous prescribing decreased over time, and this trend was accelerated after deployment of OptimiseRx. Deployment of OptimizeRx was associated with an additional reduction of hazardous prescribing of 10% two years post-intervention (odds ratio [OR] 0.90, 95% confidence interval [CI] 0.88 to 0.92); 7% at one year post-intervention (OR 0.93 (0.91 to 0.94)) and 2% at six-months post-intervention (OR 0.98 (0.96 to 0.99)).

CONSEQUENCES: The introduction of OptimiseRx was associated with a significant reduction in hazardous prescribing and these reductions were more pronounced the longer software had been in use. This suggests a 'learning' effect where repeated exposure of safety alerts effects clinician prescribing behaviour over time. Given the harm associated with hazardous prescribing this study supports continued use of clinical decision support in general practice.

Funding Acknowledgement: This study was funded by NIHR Programme Grants for Applied Research (RP-PG-1214-20012).

1B.3

Improving Medicines use in People with Polypharmacy in Primary Care (IMPPP): Clinical effectiveness of a complex intervention to improve prescribing appropriateness in patients with polypharmacy

Presenter: Rupert Payne

Co-Authors: Peter S. Blair, Barbara Caddick, Carolyn A. Chew-Graham, Tobias Dreischulte, Lorna J. Duncan, Bruce Guthrie, Cindy Mann, Roxanne M. Parslow, Jeff Round, Chris Salisbury, Katrina M. Turner, Nicholas L. Turner, Deborah McCahon

Author institutions: University of Exeter, University of Bristol, Keele University, Ludwig-Maximilians-University (Munich), University of Edinburgh, Institute of Health Economics (Alberta, CA)

Abstract

PROBLEM: Polypharmacy is common and associated with undesirable consequences. Clinical management of polypharmacy is challenging in primary care because it requires balancing therapeutic benefits and risks, and clinical and patient priorities. It also requires overcoming important barriers to effective medication optimisation, such as suboptimal case-finding, inadequate clinical training, poor informatics solutions, and a failure to incentivise good care. Current strategies for managing polypharmacy are varied, and not supported by high quality evidence. The aim of the Improving Medicines use in People with Polypharmacy in Primary Care (IMPPP) trial was to evaluate the effectiveness of a complex intervention to optimise medication use for

patients with polypharmacy in a general practice setting. A

PPROACH: The IMPPP trial was a multicentre, open-label, cluster-randomised trial, with two parallel groups. 37 practices (19 intervention) were recruited from the South-West and West Midlands. Practices were randomised either to usual care, or to a complex intervention comprising a clinical informatics tool (designed to support medication review), case-finding, pharmacist and general practitioner (GP) training (focused on patient-centred care and medication review) and a four-stage structured medication review (pharmacist-led case-note review, inter-professional collaborative discussion between pharmacist and GP, patient-facing review, and follow-up if considered clinically indicated). Up to 50 patients receiving multiple (5+) regular medications and triggering at least one potentially inappropriate prescribing (PIP) indicator were recruited per practice. The primary outcome was number of PIP indicators, captured objectively through GP electronic health records (EHRs). Secondary outcomes included medication burden and adherence, patient experience, and health service use, measured through EHRs and patient self-report. The main intention-to-treat analysis was linear mixed effects regression, comparing the number of PIP indicators triggered at 26-weeks post-review between groups, adjusted for baseline (pre-randomisation) values.

FINDINGS: Study population was 1727 patients, median age 73 years (IRQ 66-79), with 51% male. Medication reviews were conducted between 4 Oct 2022 and 3 Oct 2023. Analysis is ongoing at present. Results of the primary outcome and other key secondary outcomes will be reported at the SAPC 2024 Annual Scientific Meeting.

CONSEQUENCES: IMPPP is one of the largest clinical trials of a complex intervention for polypharmacy. The intervention is readily scalable and aligns with current health service systems and processes. The results will establish the clinical effectiveness of the IMPPP intervention with the potential to inform change in the delivery of existing medication optimisation services, and consequent improvements in prescribing in a substantial proportion of patients.

Funding Acknowledgement: This project was funded by the National Institute for Health Research (NIHR) under its Health and Social Care Delivery Research programme (Grant Reference Number 16/118/14). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

1B.5

Improving Medicines use in People with Polypharmacy in Primary Care (IMPPP): Health economic evaluation of a complex intervention to improve prescribing appropriateness in patients with polypharmacy

Presenter: Rupert Payne

Co-Authors: Ammar Annaw, Peter S. Blair, Barbara Caddick, Carolyn A. Chew-Graham, Tobias Dreischulte, Lorna J. Duncan, Bruce Guthrie, Nouf Jeynes, Cindy Mann, Deborah McCahon, Roxanne M. Parslow, Chris Salisbury, Katrina M. Turner, Nicholas L. Turner, Jeff Round

Author institutions: University of Exeter, University of Bristol, Keele University, Ludwig-Maximilians-University (Munich), University of Edinburgh, Institute of Health Economics (Alberta, CA)

Abstract

PROBLEM: Polypharmacy is common and associated with undesirable consequences. Clinical management of polypharmacy is

challenging in primary care because it requires balancing therapeutic benefits and risks, and clinical and patient priorities. It also requires overcoming important barriers to effective medication optimisation, such as suboptimal case-finding, inadequate clinical training, poor informatics solutions, and a failure to incentivise good care. Current strategies for managing polypharmacy are varied, and not supported by high quality evidence. The aim of the Improving Medicines use in People with Polypharmacy in Primary Care (IMPPP) trial was to evaluate the clinical and cost effectiveness of a complex intervention to optimise medication use for patients with polypharmacy in a general practice setting.

APPROACH: The IMPPP trial was a multicentre, open-label, cluster-randomised trial, with two parallel groups. 37 practices (19 intervention) were recruited from the South-West and West Midlands. Practices were randomised either to usual care, or to a complex intervention comprising a clinical informatics tool (designed to support medication review), case-finding, pharmacist and general practitioner (GP) training (focused on patient-centred care and medication review) and a four-stage structured medication review (pharmacist-led case-note review, inter-professional collaborative discussion between pharmacist and GP, patient-facing review, and follow-up if considered clinically indicated). Up to 50 patients receiving multiple (5+) regular medications and triggering at least one potentially inappropriate prescribing (PIP) indicator were recruited per practice. The primary outcome for the economic evaluation was quality adjusted life years, derived from patient-reported SF-12, and converted to SF-6D scores. The analytical approaches are cost-effectiveness and cost-utility analyses. Results of the primary economic analyses will be reported as net-benefit statistic, with ICERs and cost-effectiveness acceptability curves. The primary analysis is from the perspective of the NHS and personal social services. Cost-effectiveness ratios were based on the cost per incremental change in the primary clinical outcome (PIP). The cost per unit of change in PIP indicators was calculated using change in the count of PIP indicators at 26-weeks follow-up. The association between change in PIP and change in quality adjusted life years (QALY) during the same period will also be reported.

FINDINGS: Study population was 1727 patients, median age 73 years (IRQ 66-79), with 51% male. Medication reviews were conducted between 4 Oct 2022 and 3 Oct 2023. Health economic analysis to evaluate cost-effectiveness is ongoing at present. Principal results will be reported at the SAPC 2024 Annual Scientific Meeting.

CONSEQUENCES: IMPPP is one of the largest clinical trials of a complex intervention for polypharmacy. The intervention is readily scalable and aligns with current health service systems and processes. The results presented will establish the cost effectiveness of the IMPPP intervention with the potential to inform cost-effective change in the delivery of existing medication optimisation services, and consequent improvements in prescribing in a substantial proportion of patients.

Funding Acknowledgement: This project was funded by the National Institute for Health Research (NIHR) under its Health and Social Care Delivery Research programme (Grant Reference Number 16/118/14). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

1B.6

Reducing short-acting beta-agonist overprescribing in general practice:

evaluation of a quality improvement programme in East London

Presenter: Anna De Simoni

Co-Authors: Hajar Hajmohammadi1, Paul Pfeffer1-2, Jim Cole1, Chris J Griffiths1, Sally A Hull 1

Author institutions: 1Wolfson Institute of Population Health, Asthma UK Centre for Applied Research, Queen Mary University of London, London; 2Department of Respiratory Medicine, Barts Health NHS Trust, London, UK

Abstract

PROBLEM: Initiatives to reduce overprescribing of short-acting beta-agonist (SABA) inhalers are implemented in UK and worldwide. Quality improvement (QI) programmes interact with other local strategies.Here we aimed to evaluate the impact of a system-wide QI programme on SABA overprescribing, and to identify the most effective strategies.

APPROACH: All general practices within an East London intervention borough compared with practices in two neighbouring, comparison boroughs, between October 2020 and March 2023.Study practices engaged in QI activities including: electronic alerts flagging patients prescribed ≥12 SABA inhalers/year; a tool using real-time prescribing data to generate lists of patients overprescribed SABA for review; a summary guideline for clinicians; patient and practitioner information leaflets, webinar coaching. Prescribing data were collected from electronic health records with SABA overprescription evaluated through interrupted times series analysis. Content analysis was applied to data collected through a survey and conversations with staff.

FINDINGS: During the three-year study period all localities introduced incentivised activities aimed at reducing SABA prescribing. Despite this we observed a significant decrease in the prescription of SABA in the study practices, (≥12 SABA/year from 7.5% to 5.5%, ≥6 SABA/year from 27% to 21%, P=0.01), and a concurrent increase in ICS prescriptions/asthma patient. At the end of the study this was 2.5 times greater than in control localities. The estimated decrease in hospital admissions is 11%. The COVID pandemic gave rise to a temporary increase in patients on the asthma register, which persisted for 6 months and affected QI outcome measures. When used by practices the electronic alerts were effective: 50% of patients receiving an active response achieved a reduction to <12 SABA in the following year.

CONSEQUENCES: A learning health system approach built on electronic prescription data from primary care was effective in reducing SABA overprescribing and increasing ICS prescribing, resulting in an estimated decrease of hospital admissions of 11%. Practices required coaching to use the electronic tools effectively, which was impacted by the COVID-19 pandemic.We found that a long-standing culture of primary care organisations working together were an important factor in implementing QI. Alerts integrated within the practice software to alert prescribing ≥12 SABA inhalers/year were associated with effective reduction overprescribing in the subsequent year. Our results highlight the importance of general practice teams working effectively with pharmacists to ensure a shared understanding of access to SABA medications. Introducing structural change to medicine management (i.e. practice pharmacists, strong medicine management teams and practices cohesion) can make effective contributions to reduce SABA overprescribing.

Funding Acknowledgement: The project was funded by Barts Charity, reference MGU0419. REAL-Health: REsearch Actionable Learning Health Systems Asthma programme.

1C.1

Supporting improved chlamydia management in Australian general practice through the design and implementation of tailored resources: An example from the Management of Chlamydia Cases in Australia Study

Presenter: Meredith Temple-Smith

Co-Authors: Jacqueline Coombe, Jane Goller, Helen Bittleston, Stephanie Munari, Jane S Hocking

Author institutions: Department of General Practice and Primary Care Melbourne Medical School The University of Melbourne Australia, and, Sexual Health Unit Melbourne School of Population and Global Health The University of Melbourne Australia

Abstract

PROBLEM: Chlamydia is the most commonly diagnosed sexually transmissible infection (STI) globally, including in Australia, where most diagnoses occur in general practice. While noting the importance of testing and treatment according to guidelines, internationally the focus is turning to other key aspects of chlamydia management, including effective partner management, timely retesting, and early consideration and detection of complications. The need for improved engagement in case management in Australia is clear, with high reinfection and low retesting rates.

APPROACH: The Management of Chlamydia Cases in Australia (MoCCA) Study aimed to support improved best practice chlamydia management for clinicians working in general practice through the design and implementation of tailored resources. To inform the development of these resources, we conducted surveys and interviews with general practitioners (GPs) to understand the context and current challenges for chlamydia management, interviews with people diagnosed with chlamydia to understand their needs during a management consultation, and a policy review to understand the jurisdictional context. The resources were piloted in general practice and refined following feedback, then tested in a non-randomised implementation and feasibility trial in 15 general practice clinics across three states in Australia.

FINDINGS: We co-designed a website http://www.mocca.org.au"www.mocca.org.au which provides comprehensive chlamydia management information and resources to support best practice chlamydia management including: shortcut text to import into electronic medical records software, patient factsheets for chlamydia and pelvic inflammatory disease, published how-to articles on chlamydia management, resources for utilising patient-delivered partner therapy, flowcharts to support decision-making and postal kits to support timely retesting. Resources were relatively easy to implement, integrated with existing workflows and were reported to improve information delivery with patients. However, not all staff were equally engaged in the study's uptake, and clinic resource limitations hindered adoption among some clinics.

CONSEQUENCES: Internationally, the focus of chlamydia control is shifting to case management. MoCCA is the first Australian study to focus on supporting GPs to strengthen their chlamydia management practices via the integration of resources into routine workflow practices. FINDINGS: will be used to provide an understanding of how to successfully integrate chlamydia management interventions in general practice, with a view for national scale-up.

Funding Acknowledgement: MoCCA is funded by the National Health and Medical Research Council (APP1150014). We gratefully acknowledge the partner organisations and institutions who have contributed to MoCCA, as well as the general practices who participated in the study.

1C.2

How to increase HIV testing and facilitate access to PrEP in General Practice? Designing an intervention using the person-based approach

Presenter: Anne Scott

Co-Authors: Jo Burgin, Joanna Copping, Hannah Family, Lindsey Harryman, Jeremy Horwood, Jo Kesten, Ann Sullivan, Sarah Denford

Author institutions: University of Bristol, NIHR Applied Research Collaboration (ARC) West, Bristol City Council (Communities and Public Health), NIHR Health Protection Research Unit in Behavioural Science and Evaluation, University of Bristol, Unity Sexual Health, Bristol, Chelsea and Westminster Hospital NHS Foundation Trust

Abstract

PROBLEM: Increased testing for HIV and access to PrEP (drugs taken by HIV negative people before and after sex that reduce the risk of HIV transmission) is crucial for early diagnosis, treatment, and prevention of transmission. People living with HIV who are diagnosed early and are on effective treatment cannot transmit HIV sexually and can expect a similar lifespan to that of the general population. However, late diagnosis rates remain high, leading to poorer outcomes for patients, increased transmission risks and higher treatment costs. General Practice (GP) could play a key role in maximising testing opportunities and raising PrEP awareness. This study aimed to develop an intervention prototype designed to increase HIV testing and facilitate access to PrEP within GP.

APPROACH: In accordance with the person-based approach, we conducted scoping reviews and consulted experts to understand the barriers and facilitators to HIV testing and access to PrEP in GP . Subsequently, semi-structured interviews with healthcare practitioners (HCPs) and stakeholders were conducted to comprehend the challenges and identify potential solutions. The intervention design process followed an iterative approach, documenting the results of reviews, expert consensus, and qualitative data in a planning table. Focus groups were held with HCPs and the public to develop the intervention, designed to address barriers and support facilitators. Then, the proposed content was mapped to elements in a behaviour change model. Purposeful sampling was used to select general practices with a range of locations, HIV prevalence and testing rates, and public participants with a diversity of age, ethnicity, and gender.

FINDINGS: The main barriers identified through the scoping review and the interviews included lack of knowledge and awareness of HIV and PrEP, stretched HCP resources with little time to discuss and carry out tests and a lack of systematic ways to identify who to test. HCPs and stakeholders proposed strategies for increased testing. HCPs were keen to receive HIV/PrEP training and suggested ways that this could be delivered. HCPs wanted simpler ways to provide a test, to normalise the testing process, and to reduce HIV stigma. Based on these insights, three key components of the prototype intervention were developed. First, the provision of HCP education and training to raise awareness of HIV testing and PrEP. Second, a simplified and streamlined approach to testing by adopting an opt-out approach integrated into routine healthcare. Third, a systematic way to identify who to test by embedding a clinical decision support application within the electronic health record.

CONSEQUENCES: Utilising a theory, evidence and person-based approach enabled the development of a new multicomponent intervention focused on increased testing and access to PrEP within GP. Testing the effectiveness of the intervention will be a key next step in the goal to improve health outcomes in HIV.

Funding Acknowledgement: NIHR School for Primary Care Research, NIHR Applied Research Collaboration (ARC) West

1C.3

Safetxt trial: a secondary analysis exploring the intervention effects

Presenter: Cari Free

Co-Authors: Tim Morris, JAmes Carpenter, Melissa Palmer, Ona McCarthy Emma Slaymaker

Author institutions: LSHTM, UCL

Abstract

PROBLEM: The safetxt trial was an individually randomised parallel group trial conducted among 6248 people aged 16-24 in the UK. The effect of the safetxt safer sex intervention on the cumulative incidence of chlamydia/ gonorrhoea at 12 months was odds ratio 1.13, 95% confidence interval 0.98 to 1.31 and on condom use at last sex was odds ratio1.14, 95% CI 1.01 to 1.28. Limited observational data suggests that the average duration of rectal chlamydia or gonorrhoea in 2-3 months. We conducted an secondary data analysis to explore if the slightly higher infections identified in the intervention group might be attributable to more cases being diagnosed and treated in clinics during the trial in the intervention group, with undiagnosed infections in the control group resolving before the 12 months postal STI test.

APPROACH: A secondary data analysis. We compared the prevalence of chlamydia or gonorrhoea reinfection at one year in each group using logistic regression. We adjusted the primary analysis regression for the prespecified baseline covariates (age, type of STI at baseline, sex or gender, sexual orientation, and ethnicity). We report the adjusted odds ratios with 95% confidence intervals. We also created kaplan-meier plots for time to STI test and time to diagnosis, and calculated the proportions of people undergoing a STI test during the trial in clinics.

FINDINGS: The intervention effects on the prevalence of chlamydia and goorhoea at 12 months was odds ratio 1.04 (95% CI 0.83, 1.30)Although there were slightly more STI tests in the intervention group, and a slightly higher proportion of tests were positive these differences were not statistically significant. Time to test and diagnosis were similar in intervention and control groups.

CONSEQUENCES: There was no difference in the prevalence of chlamydia/ gonorrhoea at 12 months between the intervention and control group and no statistically differences in STI testing. Our FINDINGS: do not support a hypothesis that the slightly higher incidence of chlamydia/ gonorrhoea in the interventions group are attributable to more cases being identified and treated in the intervention compared to the control groups, with undiagnosed infections in the control group resolving prior to the 12 month postal chlamydia testing.

Funding Acknowledgement: NIHR PHR

1C.5

Understanding how women from ethnic minorities access and experience contraception in the UK; using a Participatory Action Research Approach with Community Research Link Workers.

Presenter: Rebecca Mawson

Co-Authors: Rebecca Mawson, Emma Linton, Jamie Cory, Kate Fryer, Aaisha Aslam, Fatima Nabage, Sheila Daley, Caroline Mitchell

Author institutions: University of Sheffield

Abstract

PROBLEM: The benefits of contraception are well recognised and access to satisfactory family planning is a UN Sustainable

Development Goal and human right. Despite free contraception in the UK, there are still unmet access needs. Unplanned pregnancies comprise 45% of pregnancies in England and carry increased risks for mother and baby,. In the UK, approximately 26% of women aged 16–49 years use hormonal methods of contraception, and 59.1% of women obtain contraception in general practice. Data on contraceptive access for women from Black, Asian and ethnic minority groups is lacking but it is strongly suspected that they are disadvantaged. Furthermore, ethnic minority women's access to contraception is thought to have been disproportionately affected by the COVID pandemic compared to their Caucasian counterparts. There is little research looking into what women from ethnic minorities think of different contraceptive options and their experience of side effects. We wanted to study this to provide a better, more equal contraceptive service.

APPROACH: We used a Participatory Action Research Approach, with Community Research Link Workers (CRLW) at its centre. We recruited three CRLW who were trained in basic qualitative methods. They recruited and conducted 4 focus groups with women from south asian, black african and black caribbean communities. We also offered 1 to 1 interviews with one of the research team if preferable. The CRLW conducted the focus groups with researcher presence, these were in English with language support where needed. We recruited 31 women for focus groups (24 of whom were born outside the UK), 5 women were interviewed one to one. Transcripts were thematically analysed by the whole research team and a workshop was undertaken to define the themes.

FINDINGS: Thematic analysis revealed four themes which addressed the research question.

(1) contraception as part of a woman's lifecycle (whole person),

(2) external influences,

(3) cultural considerations,

(4) everyone is different (individuality).

Side effects and myths about potential negative outcomes were key overarching themes which we will reflect on in further publications.

CONSEQUENCES: Providing women with choices about contraception improves their health and the health of their family and children. We know that women from ethnic minorities find it more challenging to access contraceptive services in the UK. Our FINDINGS: highlighted the specific challenges which can face women from ethnic minorities when accessing contraception. Being aware of these, whilst understanding the heterogeneity within ethnic groups, can allow for the provision of more equal contraceptive services and culturally competent practice. We need awareness that whilst services may be inclusive for one group may be excluding others. Tailoring services to populations is essential rather than a one-size-fits-all approach.Future interventions should prioritise participatory designs, and culturally appropriate materials, and shift focus to inclusive contraception research which has under-represented populations at the centre.

Funding Acknowledgement: This was funded by RCGP SFB

1D.1

A long and winding road. Improving representation from underserved groups: FINDINGS: from the AvonCAP GP2 study.

Presenter: Polly Duncan, Ruth Mears

Co-Authors: Polly Duncan,* Ruth Mears,* Shoba Dawson, Glenda Oben, Rhian Pennie, Tanya Thomas, Catherine Derrick, Fanuel Olala Oyuga, Siân Bodfel Porter, Jennifer Oliver, Leon Danon, Adam Finn, Alastair D Hay, on behalf of the AvonCAP GP2 research group.
*Joint first

Author institutions: University of Bristol

Abstract

PROBLEM: 'No decision about me, without me', a principle central to NIHR INCLUDE guidance, states that a wide range of groups should be involved in every stage of research, from priority setting through to maximising participation and interpreting results. Failing to include these patients means unrepresentative research FINDINGS: . We aimed to promote recruitment of underserved groups, including those with lower literacy, non-English speaking and ethnic minorities.

APPROACH: AvonCAP GP2 is an ongoing primary care study investigating the burden of acute lower respiratory tract infections in adults (six practices in Bristol, half serving deprived populations, recruiting Feb 2022-Jul 2024). PPI strategy development involved: (i) an ethnically diverse patient and public involvement (PPI) group (n=14); (ii) awareness raising through community groups; (iii) 'Easy Read' and telephone study invitations; and (iv) two short promotional films: a generic 'Why take part in research?' and a second explaining study participation specifics. Patients could consent by phone, post, online or in-person. For non-English speaking patients, we translated study documents and films into 10 languages and employed bilingual researchers. A small anonymous dataset was collected on patients who declined consent.

FINDINGS: From Feb 2022–Dec 2023, we screened 38,500 medical records, identified 9225 eligible patients, contacted 6829(74%) of those eligible and consented 3007(33%). Of these, 1286 people consented to the 'data only' study element, and 1721 to a 'research visit'. Of those consented, 2770(92%) opted for 'Easy Read' information sheets and 73(2%), 173(6%), 2127(71%) and 634(21%) consented by phone, post, online or in-person respectively. Of those who had a research visit, 601(35%) reported watching at least one film and 587(98%) found them useful. We identified 167(1.8%) eligible non-English speaking patients, including 111(66%) who spoke one of ten translated languages, and have contacted 45; 33(73%) declined consent, 15(33%) verbally agreed to take part and 4(9%) consented. For patients with ethnicity recorded, the proportion of white and all other ethnic groups was 93% and 7% for those consented, and 88% and 12% for those declining consent (data Feb 2022–Mar 2023, missing ethnicity data for 6% consented and 42% declined consent patients). The consent rate for patients living in the most and least deprived quintiles was 31% and 48%.

CONSEQUENCES: We have had some success promoting inclusivity and representing underserved groups, but it is difficult to know to what extent our approach has worked. Most opted for 'Easy Read' information sheets aligning with PPI feedback to keep information short and simple, films were considered useful and non-English speaking patients have been included. There is scope for improving inclusivity further through closer collaboration and building trust with different communities. Future research should evaluate inclusive recruitment strategies through a study within a trial (SWAT) or randomised controlled trial to identify what works and for whom.

Funding Acknowledgement: The AvonCAP GP study is a University of Bristol sponsored study which is investigator-led, and funded under a collaborative agreement by Pfizer Inc. The views expressed are those of the authors. We would like to thank the PPI group for their valuable insights, especially Fanuel Olala Oyuga, who is a co-author.

1D.2

Inequalities in Patient Participation: Association between general practice engagement with patient participation groups in deprived versus affluent areas and CQC ratings

Presenter: Emily Boam

Co-Authors: Emily Boam, Bruno Rushforth, Claire Planner, Jessica Drinkwater

Author institutions: Future Leaders Programme NHS England Yorkshire and Humber, NHS England Yorkshire and Humber GP School, University of Manchester Centre for Primary Care and Health Service Research

Abstract

PROBLEM: The NHS constitution emphasises the importance of patient participation in healthcare service delivery. Patient participation in the form of having a Patient Participation Group (PPG) has been a contractual obligation in English general practice since 2015. The Care Quality Commission (CQC) have a role in monitoring this in terms of how general practices respond to patients and PPGs and this is a key aspect of their 'responsive' and 'well-led' quality statements. Despite this, research into the coverage and effectiveness of PPGs is limited. The most recent data from 2016 estimated that one quarter of GP practices did not have a PPG, particularly in urban areas. Therefore, we aimed to explore the relationship between the coverage and quality of PPGs and the general practice level of deprivation, geographical location, and overall CQC rating.

APPROACH: The most recent full-inspection CQC report was hand searched for all general practices in the most (Level 1) and least (Level 10) index of multiple deprivation (IMD) area deciles for all three Integrated Care Systems (ICS) across Yorkshire and Humber. Quantitative (CQC rating and presence, partial, or absence of a PPG) and qualitative data (descriptive details regarding the structure and function of the PPG) was extracted and managed in Microsoft Excel. Quantitative analysis with Fishers Exact Test compared the presence or absence of a PPG with level of deprivation, geographical area, and CQC rating. Thematic analysis grouped qualitative data reporting the quality of the structure and function of PPGs.

FINDINGS: A total of 123 general practice CQC reports were included, with 87 in level 1 and 36 in level 10 IMD areas. Overall, 99 practices (81.1%) had a PPG, 16 practices (13.1%) did not have a PPG, and seven practices (5.7%) had a partial PPG. General practices in IMD level 1 areas were significantly less likely to have a PPG compared to IMD level 10 areas ($p=0.0376$). No significant difference in PPG coverage was found between ICS areas. There was a lack of association between CQC rating and the presence or absence of a PPG. High functioning PPGs were described as influencing a range of areas including staff recruitment and training, infrastructure, communication systems, appointments and accessibility, health promotion and education, and fundraising.

CONSEQUENCES: General practices within deprived areas are significantly less likely to have a PPG. High quality PPGs undertake activities which potentially improve patient experience and population health. With fewer PPGs, and hence patient voice in more deprived areas this is likely to further increase health inequalities. Despite PPGs being a contractual obligation, there was no association between having a PPG or not and the general practices' CQC ratings. This lack of accountability is a risk to the sustainability of PPGs, and potentially quality and equity of care.

Funding Acknowledgement:

1D.3

Reaching out to work with people and communities, a forgotten and undervalued role for sustainable general practice?

Presenter: Jessica Drinkwater

Co-Authors: Jess Drinkwater, Claire Planner, PPIG co-research group, Anne MacFarlane,

Rebecca Morris, Caroline Sanders, Jennifer Voorhees, Victor Animasahun, Tasneem Khan, Maryam Treifi, GROW co-operative inquiry group

Author institutions: (1) University of Manchester, (2) University of Limerick

Abstract

PROBLEM: Healthy systems are equitable systems. For general practice to be equitable, it needs to be inclusive, and people and communities should be involved in its conception, (re)design, and delivery. Supporting this, recent policy encourages general practices to work with people and communities to reduce inequalities. However, there is little guidance on the role of GPs in this work. We aimed to explore the barriers, enablers, and impact of GPs working with people and communities to address inequalities.

APPROACH: Participatory action research with eight early career GPs working in areas of socioeconomic deprivation enrolled on a fellowship with funded time for service improvement.The GPs formed a co-operative inquiry (CI) group, with two researchers, to critically reflect on their service improvement work with local people and communities. Data were generated over one year using multiple methods: Seven CI group meetings, individual interviews at start, middle and end (n=20), and reflective written and audio diaries (n=32). Meetings and interviews were audio-recorded. All audio data was transcribed.Iterative data analysis based on rapid qualitative analysis was led by two researchers with support from nine experienced public contributors who listened to audio data, read transcripts, and attended six co-analysis meetings. Thematic summary sheets were completed for each data collection event. Themes were informed by the data and normalisation process theory (NPT) exploring the work of involving people and communities. The thematic analysis and constructive challenges were presented back to the GPs at subsequent CI meetings for refinement. Towards the end, the GPs, public contributors, and researchers participated in two day-long co-analysis workshops. This iterative analysis process resulted in rich understanding grounded in data, repeatedly tested, and constantly compared with new data and NPT.

FINDINGS: These early career salaried GPs had little autonomy over their work and were socialised throughout training and practice to biomedical and transactional consultation work. This context affected their ability to value and prioritise working with people and communities. This was unfamiliar and often uncomfortable work, and needed effort and time to understand it, legitimise it, and develop new, mainly relational, skills. The amount of effort led some to question the role of GPs in this work. However, all recognised benefits to their service improvement projects of working with people and communities. Some GPs also described transformative impacts regarding how they view patients and practice populations, their approach within consultations, renewed purpose of GP work, and recognition of their power and advocacy role.

CONSEQUENCES: Working with people and communities is unfamiliar and messy, but potentially transformational. To sustain patient-centred equitable general practice, working with people and communities needs to be recognised as a key part of the role of GPs with time and resources allocated to it, especially in areas of deprivation.

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1D.5

How prepared are GPs to support local salon staff to promote heart health and increase uptake of cardiovascular disease screening among women in London's deprived and ethnically diverse neighbourhoods? An evaluation of GP training.

Presenter: Diandra Daley

Co-Authors: Diandra Daley*, Marjorie Lima de Vale Phd1 , Veline L'Esperance MSc1, Sarah Armes, Clare Coultas Phd1, Louise Goff Phd1, Ashlyn Mernagh-iles HND, Alexis Karamanos PhD1, Salma Ayis PhD1, Vasa Ćurčin, PhD1, Stevo Durbaba MSc1, Mariam Molokhia, Phd1 and See

Author institutions: Department of Population Health Sciences, King's College London Leicester Diabetes Centre, University of Leicester

Abstract

PROBLEM: Women from ethnic minority and socio-economically disadvantaged backgrounds have a disproportionally higher prevalence of cardiovascular disease (CVD) risk factors, and lower rates of participation in screening services. Hairdressing salons are trusted community assets, where women may frequent, network, and engage in meaningful discussion about their health and wellbeing. Similar approaches with hairdressing and beauty salons in the US have been successfully used for cardiovascular health promotion training in the United States.

APPROACH: The BEauty and health community LOuNGes (BELONG) study is exploring the feasibility of recruiting, training and retaining hairdressers in salons, supported by healthcare professionals at local GP practices in a novel health delivery partnership, to engage in health conversations that promote the uptake of NHS Health Checks in women in ethnically diverse neighbourhoods. An online training programme was designed for practice staff from three agreeing GP practices (from 4 selected) in South London, covering three main topic areas: (1) details of the BELONG project, (2) practical ways that GPs can support community salons, and (3) relevant concepts such as cultural competence and cultural safety, and their relevance to the supportive role. We will evaluate the training to determine their preparedness to take on this supportive role and identify potential factors that may limit development and sustainability of salon-primary care collaborations through: i) an Online survey, ii) Focus group discussions and iii) in-depth interviews targeting primary care stakeholders, including general practitioners, allied healthcare professionals and administrative staff. Interviews will be transcribed and analysed using reflexive thematic analyses to identify emerging key themes.

FINDINGS: We will report on the views and experiences of participating GP staff, examining their perceptions of cultural safety, competing priorities, community referral and follow-up pathways, and other governance or practical issues that could affect the sustainability of this partnership. The results will highlight the key barriers and enablers for salons and neighbouring GPs to jointly deliver a culturally accessible CVD prevention service model.

CONSEQUENCES: Establishing partnerships between health and community systems provides the potential for effective, equitable and efficient services that benefit patient access. Hairdressing salons are a powerful community asset and a partnership with GP practices could facilitate CVD prevention services with equitable reach. Understanding the capacity for GP practices to undertake additional health promotion roles within their local communities, and factors that may affect their willingness to do so, is also pertinent to understanding the wider challenges of primary care.

Funding Acknowledgement: Funding: National Institute of Health Research for Patient Benefit Programme (NIHR202769)

1D.6

Ensuring Diversity and Inclusivity in the Coproduction of a Shared Decision-Making Intervention

Presenter: Jo Butterworth

Co-Authors: Suzanne Richards

Author institutions: Exeter Collaboration for Academic Primary Care (APEx), University of Exeter Medical School; Leeds Unit for Complex Intervention Development, University of Leeds

Abstract

PROBLEM: Shared decision-making is central to the provision of high-quality, equitable health care. Doctoral research, focusing on people with multiple long-term conditions (MLTC), showcased the complexities of SDM during general practitioner (GP) consultations. A new intervention 'VOLITION' was designed, to support tailored shared decision-making, incorporating a patient's priorities into the interplay between MLTC and a practitioner's clinical uncertainties.VOLITION requires coproduction. Developmental studies were limited to older people from the southwest of England, and their GPs. However, there are likely to be cultural influences on how people perceive shared decision-making.

APPROACH: A Community of Practice (CoP) will give a diverse group of individuals equal voice to discuss SDM and VOLITION. The CoP will include lay individuals from diverse cultural backgrounds across the UK, working alongside academics, clinicians, and educators. CoP membership will be advertised via social media, community networks and professional organisations. Three workshops will have set agendas - relevant to the production of inclusive, accessible, and innovative materials - followed by reflective feedback.

FINDINGS: Findings will be available at conference. CoP members will coproduce VOLITION components that are likely to include:(i) an invitation to patients (in the form of a handout, for example), to convey their preferences for shared decision-making, as well as their personal priorities, suitable for people from diverse cultural and social backgrounds. (ii) training for clinicians in the VOLITION model, including an expectation for a spectrum of patient preferences for involvement; reflecting (cultural/ethnic/socioeconomic) diversity.

CONSEQUENCES: ImplicationsThis project fits with the intentions of policymakers; to empower patients and to train clinicians in shared decision-making. Equality, diversity and inclusion (EDI) in research can improve its relevance to practice and address inequality. This work will inform a national collaborative trial of VOLITION across diverse primary care settings. The EDI approach here will provide a template for coproduction of equitable, person-centred health care interventions.

Funding Acknowledgement: This work is funded by the Public Engagement with Research (PER) Springboard Fund from the University of Exeter. JB is funded by a NIHR Academic Clinical Lectureship.

1D.7

An embedded co-production approach to patient and public involvement in research about data sharing in health and social care – Reflections from the Qualitative Data Preservation and Sharing (Q-DaPS) project.

Presenter: Barbara Caddick

Co-Authors:

Author institutions:

Abstract

To reflect on an embedded co-production approach to PPI using the Q-DaPS project as a case study. Participants will explore the benefits and challenges of this approach. Gaining understanding of how co-production PPI offers opportunities for research to be designed, shaped, conducted and analysed by those with lived experience. Considering how this can lead to the development of different research questions provides opportunity to ensure equitable exploration. Collaborative analysis, acknowledging different perspectives and positionality, can lead to rich research

FINDINGS: 1. A brief presentation providing an introduction to the Q-DaPS project - including the approach to PPI, the importance of context and selecting a PPI strategy that meets the needs of a project. 2. Facilitated small group discussions around issues and insights from this project, covering issues such as: a. Power- who gets to decide what public contributors should do, are there inherent power differentials between researchers and public contributors. How do you build mutual trust and respect? b. Emotions- qualitative work can give rise to strong emotions for both researcher and participant due to topic matter and questions of data ownership. How do we manage strong emotions and work together? c. Identity- Does working in this collaborative way lead to issues with personal and professional identity which can overlap with imposter syndrome? d. Relationships- how do we build relationships, trust and come together as a team? 3. Reconvening for feedback from small group discussions 4. Summary/conclusions The shift towards Open Science means that there is an increasing expectation amongst funders and publishers of health and social care research in the UK that where appropriate, all data be made available for re-use. This potentially raises ethical, theoretical, methodological and practical challenges. Our PPI co-investigators raised the point that research participants have largely been excluded from conversations and considerations around qualitative data sharing. This is despite the fact that qualitative data is co-created through interaction between interviewer/facilitator and participant. As a result of our co-production approach our PPI co-investigators were able to define research participants as a key stakeholder group for inclusion in our work on views on qualitative data sharing and re-use in health and social care research. This workshop draws on our experiences of an embedded co-production approach to patient and public involvement throughout our Q-DaPS project. We outline the role our PPI co-investigators have played in shaping our research from the outset and our PPI co-investigators will reflect on their experiences of raising important research questions, contributing to study design, co-facilitating focus-groups, analysis and dissemination.

Funding Acknowledgement:

1E.1

Exploring 'risk' in the context of alternatives to unscheduled hospital admission: a realist review conducted as part of the ENHANCE (EvaluatioN of Hospital Admission avoidaNCE services) project.

Presenter: Claire Maynard

Co-Authors: Matthew Booker, Alyson Huntley, Helen Baxter

Author institutions: University of Bristol

Abstract

PROBLEM: Urgent and emergency care services are under unprecedented, sustained pressure. The NHS Long Term Plan and wider health policy advocates for innovative healthcare models that ease pressure on emergency services and minimise adverse events associated with hospital admission. A range of Hospital Admission Avoidance Interventions (HAAIs) exist across settings with significant inequity of provision. Many HAAIs do not endure, or struggle with effective

implementation in different settings. This combines to make commissioning, researching and evaluating HAAIs challenging.

APPROACH: Using a realist evaluation approach, the ENHANCE (EvaluatioN of Hospital Admission avoidaNCE Services) study aims to develop a theory-rooted contextual framework exploring why certain HAAIs work and endure, by combining evidence synthesis, case studies, and an outcome evaluation. Realist methods are appropriate for investigating complex interventions in contextually dynamic settings, as reflected in the current landscape of HAAIs. A rapid realist review was conducted as the first stage of the ENHANCE study to elucidate the causal association between contexts, mechanisms and outcomes (CMO) in HAAIs to generate initial programme theories (IPTs).Selected policy and strategy documents were reviewed, alongside input from public contributors, to refine the scope and develop a framework for evidence synthesis. Database and grey literature searches were conducted to identify empirical evidence, with no limitations on study type. A reverse chronology quota approach for screening prioritised the most contemporaneous (assumed contextually relevant) evidence. Three rounds of data screening, extraction, analysis, and synthesis, based on constructing a long-list of CMO configurations, were carried out until no new CMOs were identified. CMOs were discussed within the wider research team and synthesised under two IPTs, which were further refined by expert and public contributors. The protocol is registered on PROSPERO: CRD42023468852.

FINDINGS: 3161 records were identified from database searches and 48 selected for inclusion; a further 13 articles were included from alternative sources . HAAIs identified were broadly categorised as providing either resources for decision-making or resources for responding to and managing complexity outside of hospital. The majority of HAAIs were in emergency departments, people's usual places of residence, or virtual. Drawing on aspects of middle-range theory (health beliefs, decision-making under uncertainty, and subjective risk perception), two overarching IPTs were generated: for healthcare professionals, decision-making and managing complexity for hospital admission avoidance is dependent on finding an acceptable subjective risk threshold; for patients, acceptability of hospital admission avoidance is dependent on being able to navigate uncertainty. Three intervention contexts were identified which influenced the mechanistic pathway to outcomes within different HAAIs: risk perception, risk appetite and perceived control.

CONSEQUENCES: Hospital admission avoidance has inherent risks which are often unmeasurable, introducing uncertainty. Intervention strategies that act on risk perception, risk appetite or perceived control of risk may improve acceptability of HAAIs and their ability to endure.

Funding Acknowledgement: This research project is funded by the NIHR through MB's Advanced Fellowship (NIHR302585). The views expressed in this publication are those of the author(s) and not necessarily those of the NIHR, NHS or the UK Department of Health and Social Care.

1E.2

Improving communication to GPs for complex discharge scenarios: a scoping review and qualitative study of GP perspectives

Presenter: Nicholas Boddy

Co-Authors: (2) Rachel A Spencer, (3) P John Clarkson, (4) Anthony J Avery

Author institutions: (2) University of Warwick Medical School, (3) University of Cambridge Department of Engineering, (4) University of Nottingham School Medicine

Abstract

PROBLEM: Poor communication at hospital discharge continues to threaten patient safety and quality of care. Communication to GPs relies on discharge summaries that are usually written by the most junior doctors, who are inexperienced and can lack insight into community care. To improve quality, national improvement efforts have focused on guidance and standardisation through discharge summary templates. These have produced significant safety benefits for many patients, particularly those with simpler, more 'linear' care. However, this increasing standardisation has been described as less effective for patients with more complex care. Previous work has found that optimal communication of these complex discharge scenarios may not 'fit' a standard template, potentially constraining key narrative and explanatory aspects. This complexity may also increase the risk of harm and suboptimal care, with more dynamic templates and additional communication measures offering improvement opportunities. However, a consensus of what determines complexity at discharge is lacking. Greater understanding of the characteristics of complex discharge scenarios and their key challenges is required to delineate a target cohort and develop improvements. Previous work has highlighted a key need to understand the perspective of GPs to achieve this.

APPROACH: A scoping review is being conducted to clarify and map the existing literature regarding 'what factors determine complexity at discharge?'. This is informing a qualitative study consisting of semi-structured interviews of up to 15 GPs, which will explore their recipient perspective of discharge complexity. Detailed clinical vignettes will serve to highlight factors relating to the patient, other stakeholders and the surrounding system. The issues that complexity can create will also be explored, alongside improvement opportunities beyond the status quo of a discharge summary. To gain a breadth of perspectives, GPs will be purposively sampled based on time since qualification, and the socioeconomic status of their practice populations.

FINDINGS: Early review work has found that the term 'complex' is used heterogeneously, demonstrating a lack of consensus. Heqvist et al have recently described the complex features of the systems that surround patients at discharge, demonstrating the importance of the interactions between stakeholders and a system's components. Their demonstration of interdependencies between elements and resultant 'emergent' properties shows how a complex discharge scenario can resemble a 'complex adaptive system' (CAS). Importantly, CAS's benefit less from standardisation as compared to less complex systems. These concepts from complexity science are therefore informing the topic guide for the GP interviews, to further explore higher complexity cases.

CONSEQUENCES: This study aims to develop a prototype model of complexity at hospital discharge. This will serve to highlight higher complexity discharge scenarios with consideration of the recipient GP perspective. In turn, this model will aim to demarcate discharge scenarios that may benefit from additional communication measures, to improve safety and quality of care.

Funding Acknowledgement: This study has received no direct funding. Nicholas Boddy is personally by the NIHR as an In-Practice Fellow.

1E.3

How did we make GP-MATE (a communication tool to improve post-discharge care) using experience based co-design?

Presenter: Zakia Shariff

Co-Authors: Rachel Spencer

Author institutions: Warwick Medical School - Unit of Academic Primary Care

Abstract

PROBLEM: The post-discharge period is a time of risk for older people, especially those with frailty and multi-morbidity.[1] There has been extensive study of the discharge problem for older people from a secondary care and hospitalist perspective [2,3] but very little attention in primary care at the 'receiving end' despite clear safety issues[4]. The overarching aim of GP-MATE is to empower patients and their carers through co-designing a tool (GP-MATE) for older patients and their carers to improve communication with their general practice after discharge from hospital.

APPROACH: Experience Based Co-Design (EBCD) was used to co-design the GP-MATE patient held tool and the general practice staff toolkit. Three co-design groups corresponding to three loose geographic areas were set up, and a total of 19 older people/carers recruited. General Practice staff were also recruited with the assistance of the Clinical Research Network in three regions. A total of 17 staff members participated. The co-design meetings took place over 4 months (Spring/summer 2023). All meetings were half-day in length and were audio-recorded. The trigger film was presented to participants in the first meeting, after which priorities for GP-MATE were assigned. The GP-MATE tool was built on these priorities and underwent further development and refinement. A final joint event across the three areas took place with both staff and lay participants where implementation barriers and facilitators were identified.

FINDINGS: The GP-MATE patient held tool has four key priority areas, with an overarching aim to overcome barriers in access to general practice following discharge. Participants identified the importance of continuity of care, specifically episodic continuity, to improve the quality of care received from general practice. Carers and caring was a key priority area, exploring important topics post discharge including the issue of loneliness and identification of sources of support. The medication safety section was designed to help assess patients and their carers understanding of medication changes, while the information power section contains questions to help better understand the discharge summary. The GP-MATE staff toolkit is currently a 20-page manual with training advice for a range of staff roles in relation to GP-MATE appointment set up, systems surrounding high quality post-discharge care and information on how to conduct a GP-MATE consultation.

CONSEQUENCES: The use of EBCD to create GP-MATE provided an adaptable approach where patients and caregivers were involved throughout all stages of intervention development. GP-MATE is a low-cost intervention, empowering patients and carers and making care safer in the post discharge space. GP-MATE will be tested in a feasibility study in a General Practice setting. This will help to determine the real-world acceptability and usability of GP-MATE for both patients and primary care staff and how it will lead to measurable improvements in patient safety.

Funding Acknowledgement: This manuscript presents work funded by the National Institute for Health Research (NIHR) under its Advanced Fellowship programme (Reference Number NIHR301328).

1E.5

'My GP knows all about me': what are the important features of community follow up after acute hospital admission? A scoping review and model of care needs by patient group.

Presenter: Chloe Gamlin

Co-Authors:

Author institutions: CAPC, University of Bristol

Abstract

PROBLEM: Relational continuity in primary care is valued by patients and practitioners alike. There is substantial evidence that this reduces unplanned hospital admissions. Less is known, however, about the important features of community follow up for patients after acute admission to hospital. This review aims first to collate the existing literature by exploring who received follow up and how and by whom this was delivered. These questions are designed to characterise follow up care in the community, and secondly enable synthesis into suggested broad models of care for patient groups with differing follow up needs.

APPROACH: This scoping review was conducted in keeping with the framework set out by Arksey & O'Malley. Relevant studies were identified through extensive searches of MEDLINE and EMBASE. Given the exploratory nature of this work there were no predetermined exclusion criteria, provided that articles were in English or had translations available. A total of 46 articles from 2003-2023 were included, from a variety of healthcare systems globally.

FINDINGS: Hospital discharge is a complex process, and initiation of community follow up largely depends on information flow from secondary care.In the UK this occurs via the discharge summary, although several articles suggest under half of these crucial documents are received by primary care within 48 hours of discharge. Patients identified for follow up received mainly in-person or telephone appointments within the first 28 days post discharge, typically to action medication changes or test requests within the discharge summary. Most follow up was carried out by a doctor, however general practitioners appreciated a multi-disciplinary approach to community follow up. A pilot nurse-led follow up of cardiovascular admissions suggested this resulted in similar clinical outcomes. The research focus is primarily patients over the age of 65, and those with chronic conditions, who valued follow up by their known primary care physician and viewed it as an opportunity to build on their longitudinal therapeutic relationship.

CONSEQUENCES: It is possible to model the important features of community follow up as a hierarchy. Informational continuity is at the apex of follow up for all patient groups.Relational continuity, particularly with a GP, is next for those with chronic conditions and the elderly. However, further research into the role of the multidisciplinary team is needed.Further work regarding patients of working age and those with a novel diagnosis may suggest access to timely appointments is more important than relational continuity, particularly if contact with primary care was previously sporadic. Applying and extending this model via further research has potential to improve the community follow up available to patients, by offering timely appointments with a range of practitioners appropriate to their needs, as well as highlighting the importance of robust transitional arrangements from hospital to primary care.

Funding Acknowledgement: NIHR Academic Clinical Fellow, Acute Theme = CAPC Bristol

1E.6

Medication Optimisation and Safety in the Community Following Mental Health Hospital Discharge: Early Insights from a Qualitative Interview Study

Presenter: Dr Mark Jeffries,

Co-Authors: Dr Natasha Tyler, Prof Catherine Robinson, Ms Fiona Naylor, Dr Richard Keers

Author institutions: University of Manchester

Abstract

PROBLEM: For those with mental illness medication safety issues are common following mental health hospital discharge. The importance of networks of stakeholders and agencies in supporting safe discharge from acute care is understood, with earlier work characterising the medication 'work' carried out by patients and carers and social network support for medicines management post discharge . There is, however, little in the way of research that focuses upon post-discharge medication safety for patients with mental illness in the community. This study aimed to explore the perspectives of people with lived experience, their carers and community based health professionals, of medicine taking, knowledge transfer and care following mental health hospital discharge. We aimed to understand the influence of social processes, practices and support networks upon medication safety.

APPROACH: People with lived experience of mental illness who had at least one discharge from mental health inpatient care in the last 5 years, their carers and healthcare staff working in the community were recruited to the study. Recruitment was via social media and the professional networks of the research team.Semi-structured interviews were conducted online with a range of stakeholders to explore medication use and safety post-discharge. Questions focused on medication related activities, knowledge transfer practice, support needs and key challenges and facilitators of medication safety in primary care following discharge. Thematic analysis of early interviews was conducted to capture how supporting communities, sharing of knowledge between actors and the 'medication work' of carers influenced safe and optimal medication practices in primary care post-hospital discharge.

FINDINGS: Early insights from thirteen interviews conducted with eight healthcare professionals and five carers suggested a fragmented and disrupted network of care provision. This could include diversion of responsibility and lack of collaboration across professional and organisational boundaries. Interprofessional communication about patients medications was reliant upon sociotechnical systems that included different methods of knowledge transfer involving variable access to patient health records and multiple agencies (for example community mental health teams, and support workers) Carers, often family members, undertook care-coordination roles and medication work including providing support for, and monitoring, safe medicine use. This involved supporting with medicines taking and adherence. Challenges included disruptions involving changes to medicines, concerns about non-adherence and subsequent post-discharge deterioration of health for patients. Carers themselves relied upon a network of support from other family members, other carers and healthcare professionals.

CONSEQUENCES: Further insight is needed from people with lived experience to understand their perspectives. We plan to conduct further interviews and subsequently undertake workshops with a range of stakeholders to co-design a practical framework guiding medicines optimisation and safety in the community following discharge from inpatient mental health services. The framework and supporting 'user guide' will be intended for use by health professionals and patients/carers.

Funding Acknowledgement: This research project is funded by National Institute for Health and Care Research, School for Primary Care Research (No 646 Award)

1E.7

Patients' navigation of care following a hospital admission: Early qualitative insights from a national study of post discharge care for people affected by Acute Kidney Injury

Presenter: Dr Mark Jeffries,

Co-Authors: Dr Kelly Howells, Dr Duncan McNab, Prof Caroline Sanders, Dr Tom Blakeman, Prof Robbie Foy

Author institutions: University of Manchester, NHS Education for Scotland, University of Leeds

Abstract

PROBLEM: Acute kidney injury (AKI) is a common, harmful and costly clinical syndrome. It is a marker of illness severity, characterised by sudden worsening in kidney function. People affected by AKI experience potentially avoidable adverse outcomes following hospital discharge including high rates of unplanned readmissions and poor long-term health outcomes. Because AKI affects so many people each year, improved post-discharge care is particular important. As a clinical syndrome that is particularly relevant to care for people living with multiple long-term conditions. It is therefore important that an AKI diagnosis is placed in context, enabling tailored and timely follow-up that takes into account an individual's existing co-morbidities, social circumstances and prognosis. To date, AKI research and quality improvement initiatives have largely examined organisational and provider working practices with little attention to exploring the everyday work undertaken by patients following hospital discharge.

APPROACH: Patients who had an episode of care complicated by AKI were identified by clinical care teams at different hospitals and consent to contact forms passed to the research team. Semi-structured interviews were conducted remotely via telephone, or online, with patients after they had left hospital up to four weeks post discharge. Interviews explored patient experiences of an AKI with a particular focus on the discharge process, their navigation and coordination of follow-up arrangements and the context of other complex health and social needs.Thematic analysis drew upon the personal holistic accounts and experiences of patients to capture an understanding of the work that patients did to navigate their care.

FINDINGS: Twenty-four patients, with different presentations of AKI and varying complex needs from six hospitals, took part in semi-structured interviews. Emerging analysis of transcripts revealed that patients undertook work in the period after hospital discharge to understand their kidney health, to deal with anxieties about their health and to stay healthy at home. This work was often in the context of other pre-existing co-morbidities. Patients often navigated their health care working to manage attendance at follow-up appointments. Follow-up for the AKI was often separate from other follow-up requiring multiple appointments, with different specialist teams, sometimes in different locations. Navigating these care pathways and coordinating their own care was a challenge for patients.

CONSEQUENCES: Patient understanding of their kidney health was coupled with their own co-ordination and navigation of care after discharge from hospital. This created additional treatment burden for patients. Further work is needed to understand how patients can be better supported to navigate their care following an admission complicated by AKI and hence improve health outcomes.

Funding Acknowledgement: NIHR Health and Social Care Delivery Research (HSDR) Programme

1F.1

How might dynamic Artificial Intelligence (AI) be used to support prescribing (DynAIRx project) to ensure efficient structured medication reviews, and what are the barriers to implementation?

Presenter: Samantha Wilson

Co-Authors: Aseel S Abuzour, Alan A Woodall, Frances S Mair, Lauren Walker

Author institutions: University of Liverpool, University of Leeds, University of Glasgow

Abstract

PROBLEM: Structured medication reviews (SMRs) aim to enhance shared decision-making in medication optimisation, particularly for patients with multimorbidity and polypharmacy. However, there is limited empirical evidence on SMR challenges and the potential role for artificial intelligence (AI) tools to support SMR implementation. DynAIRx project seeks to address these gaps by developing AI tools to support SMRs, focusing on individuals prone to medicine-related harm due to multimorbidity.

APPROACH: To explore how SMRs are currently being undertaken and how clinicians and patients feel they might be augmented by AI. Nine focus groups were conducted with doctors, pharmacists and clinical pharmacologists (n=21), and three patient focus groups with patients with multimorbidity (n=13). Five semi-structured interviews were held with 2 pharmacists, 1 trainee GP, 1 policy-maker and 1 psychiatrist. Transcripts were analysed using a thematic approach.

FINDINGS: Two key themes limiting the effectiveness of SMRs in clinical practice were identified: 'medication reviews in practice' and 'medication-related challenges'. There was wide variation in healthcare professional (HCP) perspectives and approaches to SMRs, with time being a major limiting factor due to the overwhelming density of information in electronic health records, especially for complex patients. Participants noted limitations to the efficient and effectiveness of SMRs in practice including the scarcity of digital tools for identifying and prioritising patients for SMRs; organisational and patient-related challenges in inviting patients for SMRs and ensuring they attend; the time-intensive nature of SMRs, the need for multiple appointments and shared decision-making; the impact of the healthcare context on SMR delivery; poor communication and data sharing issues between primary and secondary care, and difficulties in managing mental health medications and specific challenges associated with anticholinergic medication.. Participants stated that complex patients may need multiple appointments for a comprehensive review, and advocated for a team-based approach to managing multimorbid patients. HCPs welcomed user-friendly digital tools with intuitive interfaces, using visualisations/infographics, that could also be used to discuss clinical decisions with patients. A proposed solution to reduce time spent searching through records was a timeline linking diagnoses to medications based on indications. Quick access to resources, selective prompts, risk prediction models and risk calculators that could be incorporated in uncluttered ways were also on the wish list for AI tools. However, concerns were raised regarding medicolegal risks associated with digital tools, suggesting the need to screenshot the page viewed that led to certain clinical decisions.

CONSEQUENCES: This study emphasises the complexity and time-intensive nature of SMRs, highlighting the potential for an AI prescribing support system to streamline the process. The insights gained will inform the co-development of the DynAIRx prototype to create a user-friendly digital tool to enhance SMRs for multimorbid patients.

Funding Acknowledgement: DynAIRx has been funded by the National Institute for Health and Care Research (NIHR) Artificial Intelligence for Multiple Long-Term Conditions (AIM) call (NIHR 203986). MG is partly funded by the NIHR Applied Research Collaboration North West Coast (ARC NWC). This research is supported by the NIHR ARC NWC. The views expressed in this publication are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

1F.2

A randomised controlled trial of IBD-BOOST, a digital cognitive behavioural self-management programme for fatigue, pain, or faecal incontinence, or any combination of these symptoms, in people with inflammatory bowel disease

Presenter: Steph Taylor

Co-Authors: Rona Moss-Morris, Ailsa Hart, Fion Cleirigh Buettner, Thomas Hamborg, Laura Miller, Imogen Stagg, Christine Norton, on behalf of the IBD-BOOST Investigators

Author institutions: Queen Mary University of London, King's College London, St Mark's National Bowel Hospital

Abstract

PROBLEM: Even in clinical remission many people with inflammatory bowel disease (IBD) experience fatigue, pain and faecal incontinence (FI), impacting on their quality of life (QoL). IBD-BOOST is an interactive, digital online self-management intervention, based on a theoretically informed logic model and cognitive behavioural techniques, designed to treat these symptoms. We aimed to determine whether IBD-BOOST, alongside health care professional (HCP) support and care as usual (CAU), provided greater relief from IBD symptoms and an improvement in QoL compared with CAU alone.

APPROACH: A pragmatic multi-centre two-arm parallel group randomised controlled trial (RCT) recruiting adult participants from clinics and national registries. Eligible participants rated the impact of fatigue and/or pain and/or FI as ≥5 on a scale of 0-10 (where 10 = worst possible problem) and had no "red flag" symptoms. Those randomised to intervention received 6 months access to the IBD-BOOST programme (12-sessions) and a 30-minute telephone call plus weekly email messages for 3 months from a trained HCP. Dual primary outcomes were the UK Inflammatory Bowel Disease Questionnaire (UK-IBDQ) and global rating of symptom relief (GRSR) at 6 months. Other secondary outcomes, were measured at 6 and 12 months. Complier-averaged causal effects (CACE), sensitivity and pre-specified subgroup analyses were conducted.

FINDINGS: 80 participants were randomised, 432 with Crohn's disease, 348 with ulcerative colitis or other IBD; 520 (66.7%) were female, mean age 49 years. 57% of the intervention group completed a pre-defined minimum "dose" of 4 sessions ("compliers"). At 6 months both primary outcomes were similar between the BOOST and CAU arms (mean difference:-1.67, 95% CI:-4.17 to 0.83, p=0.19 for UK-IBDQ; mean difference:0.44, 95%CI:-0.56 to 1.43, p=0.39 for GRSR). FI score and EQ5D utility score (secondary outcomes) were significantly in favour of IBD-BOOST at 6 months, but pain and fatigue were no different. CACE analysis suggested that compliers were more likely to report better QoL than 'would-be' compliers in the CAU arm (p=0.03). Pre-planned subgroup analyses found IBD-BOOST was more effective in improving UK-IBDQ and GRSR at 6 months for participants who met criteria for irritable bowel syndrome (IBS) compared with participants who did not (p_interaction=0.015 and 0.046, respectively).

CONSEQUENCES: This large RCT found that our digital IBD-BOOST self-management support intervention with HCP input did not improve quality of life (UK-IBDQ) or symptoms (GRSR) in patients with IBD and fatigue, pain, or FI symptoms (or any combination of these) compared to care as usual. Intervention arm participants reported less FI at 6 and 12 months compared to CAU participants. Intervention arm participants with IBS-like symptoms at baseline (overall 48% of those recruited) improved more than those without, suggesting the need for further effectiveness research on IBD-BOOST.

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1F.3

Getting it Write: Primary care staff perspectives on writing consultation notes in a new era of patient online access

Presenter: Brian McMillan

Co-Authors: Lindsey Brown, Gail Davidge

Author institutions: University of Manchester

Abstract

PROBLEM: Electronic Health Records (EHRs) have traditionally prioritised the needs of healthcare professionals (HCPs), functioning as a professional tool to facilitate clinical communication and decision-making.In November 2023, NHS England introduced a policy enabling most patients in England to access new free-text consultation entries in their primary care EHR, via the NHS App or other online services. Research indicates that HCPs are apprehensive about patients reading their notes and are concerned that this may lead to increased workloads and compromise the clinical value of the EHR.Our study aimed to investigate how HCPs can be better supported in meeting patients' needs when composing entries in a patient's EHR, while ensuring that these records effectively contribute to providing high-quality clinical care.

APPROACH: We conducted online interviews and focus group discussions with 13 healthcare professionals working in a variety of primary care roles and settings. We asked staff how they currently used consultation notes within their professional roles and to identify the key benefits and challenges of providing patients with online access to their notes. Finally, we asked staff to reflect on the findings from the first phase of this study and to comment on a range of potential solutions to addressing the needs of multiple users.

FINDINGS: :We identified four key themes in the data.

1. Consultation notes were not designed for patient audiences

2. Consultation notes help health professionals to maintain effective clinical care

3. Patient online access impacts on our workload and how we practice

4. 'Getting it Write' for everyone is challenging

Our discussions highlighted that although staff acknowledge that patients may benefit from access to their notes, they anticipate that many patients may struggle to understand them. Staff described diverse documentation styles and noted the critical role of consultation notes in clinical care and medico-legal compliance. Concerns were raised that tailoring documentation for patients could compromise patient safety and EHR value. Most staff felt they would benefit from further training and guidance in how to effectively address patients' needs and expressed a preference for technical adaptations that maximised patient understanding with minimal impact on workloads.

CONSEQUENCES: Staff acknowledge that patients may have difficulties understanding their health records but have concerns that adapting notes for patient audiences will diminish the clinical value of their notes and increase workloads and cognitive burdens. Balancing clinical integrity and patients' needs are crucial to the successful implementation of policy and the effective mitigation of unintended consequences. This study underlines the need to support healthcare professionals with navigating this challenge safely and effectively. Further research is urgently needed to explore the development

of technological solutions that support patient understanding of consultation notes without increasing cognitive burden and clinical workloads.

Funding Acknowledgement: This study/project is funded by the NIHR SPCR-2021-2026:608 and NIHR300887. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

1F.5

'Getting it Write': Patients and carers' understanding and responses to clinicians' notes in a new era of online access to primary care health records.

Presenter: Gail Davidge

Co-Authors: Dr Brian McMillan, Ms Lindsey Brown

Author institutions: Centre for Primary Care and Health Services Research, University of Manchester

Abstract

PROBLEM: Most patients in England now have online access to all new entries, including free-text, in their primary care health records through platforms like the NHS App or other online services.Studies on providing patients with online access to their health information show potential to improve health outcomes and patient safety. Expanding patient access to health records can also enhance health literacy and engagement, particularly for marginalised populations who may have most to gain from online access. Currently, patient health records are mainly used by clinicians to record clinical information to provide safe and effective care, and were not designed to meet the needs of patient audiences. Clinicians do not receive training in adapting consultation notes for patients. This increases risks of poor communication which can cause misunderstandings, unintended offence and anxiety. This can impact on patient safety and put more pressure on primary care services. To maximise benefits and avoid harm to patients, consultation notes must be clear and meaningful for patient audiences while still including necessary clinical details for safe and effective care.This study aimed to explore how underserved patients and carers may respond to reading consultation notes and to identify what they may find difficult to understand or cause unintended anxiety or offence.

APPROACH: We conducted interviews and focus group discussions with 26 patients from underserved communities including: young people, older patients and carers, patients living in areas of significant deprivation, patients with English as an additional language or who identified as LGBTQ+. Participants responded to vignettes about fictional patient consultation scenarios and assessed the clarity of corresponding simulated records. Participants were then asked to identify potential comprehension issues, offensive content, or anxiety triggers. Finally, patients were asked what types of help and resources may help to support improved patient understanding and relationships with healthcare staff.

FINDINGS: Most participants struggled to understand a large proportion of fictional consultation notes, particularly medical acronyms, clinician shorthand, and non-clinical abbreviations. Participants also identified issues which may cause unintended offence or additional anxiety. Participants considered that most patients will struggle to fully understand the content of their consultation notes in their current format. They made a number of suggestions about how this service may be improved to meet the needs of patient audiences and maintain positive patient-clinician relationships. These FINDINGS: were subsequently presented to healthcare professionals as part of the next phase in the study.

CONSEQUENCES: To optimise NHS investment in this policy and avoid worsening health inequalities, it's essential to ensure a clear path toward benefiting patients. Providing robust support for healthcare professionals in navigating the complexities of crafting consultation notes, alongside measures to maximise patient understanding, are needed to ensure safe and effective policy implementation.

Funding Acknowledgement: This project is funded by the NIHR SPCR-2021-2026:608. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

1F.6

Assessing and understanding the potential of assistive technology among people with chronic obstructive pulmonary disease to support independence and wellbeing: A mixed-methods study

Presenter: Farhin Ahmed

Co-Authors: Helen Dawes, Catherine Forward, Andrew Weightman, Veronica Toffolutti, Shashi Hirani, Nina Fudge, Jamie Ross, Stephanie Taylor

Author institutions: Queen Mary University of London, City, University of London, King's College London, University of Exeter, University of Manchester

Abstract

PROBLEM: Assistive technology (AT) comprising home modifications, digital technology or innovative digital infrastructure solutions is being given priority by the UK government as a cost-effective way of supporting independence, health and wellbeing for people living with disability or long-term conditions. Chronic obstructive pulmonary disease (COPD) is physically and psychologically disabling and commonly associated with multimorbidity. COPD is an important example where there is great potential for benefit from AT. People with COPD have highlighted the need for AT to support independent living at home, however the evidence to support implementation of AT is lacking.

APPROACH: The study comprises 3 work packages: (1a) To conduct a systematic review of effectiveness and cost-effectiveness in studies of AT among people with COPD and multimorbidity with use of AT linked to outcomes specific to AT to facilitate independent living. (1b) To conduct a qualitative evidence synthesis in studies of AT among people with COPD and multimorbidity and their carers to understand service provision and use of AT. (2) To conduct a qualitative in-depth interview study to gain insights into the AT service provision, AT use and its impact among people with COPD and multimorbidity, their carers, health and social care professionals and other AT stakeholders on what is working well, what are the challenges and how service provision might be improved. (3) Developing recommendations for the adoption and integration of AT through consensus for implementation at different health and social care system levels to improve availability, accessibility and uptake of AT in COPD.

FINDINGS: Work package 1a, 1b is currently ongoing. 6,807 studies identified for the quantitative review and 1,576 studies for the qualitative evidence synthesis are undergoing title/abstract screening. The included studies will comprise quantitative (e.g. randomised trials) and qualitative studies using different qualitative methods published from 2006 and in the English language. The population will comprise people with COPD and multimorbidity in receipt of any type of AT using the WHO definition to facilitate living independently in the community/own home. The intervention will be any AT or combination of AT to support Activities of Daily Living. The main outcome of interest is to assess the functioning or the functional

needs of the patient through introduction of AT.Recruitment for work package 2 has just started across different health and social care settings.

CONSEQUENCES: The study will raise awareness about the evidence around AT that brings benefits to people with COPD, the type of benefits conferred and whether the different types of AT are cost effective. It will also identify any challenges around AT delivery and, hopefully, underpin the development of more opportunities for people with COPD and their carers to access AT that is suitable, acceptable, and timely.

Funding Acknowledgement: This study is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference 683). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

1F.7

AI-guided point-of-care ultrasound to diagnose deep vein thrombosis in primary care

Presenter: Kerstin Nothnagel

Co-Authors: Jessica Watson, Jon Banks, Alastair Hay

Author institutions: University of Bristol

Abstract

PROBLEM: The National Institute for Health and Care Excellence reports that deep vein thrombosis (DVT) has an annual incidence of 1–2 per 1000. Currently, diagnostic scans for DVT are primarily performed by specialists in hospitals. Elderly patients, individuals with multiple chronic health conditions, and those experiencing significant mobility limitations are at heightened risk for developing DVT and find it difficult to get to hospital for investigation. The emergence of point-of-care ultrasound (POCUS), coupled with handheld ultrasound probes and artificial intelligence (AI)-applications to guide non-experts in ultrasound, could empower any healthcare professional to perform DVT scans. The implementation of AI-guided POCUS has the potential to expand local diagnostic capabilities beyond secondary care, reaching underserved patient groups. The present project aims to evaluate the accuracy and acceptability of AI-guided DVT diagnosis in primary care

APPROACH: A diagnostic test accuracy aims to estimate the sensitivity and specificity of AI-guided scans among 500 individuals suspected of DVT. This involves AI-guided scans performed by Healthcare Assistants (HCAs) followed by a standard scan conducted by sonographers at a primary care DVT clinic. Participants will be invited to complete a patient satisfaction survey after receiving both scans, evaluating their satisfaction with the AI-guided POCUS scan. The study will use semi-structured interviews to explore the nuances of acceptance and potential resistance towards AI-guided DVT diagnosis. This phase engages a subset of participants and the HCAs, encompassing 25 participants.

FINDINGS: This study has successfully completed the training phase for Clinical Research Network research staff and HCAs responsible for conducting the index scan. This marks the commencement of our pilot phase, with recruitment scheduled to start in February 2024. We anticipate presenting as study update by the time of the conference.

CONSEQUENCES: Incorporating an AI-guided DVT diagnostic procedure could improve local diagnostic capabilities and broaden access to underserved patients through availability of point-of-care diagnostic. This could be particularly advantageous for individuals with multiple chronic health conditions or limited mobility. It could accelerate diagnostics, providing timely access to treatment and potentially reducing severe complications

such as pulmonary embolism or post-thrombotic syndrome. Furthermore, this approach holds promise in reducing the costs associated with specialist scans and referrals incurred by National Health Service. It is important to note that the specific outcomes of this research are not yet known, but if successful, the study could potentially enhance DVT diagnosis in primary care.PPI played a crucial role in designing participant materials, shaping the lay summary for funding applications, and influencing interview questions. This ensures the project remains patient-centred and ethically robust.

Funding Acknowledgement:

1G.1

Running online citizen science trials – an opportunity to democratise research

Presenter: Kim Thomas and Amanda Roberts

Co-Authors:

Author institutions: University of Nottingham, University of Southampton

Abstract

Aims 1. To gain insight into the benefits and challenges of co-designing citizen science trials 2. To share experience from an ongoing Citizen Science project in eczema (Rapid Eczema Trials www.RapidEczemaTrials.org) 3. To share learning about the practical implications of co-designing citizen science online trials. Content

• Interactive task / poll to get the attendees thinking about what they understand by the term “citizen science”. Presentation by members of Rapid Eczema Trials Team (researcher and citizen scientists)

• Introduction to key principles of citizen science and co-design and how these might be applied to community-led clinical trials (signpost to resources)

• Provide examples of citizen science in other areas (eg RSPB, astronomy)

• Reflect on experiences of running citizen science online trials through the Rapid Eczema Trials project • Introduce small group activity. Small group task/discussion - groups to discussion one of the following topics:

• Exploring the practical challenges of co-designing citizen-science online trials (e.g. do people need to have lived experience of the condition of interest? Can people who co-design the studies take part in them? What is the impact of lengthy questionnaires and screening procedures? How can diagnosis be confirmed? How to avoid burn out of teams?)

• Making an enduring legacy – what happens when the grant runs out?

• Making citizen science a safe and enjoyable space for everyone (e.g. addressing differential power dynamics, bringing in the views and experiences of wider community, managing online meetings, adapting to multiple health issues, making it fun). Whole group feedback on issues/solutions raised

• Attendees to complete a brief end of workshop reflection survey or poll

Funding Acknowledgement:

2A.1

Exploring current levels of engagement with decarbonisation initiatives: a survey of the implementation, attitudes, and awareness of general practice staff.

Presenter: Olivia Geddes

Co-Authors: Jeremy Dale, Ana Raquel Nunes, Abi Eccles, Olivia Geddes, Helen Twohig, Helen Atherton

Author institutions: University of Warwick, Keele University, University of Southampton

Abstract

PROBLEM: The NHS has set a target to reach Net Zero by 2040. Despite being responsible for a fifth of all NHS emissions, little research has been done to establish the role of general practice in this context. A better understanding is required of the effectiveness of decarbonisation resources available to general practices, and how institutional, organisational, and professional factors can facilitate or inhibit their introduction and maintenance. Aims: To establish current levels of interest in decarbonisation in general practice. Understand the type and extent of specific decarbonisation actions being undertaken. Gauge the awareness of the decarbonisation resources currently available to practices. This work is part of the wider GPNET-0 Study.

APPROACH: An online survey was developed, aimed at staff working in general practices in three Integrated Care Systems (ICS) in England: Coventry and Warwickshire ICS, Birmingham and Solihull ICS, and South Yorkshire ICS. Questions were designed drawing on the NoMAD evaluation tool. The survey was distributed between November 2023 and February 2024 (ongoing) with an aim to reach every practice in the study setting (473 practices). The survey was distributed using a variety of methods at ICS and Primary Care Network level, supplemented with the work of Clinical Research Network (NIHR CRN) representatives, and relevant organisations, such as Greener Practice. The study protocol was developed and is being undertaken with the continuous input of two PPI co-investigators.

FINDINGS: The survey received a total of 328 responses, from 163/473 practices (34%). The highest proportion of responses were from GP Partners (29%), followed by Practice Managers (19%). 36% of responding practices reported having a lead for decarbonisation, and of these, 34% answered that this role was held by a GP Partner, and 32% answered that this role was held by a Practice Manager. 19% of respondents provided optional free text responses, permitting insight into the barriers and facilitators to decarbonisation in general practice. The survey is currently open (February 2024), and over the next few months, a more detailed analysis will be conducted. We aim to draw on both sociological and behavioural theories to permit the systematic identification of determinants relevant to the planning and implementation of decarbonisation activities in general practice.

CONSEQUENCES: This survey provides previously unknown insights into how general practices and their staff regard decarbonisation activities and their usefulness. The FINDINGS: will have implications for initiatives used in general practice to try and achieve the NHS Net Zero target.The results have been used in the first instance to inform the selection of case study sites to take part in a longitudinal qualitative investigation in the second phase of the GPNET-0 Study.

Funding Acknowledgement: This survey forms part of the GPNET-0 Study, funded by the National Institute for Health and Care Research (NIHR) Health Services and Delivery Research Programme.

2A.2

'Do the public and community pharmacists support the introduction of medication reuse as a means to reduce pharmaceutical waste?'

Presenter: Madeleine Smith

Co-Authors:

Author institutions: University of Exeter

Abstract

PROBLEM: Wasted medicines cost the NHS an estimated £300 million every year, of which

£110 million is generated in the community. Additionally, the pollution to which they contribute has a damaging impact on the environment, contaminating water courses, disrupting ecosystems, and promoting antimicrobial resistance. In spite of efforts to reduce inappropriate prescribing and over-ordering through medication reviews, some waste remains inevitable. A small body of literature has suggested medicine reuse - retrieval of unwanted prescription medication from the original recipient and re-dispensing to another patient - could reduce the financial and environmental impact of waste. Already practised in the USA and Greece for altruistic reasons, in the UK barriers currently exist in the form of legislation, quality assurance, and acceptability to the public and professionals. This study evaluates the attitudes of a sample of the public towards reusing medicines. Additionally, for the first time, community pharmacists are surveyed to ascertain their professional opinions about the potential benefits of, and barriers to, reusing returned medicines.

APPROACH: Two self-administered online questionnaires, one recruiting a convenience sample of 192 members of the general public in the south west of England, and the other given to 27 community pharmacists. The data were analysed with descriptive statistics and thematic analysis to determine attitudes and identify areas of concern that might be amenable to further research.

FINDINGS: There was strong support from the public regarding medicines reuse for both financial and environmental purposes, an increase on earlier surveys, reflecting increased public awareness of environmental issues and cost pressures on the NHS. This is the first study to specifically seek the opinion of community pharmacists who would be instrumental in any such scheme, so their positive response is particularly significant. However concerns were identified about safety and efficacy of returned medicines, particularly by pharmacists. The use of technology to improve safety, such as temperature and humidity sensors applied to packaging to ensure appropriate storage, was popular amongst the professionals, and the idea of centralised collection and redistribution that emerged from the qualitative pharmacist responses would allow economies of scale and help to alleviate their concerns about individual liability.

CONSEQUENCES: The concept of medicines reuse received strong support from the public and professionals, possibly due to its high visibility as a source of medicinal waste. However the logistical complexity of implementing such a scheme in the UK is high, and would require new legislation, the repurposing of technology, a shift in approval from regulatory bodies, engagement with the pharmaceutical industry, and patient education. Further research is recommended, perhaps a pilot study to model reuse from a care home via a community pharmacy, to obtain estimates of the time required to verify returns, which would inform the financial feasibility of such a scheme.

Funding Acknowledgement: n/a

2A.3

Sustainability Project: Inhaler Disposal

Presenter: Jade Heatley

Co-Authors: Amirah Hassan

Author institutions: University of Dundee

Abstract

PROBLEM: This project aimed to assess awareness of the environmental impact of inhalers and if this would influence people'schoice of disposal of inhalers. The gas propellant used in metered-dose inhalers is thousands of times morepowerful than carbon dioxide. When metered-dose inhalers are disposed of in general waste they end up inlandfill. Here the residual propellant can

leak into the atmosphere. The build-up of this gas contributes toglobal warming. APPROACH: We phoned 25 patients who are currently on inhalers for either asthma or COPD. Using a script that we created,we asked each patient the same set of questions and provided information about the environmental impact ofinhalers. We collected the results from this and then analysed the data. FINDINGS: : The results indicate that 91.3% of patients currently dispose of their inhalers in the bin. With only 8.7% disposingby other methods. We found that 100% of patients were not aware of the impact that inhalers have on theenvironment before taking part in this study. After providing the patients with information, of the 91.3% ofpatients who currently dispose of their inhalers in the bin, 100% would now consider handing their inhalers backto the pharmacy for safe disposal. CONSEQUENCES: There is limited awareness in patients of the environmental impact of inhalers. Knowledge of the environmentalimpact has been shown to influence people's disposal of their inhalers. Opportunistic implementation of thisknowledge to patients could be a small but effective step towards reducing the carbon footprint of inhalersprescribed within the NHS. Opportunities to give information on safe inhaler disposal could include patients'annual review appointments, with a text or on the left side of their prescription. Through this, the number ofinhalers being safely disposed of at the pharmacy should begin to increase.

Funding Acknowledgement: N/A

2A.4

A systematic review of the clinical effectiveness of dry powder inhalers in the treatment of acute exacerbations of asthma in adults and children, and in the maintenance treatment of asthma in children

Presenter: James Smith

Co-Authors: Lauren Franklin, Bernice Ruan, Louisa Yapp, Emma Jackson, James Smith

Author institutions: Helen Twohig and Lauren Franklin, Keele University. James Smith, Bernice Ruan, Louisa Yapp and Emma Jackson, Cambridge University

Abstract

PROBLEM: Metered dose inhalers (MDIs) account for 3% of the total NHS carbon emissions each year due to their use of hydrofluorocarbon propellants, which are highly potent greenhouse gases. The NHS has pledged to be carbon net-zero by 2040 and reducing prescribing of MDIs is crucial in achieving that goal. Dry powder inhalers (DPIs) are an alternative type of inhaler with a much lower carbon footprint and this type of inhaler is equally efficacious for most adults with asthma. However, there is uncertainty about the efficacy and safety of DPIs for young children or during acute asthma exacerbations. This systematic review aims to assess the clinical effectiveness of dry powder inhalers in two clinical contexts:

1) The treatment of acute exacerbations of asthma in adults and children

2) Maintenance treatment of asthma in children.

APPROACH: This systematic review was carried out in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines and has been registered with PROSPERO (CRD42022368492). A systematic search of six medical databases was carried out on the 17th October 2022. Inclusion criteria were: primary studies involving participants with a diagnosis of asthma who had been treated using a DPI either during an acute exacerbation, or for maintenance therapy if they were <18 years old. Studies published in any language and country were included and there were no restrictions based on publication date. The main outcomes of

interest were those pertaining to resolution of acute exacerbations or measures of asthma control for studies of maintenance therapy. Titles were screened by one member of the team and abstract and full-text screening were carried out independently by two reviewers, with conflicts resolved by a third reviewer. Data extraction was checked by a second member of the review team. Risk of bias of included studies was assessed using ROBINS I, Cochrane Risk of Bias Tool and appropriate CASP tools. Results were narratively synthesised.

FINDINGS: 15 studies were included in the acute asthma category; 7 in children only and 8 in adolescents and adults. Sample size ranged from 20-216 and all were published prior to 2011. Results from studies of DPI use in acute asthma suggest that that there is clinical equivalence between treatment with DPIs and other inhalers in both children and adults. However, the majority of studies had high risk of bias and the quality of the overall evidence base was low. Synthesis of results from studies of maintenance treatment of asthma in children is underway.

CONSEQUENCES: This systematic review has the potential to inform guidelines for inhaler prescribing by providing an up-to-date evidence summary on the use of DPIs in specific clinical contexts. This work may also highlight gaps in the evidence base and areas for future research.

Funding Acknowledgement: Helen Twohig is supported by an NIHR Clinical Lectureship in primary care. No funding was received specifically to carry out this systematic review.

2A.5

Developing primary care in the Seychelles

Presenter: Andrew Murphy

Co-Authors: Sanjeev Puzaghendi, Conrad Shamlaye

Author institutions: Universities of St Andrews, Ministry of Health Seychelles

Abstract

PROBLEM: Like the NHS, the Seychelles Health Care System was based upon principles espoused in the Beveridge report, and further developed based on the Alma Ata principles on primary care. The constitution of the country grants all citizens free access to primary health care. Although the country has achieved many gains in universal health coverage, the country still faces significant problems in the dimensions of quality of services. Seychelles has pursued an incremental reform package underpinned by the highest nominal per capita GDP of any African nation and the second-highest Human Development Index of any African country, after Mauritius. The Primary Health Care Package and National Health Strategic Plan 2022-2026 depends upon a highly motivated, well-resourced primary care workforce, supported by strong leadership and resources.

APPROACH: Document review and semi-structured interview. A comparison of data from national, WHO and World Bank data on health System activity and outcomes as well as undergraduate teaching and postgraduate training between 1992 and 2022 was undertaken and 12 key informants were interviewed in February 2024 using a semi-structured interview.

FINDINGS: During the past thirty years, life expectancy has increased to 74.2y (69.8y M, 77.8y F). The country's health system has undergone several structural changes in accountability and organization, but the main elements of how the sector is financed how providers are paid, and how services are delivered have remained relatively stable. Seychelles has consistently invested to improve access to and availability of services in 17 community clinics which provide a range of preventative, diagnostic and treatment services to their local communities. Current investment is 4.4% of GDP. Informal care from

traditional healers- 'bonhommes du bois' remains a first option for many Seychellois, and private health care has expanded to 27 practices. A key change in recent years is the composition of medical/dental professionals– increasing fraction of Seychellois, and increasing fraction of women constituting the workforce. Many are interested in primary care practice. Training and support in the first five years after Seychellois return to the country from undergraduate teaching and postgraduate training intending to be family physicians is obtained from a range of sources including the RCGP and St George's University of London Medical School.

CONSEQUENCES: Seychelles, being a small island developing state with limited local expertise, and facing a complex global health developmental environment, requires support from external partners to build health system resilience. Collaboration on postgraduate training and research with members of SAPC may be mutually beneficial. There is significant potential for capacity-building of these staff to strengthen primary care systems in the country.

Funding Acknowledgement: n/a

2B.1

'Help! I need somebody'… Using Nominal Group Technique to develop a framework for medical students to use when seeking telephone advice from another health or social care professional in a simulated environment

Presenter: Richard Price

Co-Authors: Professor Joanne Protheroe, Dr Magdy Abdalla, Dr Ellie Hammond

Author institutions: Keele University

Abstract

PROBLEM: Handover of clinical information is a vital part of healthcare, however is a high-risk activity which if undertaken poorly, can adversely impact on patient care. Whilst there are a variety of tools to aid clinical handover when transferring the care of a patient between clinicians, what is less established is the most appropriate structure to use when one clinician seeks advice from another but continues to have ongoing care responsibility for the patient. At Keele University, final year medical students undertake simulated consultations in a general practice setting in sessions called "Safe and Effective Clinical Outcomes." During these sessions, students frequently need to call senior clinicians for advice. Informal discussion between supervising clinicians has shown that the quality of communication of information and clarity of questions during these calls is variable. Having a framework for medical students to follow when seeking telephone advice may improve this communication, in preparation for clinical practice.The aim of this study is to establish an understanding of what information senior clinicians feel a clinical advice call should include, then use this to create an educational framework for medical students to use when seeking telephone/verbal advice in simulated clinical settings.

APPROACH: Building on existing literature to introduce and contextualise the issue, we will use a modified Nominal Group Technique to gain consensus from a group of senior primary and secondary care clinicians about what information a telephone advice call from junior colleagues should contain. In this technique participants are involved in an iterative discussion process comprising systematic generation of ideas, ranking of these ideas in order of importance resulting in a mutually agreed list of core components which should be included in clinical advice calls. This will be used to generate a proposed tool to assist medical students undertaking this activity. This tool will be reviewed by the group and consensus will be deemed to be

reached when no further adjustments are suggested.

FINDINGS: This is currently a work in progress, Nominal Group meetings will be held in Spring and the results and proposed tool will be shared at the ASM.

CONSEQUENCES: We hope that a new framework will enhance educational interventions to improve the quality of medical students' advice calls to senior clinicians, and in doing so better prepare them to undertake this activity as doctors. This ultimately should result in better patient care. We would aim to pilot the use of this framework in the context of a simulated GP surgery and other clinical settings in a further study.

Funding Acknowledgement:

2B.2

How does e-portfolio use in medical school enhance the reflective practice of final year medical students? – a realist evaluation.

Presenter: Dr Egbe Efefaroro and/or Dr Ellie Hammond

Co-Authors: Ellie Hammond, Nazim Ali

Author institutions: Keele University

Abstract

PROBLEM: Portfolios are widely used in medical education, but their effectiveness varies (Driessen et al., 2007). Portfolios may be electronic (e-portfolio) or paper-based and are often used to encourage learners to reflect on their experiences. The value of reflective practice for the personal and professional development of healthcare professionals amongst other benefits is widely reported. Writing reflections helps develop reflective proficiency (Bolton and Delderfield, 2018). Portfolios can foster reflective practice amongst medical students (which they will continue to use for lifelong learning and professional development as doctors) provided certain conditions are met. A study carried out by Driessen et al. (2005) in which they interviewed mentors highlighted conditions for the successful reflective use of portfolios in undergraduate medical education. They also called for more studies amongst the learners themselves. Thus, the research participants in our study are medical students who have used an e-portfolio to reflect during medical school. Further research has also called for studies into the variable success of the portfolio system in promoting reflective practice especially with regards to the influence of the context in which the portfolio is used (Driessen et al., 2007). Our study addresses this issue of context and aims to extend current knowledge by explaining how e-portfolio use in medical school enhances the reflective practice of medical students to gain an understanding of what works, for whom, why and in what circumstances.

APPROACH: We used a realist evaluation methodology to answer the research question because of the complex and context-sensitive nature of the e-portfolio system in different medical schools. A qualitative approach is employed because the e-portfolio in this setting does not generate numerical data as reflections are not scored. One to one semi-structured interviews are being held with purposively sampled final year medical students to test and refine initial programme theory developed using

FINDINGS: from a focused literature review and an expert panel discussion. Interview data will be analysed for context-mechanism-outcome configurations which will then be utilised to produce a refined programme theory. FINDINGS: Data collection is currently ongoing, results analysis will be presented at the conference.

CONSEQUENCES: It is anticipated that the underlying mechanisms by which the e-portfolio use in this medical school enhances

(or hinders) reflective practice will be unravelled. It goes beyond answering the question 'does e-portfolio use in medical school enhance the reflective practice of medical students' to gaining an understanding of 'how'. These FINDINGS: could inform medical educators in this and other settings on how to maximise the potential of the e-portfolio to enhance the reflective practice of medical and other healthcare students.

Funding Acknowledgement: None

2B.3

Integrating sustainable healthcare in the undergraduate primary care curriculum

Presenter: Ismail Ismail

Co-Authors: Ismail Ismail, Arti Maini

Author institutions: Imperial College London

Abstract

PROBLEM: Climate change poses an unprecedented threat to the health of the public and planet (Atwoli et al., 2021). The GMC requires medical schools to incorporate sustainable healthcare (SH) into medical education (GMC, 2018) We initially adopted an opportunistic approach to embedding SH in the undergraduate primary care (UPC) curriculum at Imperial College London and are now building on this through a more systematic approach. Aims: Our aim was to review the UPC curriculum to identify where SH topics are covered and consider opportunities to further embed this theme.

APPROACH: The learning outcomes in the Medical Schools Council SH curriculum (MSC, 2022) guided development of our SH-related learning outcomes. The UPC curriculum, including placement-based learning, workplace-based assessments, centralised teaching content, guided online learning and optional modules, was mapped against these learning outcomes. We discussed the Findings with UPC placement leads to identify opportunities to strengthen the SH theme.

FINDINGS: Our mapping demonstrated existing SH-related learning opportunities including: - Emphasis on SH principles including disease prevention, health promotion and patient empowerment - Interactive case-based learning highlighting relevance of SH to clinical practice (e.g. greener inhaler prescribing) - Coaching skills training for health behaviour change, with opportunity to practice with patients - Assessed, community-engaged quality improvement (QI) projects embedding SH principles - Introductory digital session on key concepts in sustainable healthcare - Student-selected components for on sustainable healthcare, enabling deeper inquiry We identified opportunities for further development including: - Developing the digital learning session in partnership with students to ensure key concepts are communicated effectively - Clarifying the relevance of SH within existing case-based learning sessions - Strengthening QI project guidance in relation to SH to support experiential learning.

CONSEQUENCES: Our approach to embedding SH within our UPC curriculum involves systematic mapping and consulting with key stakeholders to identify and build on existing strengths. Our digital learning provides students with scaffolding of SH concepts that they can then apply during clinical case-based learning and during assessed, community-engaged real -world projects, equipping them with the knowledge and skills to practice sustainable healthcare. Our next steps include developing and evaluating these aspects further in partnership with GP tutors and students, ensuring our SH curriculum is informed by the perspectives of community members and strengthening faculty development in SH to support student learning. We will continue engaging with wider stakeholders to embed sustainable healthcare as a key theme. We hope our work

may be of value to others seeking an approach to strengthen SH in the undergraduate medical curriculum.

Funding Acknowledgement:

2B.4

How valuable are online tutor-led small group teaching of prescribing knowledge and skills, and interpreting investigation results for geographically dispersed final year medical students on a primary care clinical attachment?

Presenter: Nicola Buxton

Co-Authors: Sana Javed, Hayley Parkes, Sheila Uppal, Nicola Buxton

Author institutions: Institute of Medical and Biomedical Education, St George's University of London, London, UK

Abstract

PROBLEM: General practitioners (GP) spend considerable time prescribing medicines and interpreting laboratory investigations; these crucial parts of primary care are often invisible to students. Our literature review confirmed this and highlighted a deficit of undergraduate teaching in these areas in primary care. We devised teaching sessions to develop these skills in prescribing and interpretation of clinical results during a final year primary care placement.

APPROACH: We constructed two online primary care case-based teaching tutorials relating to prescribing and investigation of disease for final year medical students. Scenarios were aligned to United Kingdom curricular and assessment standards with a robust peer-review process for content and standard. Case-based discussions, single-best answer questions and short answer questions were offered, with resources on the virtual learning platform. Teaching was delivered by faculty GP tutors to small groups. Sessions were evaluated using a mixed methods approach in the form of a written digital feedback survey with Likert scales and free text.

FINDINGS: 43 (17%) of 253 student attendees responded to the survey, with 86% of respondents pre-preparing for the session. 65% and 63% of respondents respectively rated the investigation and prescribing tutorials to be of high or very high value in preparing for Foundation practice. 72% and 78% of respondents, for investigation and prescribing tutorials respectively, rated the sessional content to be of sufficient or high academic challenge, and over 90% of respondents thought both tutorials should be continued. 62% of respondents appreciated teaching by the University whilst on remote clinical placement.

CONSEQUENCES: This new online teaching delivers enhanced student knowledge, skills, and preparation for postgraduate practice and is highly valued by students. Learner challenge, prospectively mapped to UK graduation standards, was judged to be appropriate. The online tutorial format with Virtual Learning Environment material facilitates sustainable reproduction without detracting from clinical placement time. Student interaction with the institution during remote placement is an added benefit, helping to promote student-institution association.

Funding Acknowledgement: N/A

2C.1

Enhancing long COVID care in general practice: a qualitative study.

Presenter: John Broughan

Co-Authors: John Broughan J1, Emīls Sietiņš2, Ka Yuet Emily Siu2, Nia Clendennen2, 3, Claire Collins4, 5, Ronan Fawsitt2,6,7, John S Lambert2,8,9, Stefano Savinelli2,10, Stephanie

Skeffington2, Geoff McCombe2, Walter Cullen2.

Author institutions: 1 Clinical Research Centre, School of Medicine, University College Dublin, Dublin, Ireland. 2School of Medicine, University College Dublin, Dublin, Ireland. 3 The Coombe Family Practice, Dublin, Ireland. 4 Irish College of General Practitioners, Dublin, Ireland. 5 Department of Public Health and Primary Care, Faculty of Medicine and Health Sciences, Ghent University, Gent, Belgium. 6Castle Garde

Abstract

PROBLEM: Research suggests that general practice can play an important role in managing long COVID. However, studies investigating the perspectives of general practitioners (GPs) and patients are lacking and knowledge regarding optimal long COVID care in general practice is therefore limited. Thus, this study aimed to investigate the perspectives of GPs and patients on the topic of long COVID and its management in general practice.

APPROACH: A qualitative research design was used and was guided by the 'Standards for reporting qualitative research: a synthesis of recommendations' (SRQR). Brief questionnaires (GP n = 11, Patient n = 7) and in-depth semi-structured interviews (GP n = 10, Patient n = 7) were conducted with GPs and patients from Irish general practices during July 2022-January 2023. Interviews were conducted via telephone and audio recordings were transcribed. A phenomenological analysis involving reflexive thematic analysis and constant comparison techniques was adopted.

FINDINGS: GPs and patients indicated that structured, integrated, and collaborative care can help optimise long COVID management in general practice. Future research examining stakeholder's perspectives using larger and longitudinal samples is advised to enhance the generalisability of evidence in this area.

CONSEQUENCES: The study's FINDINGS: demonstrate the value of continued research in this area. Studies focusing on GP interventions to enhance long COVID diagnosis, monitoring, and treatment, as well as patient experiences, are recommended. Studies with larger and / or longitudinal samples are also advised, as are studies focusing on individual stakeholder groups' priority concerns (e.g., GP long Covid assessment, patient self-management of symptoms). The FINDINGS: also highlight the need for focused long COVID care policies, and physician readers may benefit from by incorporating recommended interventions into their routine long COVID care practices.

Funding Acknowledgement: We would like to thank the Health Research Board, the Ireland East Hospital Group, the UCD College of Health and Agricultural Sciences/School of Medicine and this study's participants for the important roles that they played in making this research project happen.

2C.2

Patient experiences of the long COVID–Optimal Health Programme: qualitative interview study in community settings

Presenter: Hiyam Al-Jabr

Co-Authors: Hiyam Al-Jabr 1,2, Karen Windle 3, Andrew Clifton 4, David R Thompson 5, David J Castle 6,7, Chantal F Ski 5

Author institutions: 1 University of Keele, Keele, UK, 2 Midlands Partnership University NHS Foundation Trust, UK, 3 University of Bradford, Bradford, UK, 4 University of Suffolk, UK, 5 Queen's University Belfast, UK, 6 University of Tasmania, Australia, 7 Centre for Mental Health Service Innovation, Australia

Abstract

PROBLEM: Long COVID (LC) is a multisystem disease that persists 12 weeks or more beyond the acute infection. To date, no

standardised diagnostic or treatment pathways exist. However, a holistic, person-cantered approach has been recommended to support people with this illness. Following this advice, we examine an optimal health programme tailored specifically for those with LC; the Long COVID Optimal Health Programme (LC-OHP). The LC-OHP was adapted from the Optimal Health Programme, a psychoeducational self-efficacy programme that has been used effectively for patients across number of chronic health conditions. This study aimed to explore the views of using the LC-OHP, by patients with LC, to promote understanding of their experience and identify any suggestions to further improve the programme.

APPROACH: This study is part of a wider feasibility, randomised controlled trial (n=60) of the LC-OHP. Eligible participants were 18 years old and above, who were diagnosed with LC. Using semi-structured interviews, we examined the experiences of those randomised to the intervention group, with using the LC-OHP. The LC-OHP comprised five sessions plus a booster session. Interviews were conducted post-completion of all programme sessions. Qualitative interviews were conducted by an independent researcher, were audio recorded, transcribed verbatim and thematically analysed to identify common, emerging themes.

FINDINGS: Eleven participants were interviewed; they were mostly females of White British ethnicity (n=10, 91%). Overall, FINDINGS: highlighted the benefits of the programme and tangible ways to improve support provided to people with LC. Five main themes were identified: 'benefits of the LC-OHP', 'Programme materials, delivery logistics and relevance to LC', 'suggestions for improving the programme', 'Future potential of the LC-OHP', and 'other LC supports'. The programme demonstrated potential for assisting patients in the management of their LC associated symptoms, including their physical and mental wellbeing, and in regaining a level of control to better support their recovery. Participants found the programme to be flexible and provided several suggestions on adapting the programme for future users (e.g., adding few more detail on certain aspects) and on its delivery (e.g., consider group discussions). Recognising the heterogenous pleomorphic nature of LC, participants emphasised the importance of communication skills by practitioners as well as the implementation of personalised care that could meet the needs of individual patients. Programme educational and support resources were welcomed and described as relevant to LC and written and presented in a LC-friendly way.

CONSEQUENCES: Study FINDINGS: reflected positive experiences and acceptability of using the LC-OHP. The programme demonstrated several benefits related to supporting physical and mental wellbeing of those with LC especially in regard to its adaptable and holistic nature. Suggestions to further adapt the programme to LC and improve its delivery will be considered in future trails.

Funding Acknowledgement: This work was funded by the Mental Health Alliance (East Suffolk, West Suffolk and North East Essex) Board, grant number SIV02/0000555 and was sponsored by the University of Suffolk.

2C.3

Accessing healthcare for Long COVID in the UK: A secondary analysis of two qualitative data sets

Presenter: David Blane

Co-Authors: Susan Browne, Yvonne Cunningham, Jane Ormerod, Chris White, Tracy Ibbotson, Kate O'Donnell

Author institutions: General Practice and Primary Care, University of Glasgow, Long Covid in Scotland.

Abstract

PROBLEM: Access to primary healthcare has undergone significant changes during and since Covid-19, coinciding with the emergence of a new illness, Long COVID. There is a lack of knowledge regarding how these two developments intersect and what implications they have for the healthcare of individuals with Long COVID. Our aim was to explore the healthcare-seeking experiences of people living with Long COVID.

APPROACH: This work draws on qualitative components of two recent studies. The Long COVID in Scotland study (CISS) recruited Scottish adults who had a positive COVID-19 test and a sub sample of participants (N=45) took part in one or two in-depth interviews (N=63 interviews) exploring the impact of ongoing symptoms on daily life. The ReDIRECT RCT evaluated whether a UK-based, remotely delivered, evidence-based, cost-effective weight management programme improved symptoms of Long COVID in people with overweight/obesity. A process evaluation interviewed participants (N=35) once, twice or three times (N=66 interviews) to explore the experience of the intervention and Long COVID more generally. Both data sets contain accounts of accessing primary care. A total of 129 interviews were

FINDINGS: Participants from both studies reported significant symptom burdens from Long COVID yet contact with primary care was minimal. Accessing appointments proved difficult, sometimes impossible, due to limited availability. Appointments appeared to be reserved for 'urgent' issues and people felt they had nowhere to go with chronic symptoms. Face-to-face consultations were rare, with communication mainly via email or phone. Continuity of care was an issue and people expressed frustration with repetitive symptom recounting and over prescribing of antibiotics by GPs. Many avoided seeking help, perceiving little assistance available. Those who did seek help described a disjointed response, feeling dismissed or 'gaslit' by GPs, trapped in a cycle of inconclusive tests and consultations. Many felt their GPs were uncertain about how to treat them and there were few services that GPs could refer to. Long COVID clinics offered limited support and GPs appeared hesitant to intervene. Effective treatment remained elusive, compounded by reluctance to consult due to past dismissals and unfruitful investigations.

CONSEQUENCES: Routes of access to primary care have changed for everyone in recent years, requiring people to be aware of, and adhere to, new requirements for obtaining appointments, such as phoning reception at 8 am. The difficulties in accessing care are exacerbated for those with debilitating symptoms, including fatigue, who are experiencing new and confusing symptoms that often do not meet the criteria for obtaining an appointment. Changes to appointment systems and appointment allocation must consider the capacity of those with this new, chronic condition to engage with these systems. GPs require support to better understand how to support patients living with Long COVID.

Funding Acknowledgement: Funded by CSO Scotland

2C.4

Primary care gatekeeping during the Covid-19 pandemic: A survey of 1234 Norwegian regular GPs

Presenter: Børge Norberg

Co-Authors: Linn Getz, Bjarne Austad

Author institutions: NTNU (Norwegian University for Science and Technology), NSE (National Centre for e-health research)

Abstract

PROBLEM: How this fits in GPs play an essential role as gatekeepers in protecting secondary health services in the Nordic

healthcare system, but there is sparse research about this role during a public health crisis. This paper shows how GPs triaged and managed suspected Covid-19 patients and handled other patients during the first societal lockdown in Norway in Spring 2020. The vast majority were managed in primary care, and only 3.6% of suspected cases were admitted to hospitals, indicating well-functioning protection of hospitals. In 9% of non-Covid-related consultations, the GPs were concerned about delayed treatment for patients with potential severe diseases. The FINDINGS: highlight the value of strong primary health care. Background In the Nordic healthcare systems, general practitioners (GPs) regulate access to secondary health services as gatekeepers. Limited knowledge exists about the gatekeeper role of GPs during public health crises seen from the GPs' perspective. Aim To document GPs' gatekeeper role and organisational changes during the initial Covid-19 lockdown in Norway.

APPROACH: Method A cross-sectional online survey was addressed to all regular Norwegian GPs (n = 4858) during pandemic lockdown in spring 2020. Each GP documented how patients with potential Covid-19 disease were triaged and handled during a full regular workday. The survey also covered workload, organisational changes and views on advice given by the authorities.

FINDINGS: Results A total of 1234 (25%) of Norway's GPs participated. Together, they documented nearly 18,000 consultations, of which 65 % were performed digitally (video, text, and telephone). Suspected Covid-19 symptoms were reported in 11% of the consultations. Nearly all these patients were managed in primary care, either in regular GP offices (56%) or GP-run municipal respiratory clinics (41%), while 3.7% (n = 73) were admitted to hospitals. The GPs proactively contacted an average of 0.8 at-risk patients per day. While 84% were satisfied with the information provided by the medical authorities, only 20% were able to reorganise their practice in accordance with national recommendations.

CONSEQUENCES: Conclusion and implications During the early stage of the Covid-19 pandemic in Norway, the vast majority of patients with Covid-19-suspected symptoms were handled in primary care, thereby protecting secondary health services from potentially detrimental exposure to contagion and breakdown of capacity limits.

Funding Acknowledgement: NTNU, NSE It is sent to BJGP Open

2C.5

Assessing the feasibility of an educational trial to promote long COVID management in general practice: a study protocol.

Presenter: John Broughan

Co-Authors: John Broughan1, Geoff McCombe2, Claire Collins3,4, Orla Doyle5, Walter Cullen2

Author institutions: 1 Clinical Research Centre, School of Medicine, University College Dublin, Dublin, Ireland. 2School of Medicine, University College Dublin, Dublin, Ireland. 3 Irish College of General Practitioners, Dublin, Ireland. 4 Department of Public Health and Primary Care, Faculty of Medicine and Health Sciences, Ghent University, Gent, Belgium. 5 School of Economics, University College Dublin, Dublin, Ire

Abstract

PROBLEM: Research suggests that general practitioners are well positioned to address the challenges of Long COVID. Still, studies that have systematically evaluated GP-based long COVID interventions are lacking. The study outlined in this protocol aims to address this issue. The study will evaluate the feasibility of a co-designed educational trial that aims to promote best practice for the management of long COVID in GP settings.

APPROACH: A mixed methods design informed by the MRC's 2021 framework for developing and evaluating complex interventions will be used. A stepped approach involving ongoing stakeholder consultation, intervention co-design, implementation, and evaluation processes will take place, and the intervention will be evaluated in terms of its feasibility as per Bowen et al.'s feasibility study framework. The educational intervention will involve providing GPs with a long COVID toolkit for reading, the opportunity to attend a long COVID themed educational webinar, academic detailing, and GP case reviews of long COVID patients attending their practices.

FINDINGS: The study's FINDINGS: will demonstrate the intervention's feasibility as per Bowen et al.'s feasibility framework under eight dimensions: Acceptability, Demand, Implementation, Practicality, Adaptability, Integration, Expansion, and (limited) Efficacy. Evaluation of these dimensions will be illustrated by quantitative and qualitative outcomes pertaining to practice and patient level study recruitment and retention data, intervention co-design focus group transcripts, baseline GP / Practice (n=6) and patient (n=48) characteristics, long COVID patient scores on the COVID-19 Yorkshire Rehabilitation Scale, and post intervention qualitative interviews with GPs.

CONSEQUENCES: The proposed study will aim to make a meaningful contribution to emerging research, policy directives, and clinical practice initiatives around the topic of long COVID management, especially in general practice settings.

Funding Acknowledgement: We would like to thank the Health Research Board, the Ireland East Hospital Group, the UCD College of Health and Agricultural Sciences/School of Medicine and this study's participants for the important roles that they played in making this research project happen.

2D.1

Social media for dissemination of research evidence for health and social care practitioners: a systematic review and meta-analysis

Presenter: Dr Sarah Roberts-Lewis

Co-Authors: Dr H Baxter, Ms G Mein, Ms S Quirke-McFarlane, Dr F J Leggat, Ms H M Garner, Ms M Powell, Dr S White, Professor L Bearne

Author institutions: St George's University of London, National Institute of Health and Care Research (NIHR); St George's University Hospitals NHS Foundation Trust, University of Bristol

Abstract

PROBLEM: Evidence-based practice is known to improve healthcare performance. However, busy practitioners are often limited in their ability to engage with research evidence. Social media has potential to facilitate the rapid dissemination of research evidence to healthcare practitioners, but its effectiveness is largely unknown and has not been tested quantitatively by meta-analysis. The aim of this systematic review was to evaluate the effectiveness of social media as a way to disseminate research evidence to health and social care practitioners.

APPROACH: The design and interpretation of this systematic review was informed by patient and public involvement including consultations with stakeholders and a steering group including health and social care practitioners, educators and patients. We searched electronic databases for articles in English, published between January 2010 and January 2023, that evaluated social media interventions for disseminating research evidence to qualified, post registration health and social care practitioners. Outcomes were grouped into four domains (reach, engagement, direct dissemination, impact). Screening, data extraction and risk of bias

assessments (using the Cochrane tool for assessing risk of bias and the Newcastle-Ottawa Scale) were carried out by at least two independent reviewers. Meta-analyses of standardised pooled effects were carried out for between and within group effectiveness of social media and comparisons between social media platforms, formats and strategies. Certainty of evidence for the size of cumulative effects were assessed using the Grading of Recommendations, Assessment, Development, and Evaluations (GRADE) framework.

FINDINGS: In total, 6461 records were identified. Fifty mixed quality articles that were heterogeneous in design and outcome were included (nine were randomised controlled trials). No included studies tested dissemination of research evidence to social care practitioners. Included studies almost universally indicated effects in favour of social media interventions for dissemination to healthcare practitioners, although effect sizes varied. Cumulative evidence indicated moderate certainty of large and moderate between group effects of social media interventions on direct dissemination and impact respectively. After social media interventions, cumulative evidence showed moderate certainty of large within group effects on reach, engagement and direct dissemination and low certainty of a small within group effect on impacting thinking or practice. There was also evidence for the effectiveness of using multiple social media platforms (including Twitter and Facebook), images (particularly infographics), and intensive social media strategies with frequent, daily posts and involving influential others.

CONSEQUENCES: Social media is effective for disseminating research evidence to healthcare practitioners and should be used by researchers and practitioners to enhance research sharing. More intense social media campaigns may be more effective and different social media characteristics, including platforms, formats and strategies may enhance reach, engagement, direct dissemination and impact. Implications include our recommendations for effective dissemination of research evidence to healthcare practitioners.

Funding Acknowledgement: We would like to acknowledge the support of the National Institute of Health and Care Research (NIHR) and St George's University of London. This study presents independent research funded by NIHR evidence [2022/01]. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.

2D.2

How practice based research networks facilitate clinical drug trials in German general practice

Presenter: Nicola Schwager

Co-Authors: Christian Kretzschmann, Andreas Klug

Author institutions: Department of General Practice, University of Würzburg

Abstract

PROBLEM: German medical regulations lead to clinical drug trials, being the most resource-intensive research projects in primary care. The conduct of those trials is challenging and can test the commitment of general practitioners (GP) and their teams as well as patient care. Since 2020, practice-based research networks (PBRNs) have been established in Germany at a national and regional level to provide a high standard of support for collaboration between researchers and practice teams when conducting clinical (drug) trials.

APPROACH: The aim is to demonstrate how the implementation of PBRNs helps to facilitate the conduct of clinical drug trials in

German general practice and how the research infrastructure is used to support those involved using three examples

FINDINGS: Since 2020, three large-scale investigator-initiated randomized controlled trial (RCT) have been initiated within the PBRN networks. One RCT investigates prednisolone versus colchicine in patients with acute gout (COPAGO). It is a multicenter, pragmatic double blind RCT with a parallel group design that includes 314 patients. Another trial investigates safety and effectiveness of prednisolone and vitamin B1, B6, and B12 in patients with post-COVID-19-syndrome. PreVitaCoV is a multicenter, double-blind, placebo-controlled trial with a factorial design in which four parallel treatment groups with prednisolone and/or vitamins B1, B6 and B12 are tested. The sample size comprises 340 patients. The third drug trial is a participation in the Primary Care Adaptive Platform Trial for Pandemics and Epidemics, an international project (ECRAID Prime) involving 999 primary care patients with respiratory infections from six European countries. The aim of the RCTs is to find new therapies for patients with respiratory tract infections. The PBRNs provide regular training to qualify the practice teams in clinical trials and incentivises participation in both training and clinical trials. The infrastructure also facilitates the recruitment of GP practices to participate in clinical drug trial. The practices are involved in the conduct of RCTs to varying degrees depending on study design and study-related workload. Several tasks are performed by the infrastructure e.g. by supporting practices on site via flying study team.

CONSEQUENCES: Experience gained in these studies will be evaluated to determine which support was most successful in implementing clinical drug trials in German general practice. Implications for other countries such as the UK will be discussed.

Funding Acknowledgement: The Project is funded by the German Ministry for Education and Research

2D.3

A novel approach using machine learning to produce Living Evidence Maps for what works to reduce health inequalities in primary care

Presenter: Helena Painter

Co-Authors: Ofelia Torres, Helen Pearce, Jatinder Hayre, Lucy McCann, Heidi Lynch, John Ford

Author institutions: Queen Mary University of London, University of Cambridge

Abstract

PROBLEM: There has been a 300% increase in primary care inequalities studies in the last decade, with almost 3000 articles published last year. Systematic reviews, particularly on broad topics such as this, have a limited ability to synthesise this increasing body of literature in a timely fashion without going out of date. Innovative methods are needed to address this problem. Machine learning (ML) software can be used to regularly and accurately identify relevant literature to create living evidence maps. We aimed to create living evidence maps of interventions to address health inequalities in primary care to support the implementation of equity-focused policy and practice.

APPROACH: Six systematic reviews were used to train a ML algorithm, using EPPI-Reviewer software, to identify studies investigating what works to address inequalities in primary care. Additional studies were identified using network graph searches which use forward and backwards citation tracking and related article searches. The ML software prioritised potential studies in OpenAlex according to their similarity to the training material. The prioritised studies were screened on title-

abstract and full text, and manually coded for their intervention type, disadvantaged group and health and care outcomes. Additionally, as part of auditing the tool, manual searches for relevant studies were included and coded. Using EPPI-Visualiser software, the codes for interventions, disadvantaged groups and health and care outcomes were mapped to allow researchers to identify both evidence to inform practice, and gaps in the research. Evidence briefs, aimed at policymakers and practitioners, are then produced based on the living evidence maps. Our living evidence maps are published open access.

FINDINGS: We have included 329 systematic reviews (SR) and 3 umbrella reviews (UR). The disadvantaged groups with most publications were ethnic minority groups (n=210) and socioeconomically disadvantaged groups (n=118). The interventions with most publications included advice and counselling (n=162) and education (n=156). Outcomes most studied included behaviour change (n=98) and diabetes (n=86). Topic maps with the highest number of publications include advice and counselling interventions for ethnic minorities (SR = 107, UR = 2), education interventions for ethnic minorities (SR = 106), community and link worker interventions for ethnic minorities (SR = 86), and advice and counselling interventions for socioeconomically deprived groups (SR = 62, UR = 2). There was no evidence found for gypsy, roma or traveller communities; autism; or ADHD.

CONSEQUENCES: Our novel ML-driven living evidence maps generate a comprehensive evidence base, more efficient and up to date than traditional systematic reviews. These decrease time spent synthesising evidence, allowing efforts to be focused on action to reduce health inequalities. Our living evidence maps facilitate the production of evidence briefs for policymakers and practitioners, and identify evidence gaps for researchers and funders, highlighting opportunities to address primary care inequalities in research and practice.

Funding Acknowledgement: We received core funding for this work from NHS England East of England

2D.4

Optimising opportunities for capacity building within programme grants: the example of IMP2ART (IMPlementing IMProved Asthma self-management as RouTine)

Presenter: Stephanie JC Taylor

Co-Authors: Hammersley Victoria, Delaney Bridgid, Kinley Emma, Korell Barbara, McClatchey Kirstie, Uzzaman Nazim, Sheringham Jessica, Steed Liz, Pinnock Hilary.

Author institutions: Queen Mary University of London; University of Edinburgh; University of Sheffield; University College London.

Abstract

PROBLEM: Increasing exposure to research for undergraduates and postgraduates may help build research capacity and this is particulary important in disciplines where academics (both clinicians and primary care scientists) are under represented, such as primary care.

APPROACH: Throughout our NIHR Programme Grant IMP2ART (IMPlementing IMProved Asthma self-management as RouTine) (NIHR PGfAR RP-PG-1016-20008) we have sought opportunities to align student projects with our research. Our aim being to optimise the opportunities offered by a programme grant to involve students and build interest and capacity in applied health service research in primary care.

FINDINGS: Five years into the programme of work, a total of 22 students/trainees/registrars have been involved with, and contributed to, the IMP2ART research. This includes twelve

undergraduates (BMedSci/BSc/medical students), two MPH students, three Academic Clinical Fellows, and an international visiting PhD student who have undertaken projects nested in the developmental work, analysed process evaluation data and undertaken qualitative work with patients. The students have presented eight abstracts (four at international conferences) and contributed to eight papers (three as first authors) on IMP2ART-related topics.In addition, three PhD studentships (funded by CSO/THIS/UoE) have explored supporting self-management in remote reviews, the role of facilitation, and asynchronous consulting. Between them the PhD students have, to date, presented 21 abstracts, and published three first author papers. We are supporting IMP2ART early career researchers to apply for the newly-launched NIHR 'mid-programme development grants (PDGs)' exploring social media interest on World Asthma Day to inform patient resources, and the challenges of reducing inequity in provision of supported self-management.

CONSEQUENCES: Global health grants often include a budget for capacity building, enabling teams to allocate funded time for supervising student projects, developing on-line training modules to support future projects, or supervising on an aligned PhD student. This was rarely explicit within UK grants limiting the contribution specific research projects can make to capacity building. The newly launched NIHR PDGs are a welcome move towards an approach that embraces capacity building as the norm within research, as are other recent or forthcoming changes to NIHR Programme Grants and an increased recognition of capacity building across NIHR.

Funding Acknowledgement: The National Institute for Health and Care Research (NIHR) Programme Grants for Applied Research (Reference Number RP-PG-1016–20008). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

2D.5

IMPOSTER PARTICIPANTS IN QUALITATIVE RESEARCH: AN EVER- INCREASING CHALLENGE

Presenter: Lisa Shah

Co-Authors: Dr Sarah Hillman

Author institutions: University of Warwick

Abstract

PROBLEM: Recruitment and data collection in qualitative research have increasingly moved online after Covid-19. Remote data collection can be as rich as in-person approaches and has the benefit of increasing accessibility to underserved communities and saving time and cost to researchers.In our research about the experiences of menopause in underserved women, it became apparent there were imposter participants during recruitment and remote data collection. This compromised data was analysed within the team and was eventually excluded from the study. From scoping the literature, the issue of imposter participants in qualitative research is not new but is on the rise. There is a lack of guidance in how to tackle this increasing problem that needs to be addressed to optimise the trustworthiness of qualitative data. We aim to review current literature, share our reflections on the impact of imposter participants, highlight ethical considerations and create a toolkit that can be transferable to qualitative research in all settings.

APPROACH: We conducted a scoping review of imposter participants in qualitative research and realised this was a problem for nearby institutions. We reached out to qualitative researchers in primary care from the Universities of Oxford, Birmingham and Keele and have formed a cross-organisational steering group with PPIE members. As part of

our due diligence, the issue of imposter participants was highlighted to ethical committees.We aim to collate and reflect upon our experiences with imposter participants, discuss themes, and create a toolkit. We will highlight ethical considerations such as safeguarding and the balance between accessibility and gatekeeping in research methods.

FINDINGS: The first meeting for the steering group is scheduled in two weeks. The agenda for the meeting is to reflect on current literature and our experiences of imposter participants. We intend to meet monthly addressing a different aim within the project.As the group is cross-organisational, we have diverse experiences of this issue in academic primary care. We aim for the Findings to be published and shared within our networks to increase awareness of the issue with tangible considerations for future research practices.

CONSEQUENCES: From the literature, we know that imposter participants in qualitative research can significantly impact the trustworthiness of the data. It can negatively impact on the practicalities of conducting research such as finances, researchers time and effort, and feasibility of continuing a study.We aim to increase transparency and awareness of this ever-increasing problem in qualitative research through our shared experiences. We intend for the toolkit to be shared widely in our academic networks to minimise the impact of imposter participants on qualitative research methods. This is vital to optimise the trustworthiness of the data and to safeguard researchers and participants. We aim to highlight the ethical considerations and areas of future research.

Funding Acknowledgement:

2E.1

Cardiovascular and bone health outcomes in older people with subclinical hypothyroidism treated with levothyroxine: a systematic review and meta-analysis

Presenter: Mohammed Saif Farooq

Co-Authors: Mia Holley, Salman Razvi, Rosie Dew, Ian Maxwell, Scott Wilkes

Author institutions: Sunderland University, Newcastle University

Abstract

PROBLEM: Thyroid dysfunction is common in older people, with females at higher risk. Evidence suggests that thyroid stimulating hormone (TSH) naturally increases with age. Subclinical hypothyroidism (SCH) is diagnosed when serum thyroid-stimulating hormone levels are mildly elevated while free thyroxine levels are within normal range. With uniform TSH reference ranges across the adult lifespan, a diagnosis of SCH is more likely with increasing age. Patients with SCH are often prescribed levothyroxine. This review investigates the cardiovascular and bone health impacts of levothyroxine in patients over 50 years old with a baseline diagnosis of SCH.

APPROACH: Systematic review and meta-analysis. An advanced search function was performed across the Cochrane, Embase, Medline, PubMed, and Web of Science databases to collate previous studies that evaluated cardiovascular and bone health outcomes in SCH patients with and without levothyroxine, from inception until the 3rd of August 2023. The remaining studies were assessed using the Cochrane Risk of Bias tool for randomised controlled trials and the Newcastle-Ottawa quality of assessment for observational studies. The Grading of Recommendations, Assessment, Development and Evaluations (GRADE) tool was then used to assess the overall quality of each study. The results where then pooled by their odds ratios, using R-programming.

FINDINGS: Seven studies that recruited 5,887 participants, ranging from 45.4 to 80.1 years of age were selected. Six studies for cardiovascular outcomes were pooled for meta-analysis, there was no association between levothyroxine and cardiovascular outcomes in the SCH patients aged over 65 years [pooled OR 0.99; 95% confidence interval (0.74-1.11)]. The results also showed no association between levothyroxine use and bone health outcomes for SCH patients aged over 65 years [pooled OR 0.99; 95% confidence interval (0.52-1.88)]. No heterogeneity was found between the 6 cardiovascular and the 3 bone health outcome articles (I2 =0%).

CONSEQUENCES: We found no association between levothyroxine use and cardiovascular and bone health outcomes in SCH participants over 65 years, indicating that more studies are needed on levothyroxine and its implications on cardiovascular and bone health outcomes in the older population.

Funding Acknowledgement: This research is funded by a grant from the National Institute of Health Research Applied Research Collaboration for the North-East and North Cumbria and by a stipend from The Academy of Medical Sciences.

2E.2

How effective are stress management and relaxation interventions for the management of hypertension and pre-hypertension? A systematic review and network meta-analysis.

Presenter: Katie Webster

Co-Authors: Dr. Katie Webster, Dr. Monika Halicka, Dr Russell Bowater, Dr. Jelena Savović, Dr. Alyson Huntley, Ms. Sarah Dawson, Dr. Christopher Clark, Dr. Rachel Johnson, Professor Julian Higgins, Professor Deborah Caldwell.

Author institutions: NIHR Bristol Evidence Synthesis Group, Population Health Sciences, Bristol Medical School, University of Bristol. University of Exeter Medical School, University of Exeter.

Abstract

PROBLEM: Worldwide, hypertension affects more than 30% of people aged 30-79 years, and is a major risk factor for cardiovascular, cerebrovascular and peripheral arterial disease. However, relatively small changes in blood pressure are associated with better health outcomes. As such, hypertension is an important target for interventions to prevent cardiovascular morbidity and mortality. Although medication is a mainstay of treatment, non-pharmacological interventions such as lifestyle and behavioural changes, have long been recognized as an important adjunct in blood pressure control and are first-line recommendations for treatment by many international guidelines. A priority setting exercise including patients, researchers and healthcare professionals, identified stress management interventions as a top ten research priority for hypertension. In the UK, NICE has also recommended future research into relaxation therapies for hypertension.

APPROACH: We report a systematic review and network meta-analysis of stress management and relaxation interventions for hypertension and pre-hypertension. Eligible randomised controlled trials included adults (≥18 years) with hypertension (BP ≥140/90mmHg) or pre-hypertension (BP ≥120/80mmHg). Interventions include yoga, tai chi, mindfulness-based stress reduction, meditation and other stress-management interventions. The primary outcomes are systolic and diastolic blood pressure. No restrictions on blood pressure measurement protocol were imposed. Studies at low risk of bias (assessed using the RoB2 tool) will be quantitatively synthesised using a random effects network meta-analysis (NMA). NMA allows the comparative effectiveness of active

interventions to be estimated relative to every other intervention in the network, even in the absence of direct head-to-head studies. The development of this review was informed by consultation with public contributors with lived experience of hypertension. Input was sought to identify specific relaxation and stress management interventions to include, and to select important outcomes for managing hypertension.

FINDINGS: To date, we have extracted data from 182 included studies published between 1975 and 2023. Studies were conducted in 31 different countries, lasted from 1 to 36 months, and randomised almost 15,000 people. Common interventions were yoga, progressive muscle relaxation, biofeedback, device-guided breathing, music therapy, mindfulness and tai chi. Results from network meta-analysis of these studies will be presented at the conference.

CONSEQUENCES: Identification of effective non-pharmacological interventions for blood pressure control has the potential to improve blood pressure management – and consequently cardiovascular outcomes – for millions of people worldwide. The use of effective stress management techniques as an alternative or adjunct to conventional pharmacological treatments may empower people to manage their own blood pressure, and provide a novel, evidence-based approach for the management of hypertension in primary care. The results of this work may also inform future hypertension guidelines.

Funding Acknowledgement: This work was funded by NIHR.

2E.3

The association between skeletal muscle mass and blood pressure in the adult population: A systematic review

Presenter: Dr Gydhia Al-chalaby

Co-Authors: James Hill, Thomas Faulkner, Fiona Rowe, Nefyn Williams, Eduard Shantsila

Author institutions: University of Liverpool (Primary Care and Mental Health Department), University of Central Lancashire

Abstract

PROBLEM: Cardiovascular disease (CVD) is the leading cause of premature mortality worldwide. Hypertension is a major risk factor for developing CVD. Early identification of CVD risk factors is essential to improve health outcomes. Skeletal muscle mass (SMM) is a promising predictor of CVD outcomes. There is conflicting evidence about the strength and the direction of the association between SMM and blood pressure (BP). Therefore, this review aims to assess the association between SMM and BP in adults

APPROACH: This systematic review undertook a multi-database search of MEDLINE, PubMed, and Embase from the date of inception until the 19th of July 2023. It included observational and interventional studies which assessed the association between SMM (using clinically validated methods) and BP in adults with or without hypertension in any clinical setting. Muscular dystrophies and secondary sarcopenia studies were excluded. Full paper screening, data extraction and assessment of quality were independently undertaken by two reviewers. Due to the heterogeneity of included studies a vote counting, and narrative synthesis method were employed. Before commencing, this systematic review was registered on PROSPERO (project ID: CRD42023485314).

FINDINGS: “After duplicate removal, 3,091 studies were identified of which 12 studies were included. Out of the eight studies which reported an association between sarcopenia and BP; two found a positive association with hypertension, one found a positive association with systolic BP variability, one found a positive association with orthostatic hypotension, one found no association with

hypertension, two found a negative association with hypertension and one found a negative association with systolic BP. Out of the four studies which measured the association between SMM and BP (one study assessed both systolic and diastolic BP); one reported a negative association with hypertension, one reported a positive association with hypertension, one found a negative association with systolic BP and two found a positive association with diastolic BP.In conclusion, there are no established reference values for SMM. The studies used different methods to measure and report their FINDINGS: . It was also unclear whether all moderating factors have been considered, making it difficult to establish a consistent association".

CONSEQUENCES: The exact relationship between SMM and BP remains unclear. Few theories suggest that low SMM can cause insulin resistance and high arterial stiffness which contributes to raised BP (negative association). Others suggest that increased SMM causes left ventricular hypertrophy and activates the sympathetic nervous system, leading to elevated BP (positive association). Further research is needed to determine whether there is a link between SMM and BP, considering the wide variety of confounding factors that could influence the strength or direction of this relationship. Additionally, there is a need to establish benchmark SMM values and to validate these values across different adult populations based on age, gender and ethnicity.

Funding Acknowledgement: The authors have no funding to report.

2E.4

A scoping review of the evidence available for the training lay advocates on CVD prevention in ethnically diverse women in hairdresser and beauty salons

Presenter: Martha Goldring

Co-Authors: Martha Goldring*, Marjorie Lima de Vale Phd1 , Veline L'Esperance MSc1, Sarah Armes, Clare Coultas Phd1, Louise Goff Phd1, Ashlyn Mernagh-iles HND, Alexis Karamanos PhD1, Salma Ayis PhD1, Vasa Ćurčin, PhD1, Stevo Durbaba MSc1, Prerana Kaneri MSc, Mariam M

Author institutions: Department of Population Health Sciences, King's College London Leicester Diabetes Centre, University of Leicester

Abstract

PROBLEM: Deprivation and ethnicity are associated with adverse cardiovascular disease outcomes, and inequities in access to health care. Community-based training of lay health advocates or "health navigators" can facilitate equitable access to preventative care, as salons are a trusted community service and more accessible than a formal service. We aimed to map and summarise the evidence about training lay health advocates on CVD prevention and management which have predominantly targeted women from ethnically diverse communities, including formative phases, theoretical approaches, and evaluation.

APPROACH: The methodological framework was based on the guidance of Arksey and O'Malley, with incorporation of other relevant materials. PubMed, Web of Science, Embase, PyscInfo, Medline and Global Health were systematically searched from inception until 28/2/24, and reference lists of relevant articles were screened. The Reach, Effectiveness, Adoption, Implementation, and Maintenance framework was used to explore the potential training impact.

FINDINGS: Our previous search of 419 titles and abstracts screened for relevance in 2022 (will be updated to 2024), with eight meeting the inclusion criteria, all based in the USA. Two used formative phases to inform training

development, five studies referred to theoretical or conceptual frameworks and three described evidence of co-development with key stakeholders or experts within the community. Incentivisation was provided to lay health advocates in five of the studies.

CONSEQUENCES: Our literature review suggested that training salon-based interventions could increase access to preventative care and that formative research helped to refine the training content and mode of delivery. However, the reporting of formative research was inadequate, community participation varied considerably, conceptual frameworks about how change could be achieved were inconsistently applied, and there was inadequate process evaluation to understand the potential impact of salon-based training.

Funding Acknowledgement: Funding: National Institute of Health Research for Patient Benefit Programme (NIHR202769)

2E.5

Mixed methods evaluation of clients' experiences with a multi-component salon-based health promotion intervention: BELONG Study

Presenter: Afrin Khan

Co-Authors: Afrin Khan*, Marjorie Lima de Vale Phd1 , Veline L'Esperance MSc1, Sarah Armes, Clare Coultas Phd1, Louise Goff Phd1, Ashlyn Mernagh-iles HND, Alexis Karamanos PhD1, Salma Ayis PhD1, Vasa Ćurčin, PhD1, Stevo Durbaba MSc1, Mariam Molokhia, Phd1 and Seerom

Author institutions: King's College London

Abstract

PROBLEM: Women from ethnic minority and socio-economically disadvantaged backgrounds have a disproportionally higher prevalence of cardiovascular disease (CVD) and risk factors, and are less likely to access health screening. Hairdressing salons are trusted community assets, where projects with hairdressing and beauty salons have been successfully used for cardiovascular health promotion training in the United States but not in the UK to date.

APPROACH: The BEauty and health community LOuNGes (BELONG) study is exploring the feasibility of recruiting, training and retaining hairdressers in salons, supported by healthcare professionals at local GP practices in a novel health delivery partnership, to engage in health conversations that promote the uptake of NHS Health Checks in women in ethnically diverse neighbourhoods. Mixed methods evaluation will be carried out using pre-and post-questionnaires and focus groups/interviews. I. Pre & post-intervention-questionnaires will collect information on client's experiences with NHS health check; post-intervention questionnaires will also ask about client's interactions with health promotion information (e.g., health conversations, printed and digital educational materials). Clients will be purposively sampled from the post-intervention survey to represent a spread of ethnicity, age, and whether they had previously had an NHS Health Check before the intervention. II.We aim to recruit at least four clients from each salon (n=12) for the focus groups/interviews which will explore the clients' prior experiences of interacting with health care services as well as their engagements with the intervention. Consent for the research staff to contact clients for focus groups/ interviews will be collected when consent is obtained for the pre- and post- surveys These discussions will take place at a location of the client's choosing or remotely. Data from surveys will be analysed descriptively. Data from focus groups/interviews will be analysed using thematic analysis; a foundational analytic method in qualitative research that supports

the identification, analysing and reporting of patterns (themes) within data.

FINDINGS: We will report on the views and experiences of participating clients, examining their perceptions of cultural safety, competing priorities, engagement with healthcare services, and other practical issues that could affect the sustainability of this approach. The results will highlight the key barriers and enablers for clients to engage with a culturally accessible CVD prevention service model.

CONSEQUENCES: Establishing partnerships between health and community systems provides the potential for effective, equitable and efficient services that benefit patient access. Hairdressing salons are a powerful community asset that could facilitate CVD prevention services for women from ethnic minorities who are socioeconomically disadvantaged. Understanding the factors that may affect clients' willingness to engage in this model of healthcare delivery is also pertinent to understanding successful healthcare provision.

Funding Acknowledgement: National Institute of Health Research for Patient Benefit Programme (NIHR202769)

3B.1

Generalist redesign of primary healthcare for people living with multimorbidity: work from the TIMES study

Presenter: Molly Megson

Co-Authors: Molly Megson, Aidin Aryankhesal, Jess Blake, Andrea Hilton, Jayden can Horik, Chris Fox, Joanne Reeve

Author institutions: University of Hull, University of East Anglia, University of Exeter

Abstract

PROBLEM: People living with multimorbidity need a different type of healthcare. Single disease focused care, however well integrated/coordinated, leads to both overmedicalisation (burden) and under recognition of needs. We aim to describe the new complex intervention needed to deliver advanced generalist primary healthcare to this patient group. Past work, based largely on secondary analyses, developed a provisional logic model. Here, we critically examine front-line practice to understand the utility and gaps of our draft model.

APPROACH: Design: Normalisation Process Theory (NPT) informed analysis of front-line general practice to identify enablers and barriers to delivery of whole person, tailored care for people living with multimorbidity. Focused ethnography across 5 sites including observation of patient-facing care, staff interactions, and mini focus groups with staff and patients. 100 hours in the field. Two stage analysis: inductive thematic analysis (Braun&Clark) describing enablers/barriers to tailored care; NPT analysis of implications for draft logic model. Ethics: HCRW REC approval 22/WA/0148. Patients and carer representatives have been actively involved in all stages of the design, delivery and analysis of this work.

FINDINGS: Observed enablers/barriers related to 3 themes:

i) understanding the patient in context (communication and practical issues) ; ii) delivering tailored management (shared decision making and supportive collaboration); iii) learning from and evaluation of care (skills and culture).Critical comparison with our provisional logic model recognised 3 additional elements: the practical resources and skills needed to do this work confidently; active engagement of both patients/carers and multidisciplinary professionals to create and use tailored management plans; continuous fostering of/permission for a culture of tailored primary healthcare with permission to go beyond single disease care

CONSEQUENCES: Our work supports and develops our understanding of the advanced generalist complex intervention needed to deliver tailored healthcare for people living with multimorbidity. We describe how this can be delivered in practice: at patient, professional and organisational levels.This study allowed us to explore tailored care in depth. We are now undertaking a nationwide survey of GPs to re-examine our FINDINGS: in breadth.And so use all our FINDINGS: to inform development and testing of a new model of advanced generalist care for a specific group of patients living with multimorbidity – those living with dementia - TIMES. The TIMES study will examine tailored care in the management of sleep problems for people living with dementia or mild cognitive impairment.

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3B.2

The impact of living with multiple long-term conditions (multimorbidity) on everyday life – a qualitative evidence synthesis

Presenter: Emilia Holland and Lynn Laidlaw

Co-Authors: Dr Kate Matthews(1), Prof Sara Macdonald(2), Prof Mark Ashworth(3), Lynn Laidlaw(4), Kelly Sum Yuet Cheung(5), Dr Sebastian Stannard(1), Prof Nick A. Francis(1), Prof Frances S Mair(2), Rita Rajababoo(4), Saroj Parekh(4), Charlotte Gooding(1), Prof Nisree

Author institutions: (1)University of Southampton, (2)University of Glasgow, (3)King's College London, (4)Patient and Public Involvement (PPI) member, (5)University Hospital Southampton NHS Foundation Trust, (6)NIHR Applied Research Collaboration Wessex

Abstract

PROBLEM: Multiple long-term conditions (MLTCs), living with two or more long-term conditions (LTCs) and often termed multimorbidity, has a high and increasing prevalence in many countries with earlier age of onset in people living in deprived communities. A holistic understanding of the patient's perspective of the work associated with living with MLTCs is needed. The aim of this study was to synthesise qualitative evidence describing the experiences of people living with MLTCs in order to develop a greater understanding of the effect on people's lives.

APPROACH: Three concepts (multimorbidity, burden and lived experience) were used to develop search terms. A broad qualitative filter was applied. MEDLINE (Ovid), EMBASE (Ovid), PsycINFO (EBSCO), CINAHL (EBSCO) and the Cochrane Library were searched. We included studies where at least 50% of study participants were living with three or more long-term conditions and the lived experience of multimorbidity was expressed from the patient perspective. We excluded studies published before 2000 and those not in English. Screening and quality assessment (CASP checklist) was undertaken by two independent researchers. Line-by-line coding was undertaken in NVivo, and data was synthesised using an inductive approach. PPI input was included throughout the course of the study, from development of the research questions and search terms through to qualitative data analysis.

FINDINGS: In total 23010 unique studies were screened and 46 studies met the inclusion criteria. Eight themes of work (a term reflected in the sociological literature and preferred by PPI colleagues in this study to the word 'burden') emerged which characterised the impact of living with MLTCs: learning and

adapting (learning about LTCs and their management; physical and psychological adaptations including biographical work), accumulation and complexity (the additional work and complications associated with living with more than one LTC), symptoms, emotions, investigation and monitoring, health service and administration, medication, and finance. The quality of studies was generally high. All studies covered between five and eight of the eight themes. 41 of the included 46 papers had no PPI involvement reported and there were no clear PPI contributor co-authors. Reporting of PPI did not involve public contributors, often lacked detail and provided no evidence of the process or methods used.

CONSEQUENCES: This study found that multiple themes of work, many of which are reciprocally linked, influence the holistic lived experience for people living with MLTCs. The patient experience of living with MLTCs is determined by the unique combination of their long-term conditions within a personal context of numerous other wide-ranging factors. Much of this work, and the associated impact on patients, may be not apparent to healthcare staff unless specifically asked about. Current health services and policies are not meeting the needs of this growing group of patients.

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3B.3

Guilt, shame and the perception of being a burden among older adult with multimorbidity: a scoping review and qualitative exploration - The GLASS Study

Presenter: Tamsin Fisher

Co-Authors: Tamsin Fisher, Opeyemi Babatunde, Anne-Marie Boylan, Carolyn Chew-Graham, Shoba Dawson, Julia Hamer-Hunt, Stephanie Tierney

Author institutions: Keele University, University of Oxford, University of Bristol

Abstract

PROBLEM: Due to an ageing population worldwide, care for older adults has become a global challenge. For many older adults living with multiple long-term conditions (or multimorbidity), poor care coordination, and overwhelming burden related to the necessity of learning about, following self-management plans and necessary lifestyle changes can be further complicated by feelings of guilt and shame of being a burden to formal and informal caregivers. Objective: This study aims to develop a better understanding of how feelings and experiences of guilt, shame, and the perception of being a burden impact on older adults' health care interactions.

APPROACH: Three complementary research elements are being conducted: i) scoping review: involving a comprehensive search of databases (n=6) to identify relevant studies up to November 2022. Citations were independently screened by reviewers using pre-defined eligibility criteria (Protocol: Open Science Framework registry (https://doi.org/10.17605/OSF.IO/EKADQ). Extracted data were categorised and a map of existing knowledge and current gaps in literature is being profiled; ii) through interviews and focus groups, and using 'creative methods', we further explore older people's experiences of guilt, shame and self-perceived burden, and their impact on

healthcare use, self-management, and overall health. A public art gallery (virtual) will be developed, adding depth and richness to FINDINGS: ; iii) stakeholder engagement workshops will support co-design of strategies to reduce the potential impact of older adults' perceptions of being a burden on their overall health outcomes, and interactions with health services. Settings: This is a mixed methods study, based in primary care. Clinicians and patients with multiple long-term conditions formed an advisory group contributing to study design, interpretation, and dissemination of FINDINGS: Engagement and involvement of public members, in this project is being guided by the UK Standards for public involvement framework.

FINDINGS: : 9845 unique citations were screened in the review, 52 studies were included. Early FINDINGS: show that older adults with multiple long-term conditions experience self-perceived burden. Further health deterioration and failing to meet health /self-management goal(s) may lead to feelings of guilt, and shame which may not often be communicated to care givers and/clinicians. Analysis is ongoing. Full FINDINGS: will be presented at the conference.
CONSEQUENCES: There's need for awareness and strategies to strengthen support for the health and well-being of older adults with multiple long-term conditions in primary care. This may reduce health inequalities and enhance health and social-care delivery.

Funding Acknowledgement:

3B.5

Prevalence and pairs of long-term conditions in new presentations of breathlessness in primary care: a preliminary descriptive assessment using UK CPRD GOLD from 2007-2017

Presenter: Harini Sathanapally

Co-Authors: Urvee Karsanji, Claire Lawson, Michael Steiner, Rachael Evans, Jennifer Creese, Anvesha Singh

Author institutions: University of Leicester

Abstract

PROBLEM: Breathlessness is a complex symptom, with multifactorial aetiologies and associated with a high prevalence of underlying multiple long-term conditions (MLTC). Both breathlessness and MLTC have in turn been associated with increased health service utilisation and increased risk of adverse health outcomes. However, little is understood about the compounding effect of patterns of underlying MLTC's in patients presenting with breathlessness in primary care.

APPROACH: UK CPRD GOLD was used to identify adults with a first-recorded code for breathlessness (index) between 2007-17, and no known cardio-respiratory conditions (Asthma, COPD, Interstitial Lung Disease and Heart failure). To identify patients with non-infective causes of breathlessness only, patients who had a coded diagnosis of acute respiratory infection on the same date as their coded presentation with breathlessness were excluded. We sought to describe the prevalence of MLTC's (defined as the coexistence of two or more long-term conditions in the same individual) and the top five most prevalent pairs of pre-existing long-term conditions at index. Coded diagnoses of long-term conditions from CPRD with matched coded data from HES, were identified in accordance with those listed in the Cambridge Multimorbidity Score (CMS).

FINDINGS: There were 101,369 patients with a first-recorded code of breathlessness; mean age 58.1 years, 55.3% female, 22.7% from the least deprived (IMD= 5) and 16.5% from the most deprived areas (IMD =1). Hypertension (30.8%) was the most prevalent condition at the time of presentation, followed by depression (29.5%). 56.4% of patients suffered

with 2 or more LTC's. The top five most prevalent pairs of long-term conditions were:

1. Depression & Anxiety (13.7%)
2. Depression & Hypertension (8.5%)
3. Depression & Psoriasis/Eczema (7.6%)
4. Hypertension & Psoriasis/Eczema (7.3%)
5. Hypertension & Anxiety (6.3%)

Depression and Anxiety were the most prevalent pair of LTC's (13.7%) in our cohort, and affected a higher proportion of female patients (17.3%) compared to male patients (9.3%) .

CONSEQUENCES: Our preliminary descriptive Findings reiterate the significant burden of MLTC's in this group, and suggest there may be patterns of pre-existing MLTC's amongst patients presenting with breathlessness. Further work using latent class analysis is planned to identify any patterns in how MLTC's cluster together with interplay of individual demographic factors including ethnicity with intersectionality in this patient group, and identify any differences in diagnostic pathways, health service utilisation and outcomes.

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3B.6

Using normalisation process theory to evaluate the implementation of a comprehensive template to support personalised care for people with multiple long-term conditions

Presenter: Andrew Turner

Co-Authors: Andrew Turner1, Rachel Johnson1, Clare Jinks2, Mari Carmen Portillo3, Caroline Coope1, Alice Moult2, Kate Lippiett3, Dereth Baker2, Cindy Mann1, Krysia Dziedzic2, Zoe Paskins2, Simon Chilcott1, Grace Scrimgeour1, Chris Salisbury1

Author institutions: 1. Centre for Academic Primary Care University of Bristol, 2.School of Medicine Keele University, 3. Health Sciences University of Southampton

Abstract

PROBLEM: Increasing numbers of people live with multiple long-term conditions (MLTC). People living with MLTC report that their care is poorly co-ordinated and not sufficiently focused on what matters to them. Healthcare services are currently often organised around single conditions and are grappling with the challenge of configuring services to meet the needs of people with MLTCs.

APPROACH: The PP4M study evaluated the implementation of a comprehensive annual review template to promote personalised care for people with MLTC in UK primary care. The template was available to participating practices, along with implementation support that included resources explaining the intervention purpose and requirement of practices, researcher supported process mapping, IT support, training, and ongoing support for implementation processes. Normalisation Process Theory (NPT) is a framework to understand how innovations are implemented in healthcare settings. NPT was used to inform both the development of the implementation strategy and the qualitative evaluation of the implementation of the template.

FINDINGS: We will present methodological findings from using the relatively recently published 'normalisation process theory

coding manual for qualitative research'. The coding manual was designed to facilitate and streamline analyses guided by NPT, as well as link NPT concepts to realist evaluation methods. We describe, practically, how the coding manual was operationalised and how the analysis was conducted collaboratively within a multi-site team.

CONSEQUENCES: Critical reflection on how an NPT coding manual was used to analyse qualitative data about the implementation of an improved MLTC review template will be useful to other researchers conducting implementation studies, using NPT, and, or performing qualitative analysis collaboratively in multi-site teams.

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3B.7

What do primary healthcare professionals think of using artificial intelligence to make decisions with patients with multiple long-term health conditions?

Presenter: Jennifer Cooper

Co-Authors: Shamil Haroon, Krish Niranthakumar, Alex D'Elia, Niluka Gunathilaka, Sarah Flanagan, Tiffany Gooden, Sheila Greenfield,

Author institutions: University of Birmingham

Abstract

PROBLEM: Living with multiple long-term conditions (MLTC) is now the norm for over 50 year olds in the UK. Combining the richness of GP healthcare records data with artificial intelligence (AI) technologies may identify new strategies to improve lives for such patients who are typically systematically excluded from clinical trials. AI technologies are being rapidly developed for use in healthcare settings. We are developing an AI tool to support prescribing decisions in patients with MLTCs. However, the perspectives of the GPs, practice nurses, and pharmacists who may be expected to use these technologies have not previously been explored.

APPROACH: We conducted 20 1:1 half-hour interviews with GPs, practice nurses, and clinical pharmacists. Interviews were conducted using a topic guide to explore perspectives on the challenges of managing complex multimorbidity, current understandings of AI, and the principles of using AI in an example consultation involving prescribing a new medication to a patient who already has four long term conditions. Transcripts were analysed using Framework analysis.

FINDINGS: Clinicians find multimorbidity challenging. That complexity is driven not simply by the number of conditions a patient has but by patients' health literacy, lifestyle factors, and the challenge of applying multiple rigid guidelines to individual people's lives. Time pressures and lack of continuity are key organisational factors that will influence the potential success or failure of AI tools in clinical practice. Clinicians are very interested but sceptical about how AI may be used to support decision-making with patients with multimorbidity. Potential advantages include standardising good quality care and reducing human error. However, clinicians are concerned that use of AI in the consultation could impact on the doctor-patient interaction, and have unforeseen medicolegal and ethical implications.

CONSEQUENCES: Overall, clinicians feel AI tools could support but not replace expert clinical judgement in managing MLTC. An increasingly complex patient population combined with declining numbers of GPs means new strategies are welcome. However, AI tools built using healthcare data need to be developed in collaboration with clinicians and patients to ensure that they have a positive impact and do not worsen existing inequalities.

Funding Acknowledgement: NIHR

3C.1

Five year mortality of patients diagnosed with lung cancer within two years of a positive autoantibody blood test in a Randomized Controlled Trial.

Presenter: Francis Mair

Co-Authors: ECLS Investigators

Author institutions: Universities of St Andrews, Dundee, Glasgow Nottingham and Cardiff

Abstract

PROBLEM: Lung cancer is commonly diagnosed at a late stage, when five-year mortality rates remaining at over 90% are unacceptably high. To improve the poor prognosis, methods that detect lung cancer at an earlier stage, when it is more likely to be treated with curative intent, are required. Following the landmark National Lung Screening Trial, low-dose CT screening has been shown to detect cancers earlier and reduce lung cancer mortality by 20-25%. In 2022 the UK National Screening Committee recommended targeted lung cancer screening in people aged 55 to 74 years with a history of smoking. However, uptake by the public can be suboptimal because of lack of health insurance or low income, difficulties getting time off work, and low perceived risk . Moreover, the widespread adoption of low-dose CT screening is limited in many health systems by resource constraints, high false positive rates and concerns about overdiagnosis

APPROACH: ECLS (Early Diagnosis of Lung Cancer Scotland) was a pragmatic randomized trial involving 12 208 high-risk participants recruited through general practice and community-based recruitment strategies in Scotland. Recruitment occurred between April 2013 and July 2016 with follow up undertaken 60 months after randomization for each participant: adults aged 50–75 considered at increased risk of developing lung cancer compared to the general population. Our earlier publication from this trial reported outcomes after two years showing a significant reduction in late stage presentation, with a hazard ratio for stage III/IV presentation of 0.64 (95% CI 0.41–0.99), but no significant difference in lung cancer or all-cause mortality at 2 years follow-up. This presentation will present five year follow up per protocol analysis on lung cancer and all-cause mortality.

FINDINGS: 77 077 invitation letters were sent to people fulfilling the record search criteria from 166 general practices and 16 268 responded (21.1%). 12 241 were invited to an in-person screening appointment, and 12 208 were randomised and followed up. The recruitment rate of people identified as potential study participants from family practice records was 13.4%; and the recruitment rate from self-referral was 79.1%. Participant characteristics were balanced between the intervention and control groups . 28.5% of participants lived in the most deprived quintile in Scotland, the mean age at recruitment was 60.5 years (S.D. 6.58), and the mean pack years smoked was 38.2 (S.D. 18.58). The main findings are undergoing peer review by a major journal at present but will be available outside their embargo in time for the conference

CONSEQUENCES: Blood tests or other biomarkers could substantially reduce the number of people requiring imaging investigations depending upon where the cut-off for sensitivity and specificity is set. This may have globally significant implications for case finding and screening for lung cancer in people at high risk of the disease. Whether blood based biomarkers should be used as one method to reduce lung cancer mortality requires further elucidation

Funding Acknowledgement: Scottish Chief Scientist and Oncimmune.

3C.2

Comparing cancer stage at diagnosis between migrants and non-migrants: a meta-analysis

Presenter: Adam Harvey-Sullivan

Co-Authors: Sana Ali, Parveen Dhesi, Joseph Hart, Helena Painter, Garth Funston, Dominik Zenner

Author institutions: Queen Mary University of London, University College London

Abstract

PROBLEM: Migrants worldwide face significant barriers in accessing healthcare services; resulting delays in provision of healthcare can lead to poor health outcomes. Stage at diagnosis is a key factor in determining cancer survival. Delays in cancer diagnosis can result in detection at more advanced stage that is harder to treat. Factors such as linguistic, cultural, systemic, and socio-economic barriers risk delays in cancer diagnosis for migrants. This study aims to compare the differences in cancer stage at diagnosis between migrant and non-migrant populations, hypothesizing that migrants are less likely to be diagnosed at an early stage.

APPROACH: We conducted a systematic review with meta-analysis (PROSPERO CRD42023385332) following the PRISMA guidelines. Three databases (MEDLINE, Embase, and Web of Science) and grey literature were searched. Eligible studies were published from January 2000 to January 2023, conducted in OECD countries, focused on symptomatic primary cancer diagnoses, and compared stage at diagnosis among adult migrants with non-migrants. Quality assessment was performed using the ROBINS-I tool. Meta-analyses were performed using a random-effects model to calculate pooled odds ratios (ORs) comparing early-stage diagnosis in these populations.

FINDINGS: Our search strategy identified 11,549 articles. 41 studies met the inclusion criteria, and 34 were suitable for meta-analysis. Studies encompassed eight cancer types, eight countries and a variety of migrant populations. Overall, we found that migrants were significantly less likely to be diagnosed with early stage cancer compared to non-migrants (OR 0.85; 95% confidence interval (CI) 0.78-0.91). Stratified pooled estimates across seven cancer types consistently showed this association but it was statistically significant only for breast (OR 0.78; 95% CI 0.70-0.87) and prostate cancer (OR 0.92; 95% CI 0.85-0.99). Subgroup analysis by study location and migrant region or origin demonstrated variation but the overall trend of migrants being less likely to have early stage at diagnosis was maintained. Sensitivity analysis for imputed missing data and by cancer stage classification scheme did not change the interpretation of the outcomes.

CONSEQUENCES: Our results demonstrate that migrants are less likely to be diagnosed with early stage cancer compared with non-migrants. This inequality can be attributed to multiple barriers to healthcare access. Study heterogeneity is a significant limitation that we mitigated through stratification and sensitivity analyses. Variations by cancer type highlight that different cancer-, patient-, clinician- and health system factors can influence the diagnostic pathway for each

malignancy. Delays in cancer diagnosis for migrants have significant implications for clinicians and policymakers as late-stage diagnosis is not only associated with significant suffering, morbidity and mortality but also incurs greater healthcare costs. This underscores the urgent need for targeted interventions to improve early cancer diagnosis among migrant populations, such as culturally sensitive healthcare services, community outreach programs, and policy reforms to ensure equitable healthcare access.

Funding Acknowledgement: Doctors Harvey-Sullivan, Painter, Dhesi and Ali are NIHR-funded Academic Clinical Fellows in Primary Care.

3C.3

Deep transformer learning model for the diagnosis of suspected lung cancer in primary care based on sequential coded electronic health record data.

Presenter: Brendan C. Delaney

Co-Authors: Lan Wang, Younghua Yin, Ben Glampson, Robert Peach, Mauricio Barahona, Erik K Mayer.

Author institutions: Imperial College London, Departments of Surgery and Cancer, Mathematics

Abstract

PROBLEM: Lung cancer is the commonest cause of death from cancer in the UK, in large part due to its often-late stage of diagnosis. Only 4% of lung cancer patients present in primary care with 'red flag' symptoms such as haemoptysis. To diagnose patients at an earlier stage predictive models based on multiple symptoms are required. Existing epidemiological risk models do not consider the temporal relations expressed in rich sequential electronic health record data. Machine learning with deep 'transformer' models enable us to consider the sequential and timing aspects of the data in building predictive models. These models are the foundation of Large Language Models and 'generative-AI'. We aimed to build such a model for lung cancer diagnosis in primary care using GP Electronic Health record (EHR). APPROACH: In a nested case-control study within the Whole Systems Integrated Care (WSIC) NW London dataset, lung cancer cases were identified using Read CT v2 terms and control cases of either 'other' cancers or respiratory conditions. Sequential EHR data (diagnoses, symptoms, signs, referrals, test results, medication) going back three years from the date of diagnosis less the most recent 3 months were semantically pre-processed by mapping from more than 20,000 terms to 185. Analysis was performed using BERT (Bidirectional Encoder Representations from Transformers), a tool for deep learning with self-supervision and six layer by 12 attention heads. Fine tuning of the resulting 'MedAlbert' model was conducted with a Logistic Regression Classifier (LRC) head. Clustering of the final hidden vector CLS was explored using k-means. We split the data into 70% training and 30% internal validation. An additional regression model alone was built on the pre-processed data as a comparator. FINDINGS: Based on 3,303,992 registered patients from January 1981 to December 2020 there were 11,847 lung cancer cases of whom 9,629 had died. 5,789 cases and 7,240 controls were used for training and a population of 368,906 for validation. Our model achieved an AUROC of 0.965 (0.962, 0.969) with a Sensitivity of 81%, Specificity 95%, PPV 7.8% and NPV 98% based on the three year's data prior to diagnosis less the three immediate months before. The comparator regression model achieved a PPV of 6.1% and AUROC of 0.956 (0.952-0.959). Six clusters were identified in the model including known risk factors for lung cancer such as smoking history, respiratory conditions. In addition, diabetes, obesity and alcohol intake were features contributing to the risk model.

CONSEQUENCES: The QCancer Lung Model has a PPV of 1.34% at its maximum sensitivity of 77.3%. Capturing the subtle differences in presentations between cancer and non-cancer pathways to diagnosis enables much more accurate models. Future work will focus on external dataset validation and integration into GP clinical systems for evaluation.

Funding Acknowledgement: Cancer Research UK

3C.5

Creating robust safety netting systems to expedite cancer diagnosis: The progress of a phase III RCT

Presenter: Clio Evans

Co-Authors: Clare Wilkinson, Daniel Walker, Nic Nikolic, Annie Hendry and Stefanie Dis

Author institutions: Bangor University North Wales Centre for Primary Care Research

Abstract

PROBLEM: Early diagnosis of cancer in crucial to improving patient outcomes and has the potential to reduce NHS costs. With over 70% of cancers presenting in primary care and almost 50% of avoidable delays in cancer diagnosis occurring in primary care, it makes it a desirable setting to make improvements to diagnostic pathways. Evidence suggests that robust safety netting systems can lead to an improvement in patient outcomes and that avoidable harms can be mitigated by good communication among general practice staff and a supportive administrative system. It has been found that safety netting systems vary widely between general practices and improvements to these systems could ultimately reduce diagnostic error and delayed referral in primary care.

APPROACH: 'ThinkCancer!' is a theoretically driven, novel, complex behavioural intervention delivered to a whole practice team and consists of a series of online educational and quality improvement sessions, culminating in the design of a bespoke practice safety netting plan to support implementation and change.ThinkCancer! was rigorously developed and tested in a feasibility randomised trial in Wales which revealed that a whole practice workshop to expedite cancer diagnosis in primary care is timely and very much appreciated by general practices across Wales.

FINDINGS: from the feasibility study have informed progression to a phase III multicentre, pragmatic randomised controlled trial with embedded economic evaluation and process evaluation which will measure whether ThinkCancer! can really achieve earlier cancer diagnosis and whether it is cost-effective when compared to usual care. With the unit of randomisation being the general practice, the aim is to recruit 76 practices from across Wales and the North West region of England. FINDINGS: With phase III now in progress, all practices within the study sites have been approached and invited to participate. To date, a total of 88 practices have expressed interest in taking part and 38 of these (half of the target number of practices) have been recruited to the trial.ThinkCancer! is currently being delivered to several whole practice teams and those who have completed the series of sessions have created detailed safety netting action plans and have put in place the appointment of a cancer safety netting champion. Positive written feedback has been received from individuals who have taken part in the intervention.

CONSEQUENCES: ThinkCancer! is a tailored multidimensional educational intervention which can empower whole practice teams to create and actively engage in more robust cancer safety netting systems, with the potential to reduce delays in the diagnostic pathway and improve referral practices within primary care and ultimately patient survival.

Funding Acknowledgement: This study is being funded by Cancer Research Wales and North West Cancer Research

3C.6

Early cancer diagnosis and community pharmacy in deprived areas – an online survey

Presenter: Judit Konya

Co-Authors: Judit Konya, Rachel Winder, Chris Clark, Richard Neal, Gary Abel, Gianni Dongo, David Bearman, John Campbell

Author institutions: University of Exeter

Abstract

PROBLEM: The key to cancer treatment success and better clinical outcomes is early detection. Clinical outcomes of cancer are worse in deprived areas. The role of general practice is essential, as patients with symptoms that could potentially be symptoms of malignancy, and most commonly present in primary care. However, they may approach other healthcare providers first, for example, community pharmacies.Community pharmacies are accessible, and they are already contributing to relieving the pressure on general practice. The positive pharmacy care law states that in deprived areas, patient access to community pharmacies within a 20-minute walk is better, when compared to more affluent areas, and overall represents better geographical access when compared to GP surgeries.We are currently conducting a systematic review that summarises the evidence regarding the role of community pharmacy in early cancer detection. The current practice of community pharmacy staff in England is not well explored.

APPROACH: We designed an online survey for customer-facing community staff members, which is currently being piloted. The study aims to explore the current practice of community pharmacy staff when dispensing over-the-counter medication to customers for the treatment of symptoms that could indicate potential gastrointestinal, urinary tract, prostate or lung cancer. The survey was designed using the Qualtrics online survey tool.Objectives:

1. To conduct an online survey with customer-facing staff members in community pharmacies to explore their current practice regarding asking customers about their symptoms when they seek to purchase over-the-counter medication for symptoms that could be symptoms of cancer.

2. To explore factors relating to usual practice.

3. To explore if usual practice differs between deprived area-serving community pharmacies and more affluent area-serving community pharmacies.

4. To use FINDINGS: to inform future research needs about the role of community pharmacies in early cancer detection.

We will work together with Local Pharmaceutical Committees in Cornwall, Devon, Somerset and Greater Manchester to distribute the survey. They will e-mail the information to the NHS e-mail addresses of community pharmacies and the invitation will be then forwarded to customer-facing staff members' e-mail addresses.Given the exploratory nature of the survey, the key factor when considering sample size is the precision of any estimates of the percentages of staff asking about symptoms that could indicate cancer. With responses from over 450 pharmacies, the 95% confidence intervals on a percentage of 25% would be 21-29%.

FINDINGS: We will present preliminary results at the conference.

CONSEQUENCES: An online survey of community pharmacy staff is a not widely used research approach. Our FINDINGS: will inform the current practice of community pharmacy staff about their approaches to

explore potential cancer related symptoms when customers purchase over-the-counter medication. FINDINGS: will inform future research and policy making.

Funding Acknowledgement: This project is funded by the NIHR SPCR, Grant Reference Number 602.

3D.1

The impact of treatment burden on people experiencing homelessness

Presenter: Shona Mackinnon

Co-Authors: Hannah Scobie, Karen Wood, Yvonne Cunningham, Alessio Albanese, Richard Lowrie, Vibhu Paudyal, Andrea Williamson, Jane Moir, Andrew McPherson, Cian Lombard, Steven Ross, Adnan Araf, Helena Heath, Frances Mair

Author institutions: University of Glasgow, University of Edinburgh, University of Birmingham, NHS Greater Glasgow & Clyde, Simon Community Scotland, Birmingham and Solihull Mental Health NHS Foundation Trust

Abstract

PROBLEM: Treatment burden is the work people have to do to manage their health, and how this work impacts their wellbeing and ability to function. People experiencing homelessness often have disproportionately more health issues yet fewer resources and therefore agency to manage them. There is a paucity of evidence in this area but previous quantitative studies show high levels of mental /physical exhaustion related to self-management in this group, and significant impact on functioning/wellbeing. This research aims to better understand ways in which treatment burden impacts people experiencing homelessness, with a view to informing future healthcare models.

APPROACH: A qualitative data analysis of a pilot randomised controlled trial conducted in Glasgow and Birmingham. The PHOENIx intervention offered holistic support through weekly outreach visits by an NHS pharmacist prescriber and third sector homelessness worker in a community setting.Semi-structured in-depth interviews were carried out with 7 control and 19 intervention participants, as well as 14 key informant interviews with health professionals and stakeholders. Interviews were recorded, transcribed and analysed thematically using NVIVO 14, drawing on principles from Normalisation Process Theory (NPT).

FINDINGS: Both physical and mental workload were identified to be significant challenges - particularly related to multiple health and social care appointments. The workload of remembering appointments and arranging travel logistics (e.g. reliance on public transport), was substantial. The financial burden of appointment attendance was significant. This effect was greater for those with mental health and substance misuse issues. Insecure housing situations made access to services more difficult.Mental workload was exacerbated by feelings that the health system was unable to meet participants' needs. Participants reported stigma, lack of trust, and that their own needs or priorities were not understood or accounted for. Those with substance misuse issues felt excluded from mental health services until their substance misuse issues had resolved, despite feeling these were linked.Difficulties were reported in navigating the health system, which was particularly challenging following missed appointments. The mental/physical exhaustion related to treatment burden meant some struggled to engage in primary care or preventative services, and became increasingly reliant on emergency care services. This in turn was felt to have significantly impacted on health outcomes.

CONSEQUENCES: The co-designed PHOENIx intervention was described as addressing many of these issues, demonstrating the

importance of considering the specific needs of people experiencing homelessness when designing and delivering services. In particular, minimising appointment burden through integrated care approaches and utilising models that meet people's needs. For example, improving accessibility through drop-in approaches, providing transportation support and considering the intersection between mental health and substance misuse. Finally, it highlights the importance of relationships, continuity within services and building trust, and that services should be resourced to provide lasting support.

Funding Acknowledgement: National Institute for Health and Care Research (NIHR)

3D.5

Development of social risk screening tool for primary care: Systematic review and Delphi study

Presenter: Emma Parry

Co-Authors: Professor Ross Wilkie, Dr Kate Warren

Author institutions: Keele University, Royal Wolverhampton NHS Trust

Abstract

PROBLEM: Social determinants of health (SDOH) critically influence population and individual health outcomes. Despite this, information on individual-level social risks are not collected routinely in primary care. General Practice is often the primary contact point for individuals facing social issues. Enhancing information on individual social risks facilitates improved personalised care, targeted support for those with unmet social need, and better information for resource planning and policy decisions. Existing social risk screening tools are primarily designed for North American audiences. Our aim was to develop a screening tool through a systematic review of existing tools/questions and a Delphi study to identify acceptable questions for use in a UK setting.

APPROACH: 1) Systematic reviewWe searched English language literature using Medline, CINAHL, Embase, Web of Science, Social science and practice databases from 2002-2022 for questions/tools that collected information on people's social risk from the following pre-specified domains: finance, housing condition, homelessness, food security, transport, utilities, education, neighbourhood safety, social connectedness, childcare and employment. We excluded any questions/tools that were not relevant to UK settings.Each publication was reviewed to assess whether the 8 Gold Standard Steps of Measure Development (GSSoMD) were reported which included: generation of initial questions using experts, pilot testing, validity and reliability testing and reporting of psychometric properties. Questions/tools that were used for screening and met at least one step from the 8 GSSoMD proceeded to the Delphi study.2) The Delphi study consisted of 3 rounds with stakeholders (PPIE members, GPs, public health, social workers, allied health professionals and third sector workers). In each survey round, participants were presented with questions in each of the domains and were asked to rate or rank which questions they felt were most acceptable to ask in each domain. Each round led to item reduction and after the final round one question per domain remained.PPIEKeele PPIE members reviewed research questions, study design and survey instruments.

FINDINGS: 1) Systematic review106 studies were included after full text review, the majority from USA (n=84). Tools/questions were predominantly from hospital settings (n=37) and primary care (n=26). Screening was usually in written format (n=35), face-to-face (n=23) or electronic (n=19) and self-complete (n=44).2) Results from the Delphi study are currently being analysed. In total, 27 participants completed Survey 1, the majority

were aged 45-54 years (n=9), female (n=20) and white ethnicity (n=15).

CONSEQUENCES: Our 11-item, yes/no answer, evidence-based, social risk screening tool has been developed for use in primary care. It gathers comprehensive information on people's social circumstances. Where a need is identified people can be signposted to services or referred to social prescribers. Further research is needed to test reliability and validity of the tool, understand the extent of unmet social need and resource implications of screening.

Funding Acknowledgement: EP is funded by a National Institute for Health and Care Research (NIHR) Academic Clinical Lectureship CL-2020-10-001. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.

3D.6

Process evaluation for the Pharmacy Homeless Outreach Engagement Non-medical Independent prescribing Rx (PHOENIx) community pharmacy study

Presenter: Dr Shona Mackinnon

Co-Authors: Shona Mackinnon, Karen Wood, Yvonne Cunningham, Alessio Albanese, Richard Lowrie, Vibhu Paudyal, Andrea Williamson, Jane Moir, Andrew McPherson, Cian Lombard, Steven Ross, Adnan Araf, Helena Heath, Frances Mair

Author institutions: University of Glasgow, University of Edinburgh, University of Birmingham, NHS Greater Glasgow & Clyde, Simon Community Scotland, Birmingham and Solihull Mental Health NHS Foundation Trust

Abstract

PROBLEM: People experiencing homelessness (PEH) have complex health and social care needs, with the average age of death for PEH being 45 years old. PEH frequently use community pharmacies; however, evaluation of the delivery of a structured, integrated, holistic health and social care intervention has not been previously undertaken in community pharmacies for PEH. This study aims to explore participant, healthcare professional and stakeholder perceptions of the intervention and acceptability of trial procedures.

APPROACH: PHOENIx is a randomised pilot trial. 100 PEH, aged ≥18 years were recruited from a total of five community pharmacies in Glasgow and Birmingham. PHOENIx intervention included structured assessment in both community pharmacy and other venues, of health, housing, benefits and activities, in addition to usual care, through weekly visits lasting up to six-months. The evaluation of the intervention included qualitative interviews conducted with intervention participants (n=19), health professionals/ study staff (n = 7) and stakeholders (n = 9). Semi-structured interviews explored the perceived issues in providing health care for PEH, acceptability of trial procedures, and perceived barriers and facilitators of any future implementation of the intervention. Interviews were audio-recorded and transcribed verbatim. Data were analysed thematically with Normalisation Process Theory used as an underpinning conceptual lens.

FINDINGS: The overall perception of the PHOENIx intervention was positive, with a high level of support for the trial aims. Interviewees described the key issues in health care for PEH including services not being accessible, too complex to navigate and significant waiting times to access support. Optimal health care for PEH is described by participants as holistic, addressing physical, emotional and financial wellbeing. Intervention participants identified the perceived positive impacts of the intervention on their health and wellbeing including, changes to medication, a reduction or change

to substance use, improved access to health care and an overall feeling of support for physical, emotional and financial wellbeing. Intervention participants indicated that they would likely be willing to take part in a larger scale trial, as well as recommend the intervention to other PEH.Health care professionals working with the intervention and other key stakeholders reflected on the role NHS pharmacists can play in the support of PEH, and their ability to work in partnership with other services. Participants identified some potential barriers to future implementation including the challenge of obtaining sustainable funding for the intervention and other services providing support to PEH.

CONSEQUENCES: The PHOENIx intervention was deemed acceptable and perceived to have many perceived positive impacts. There is a high level of support for the PHOENIx intervention from both intervention participants and health care professionals/ stakeholders suggesting that if stop/go criteria for the pilot trial are met, including achieving the primary outcomes of the trial, then progression to a full-scale trial is merited.

Funding Acknowledgement: This research is funded by NIHR

3E.1

Parents' and carers' experiences of self-managing their child's constipation: An online survey and nested qualitative interview study

Presenter: Riya Tiwari

Co-Authors: Rachel Dewar-Haggart, Kate Henaghan-Sykes, Samantha Hornsey, Ingrid Muller, Juliette Rayner, Mark Tighe, Hazel Everitt, Miriam Santer, Leanne Morrison

Author institutions: University of Southampton; ERIC - The Children's Bowel & Bladder Charity; University Hospitals Dorset NHS Foundation Trust

Abstract

PROBLEM: Constipation affects 1 in 3 children in the UK. Symptoms can be distressing and have significant impact on the child's and parent/carer's quality of life. Managing symptoms early can reduce this impact. Parents/carers report reluctance to seek help from healthcare professionals and difficulty finding self-management support. We are conducting a UK-based needs assessment to inform the development of an accessible intervention to provide self-management support. Our key research questions are:

1. What are parents/carers' beliefs about their child's constipation and attitude toward existing support resources?

2. How are barriers and facilitators to self-management experienced by parents/carers and what does successful self-management look and feel like from their perspective?

APPROACH: This is a mixed methods study including survey and qualitative interviews.An online survey with parents/carers of children aged 6 months to 5 years has examined beliefs about constipation and attitudes toward existing support resources. The survey was distributed through charity partners, social media (free and paid advertisements) and community advertising (including nurseries, play centres). Semi-structured qualitative telephone interviews with a purposively selected sample of up to 30 survey respondents are being conducted to further explore barriers/facilitators to self-management and experiences of accessing support for their child's constipation. The survey content and interview topic guides were developed in collaboration with public contributors and charity partners. Interviews are audio-recorded, transcribed verbatim and analysed using Reflexive Thematic Analysis.
FINDINGS: Recruitment will be completed in

February 2024. To date 300 participants have completed the survey and 22 interviews undertaken. Line-by-line coding of interview transcripts has identified preliminary FINDINGS: centred on: parents/carers' need to feel heard and listened to when seeking primary care support; their active role in daily management and the impact this has on family routines; the role of stigma around poo; concern about the long-term impact of constipation on their child's development; the long-lasting process of noticing, navigating, and responding to the child's toileting or bowel patterns; emotional reactions to seeing their child struggle; and desire for an answer to their child's symptoms. Parents/carers report trying a range of management approaches and sources of support, but welcome a comprehensive resource that can provide practical support and management options in one place. Full results will be available at the conference. CONSEQUENCES: These FINDINGS: identify and prioritise the knowledge, tools and support parent/carers need to enable them to manage their children's constipation. This will inform the content and development of a new resource.

Funding Acknowledgement: NIHR-SPCR Project 632

3E.2

Protocolled nurse-led care improves asthma control in pediatric asthma patients in primary care.

Presenter: Sara Bousema

Co-Authors: Arthur M. Bohnen, Dimitris Rizopoulos, Marielle Pijnenburg, Patrick J.E. Bindels, Gijs Elshout.

Author institutions: Department of General Practice, Erasmus MC, University Medical Centre Rotterdam, Department of Biostatistics, Erasmus MC, University Medical Centre Rotterdam, Department of Pediatric Respiratory Medicine and Allergology, University Medical Centre Rotterdam

Abstract

PROBLEM: In children with asthma, daily symptoms and exacerbations have a significant impact on the quality of life of both children and parents. More effective use of asthma medication and, consequently, better asthma control is advocated, since both over- and undertreatment are reported in primary care. Trials in adults suggest that asthma control is better when patients receive a regular medical review. Therefore, protocolled care by the general practitioner may also lead to better asthma control in children. However, such protocolled care by the general practitioner may be time consuming and less feasible.

APPROACH: We conducted a cluster-randomized controlled trial in the Netherlands examining the effectiveness of nurse-led protocolled care for children with asthma in primary care. Children aged 6-12 years with asthma, using asthma medication and treated in primary care were eligible. Children were randomized in either the protocolled nurse-led care group or the usual care group. The follow-up time was 18 months. Data were derived from questionnaires, spirometry tests and consultations with a practice nurse. The data included patient characteristics, information on medication use, exacerbations and Childhood Asthma Control Test (C-ACT) scores, Pediatric Asthma Quality of Life Questionnaire (PAQLQ) scores and the results of spirometry tests.

FINDINGS: In this study, 49 practices in the provinces of Zuid-Holland, Utrecht, Brabant and Zeeland in the Netherlands participated. We included 90 patients; 51 were randomized in the protcolled nurse-led care group and 39 in the usual care group. The mean age was 9.6 years, and 63.3% of the total study sample included males. Asthma control improved significantly over time in the protocolled-nurse led care group as compared to the usual

care group. There were no significant differences in the number of reported exacerbations between the groups. Further analysis is in progress.

CONSEQUENCES: This study shows evidence that protocolled nurse-led care leads to better asthma control in children treated for asthma in primary care. Better compliance to the protocol could improve the outcomes even more.

Funding Acknowledgement: This study was funded by ZonMw

3E.3

Acne Care Online: optimising a digital behaviour change intervention to support self-management of acne in young people.

Presenter: Mary Steele

Co-Authors: Stephanie Easton, Rosie Essery, Mary Steele, Seb Pollet, Rebekah Le Feuvre, Julie Hooper, Charlotte Cairns, Nick Francis, Paul Little, Matthew Ridd, Alison Layton, Sinéad Langan, Andrew Thompson, Mahendra Patel, Adam Yates, Tracey Sach, Sophie Dove, Kate

Author institutions: University of Southampton, University of Bristol, Harrogate and District NHS Trust, London School of Hygiene and Tropical Medicine, Cardiff and Value University LHB, University of Bradford, Woodstock Bower Group Practice, Patient and Public Involvement Contributors

Abstract

PROBLEM: Acne is common and can have substantial impacts on quality of life. Despite evidence of effectiveness, adherence to topical treatments is sub-optimal, and oral antibiotics are commonly over-used. Young people often delay contacting health professionals, increasing risks of worsening acne or scarring. This study sought to maximise the acceptability, usability, and persuasiveness of a prototype digital intervention, Acne Care Online, that aims to support people with acne to obtain and use topical acne treatments appropriately.

APPROACH: Qualitative think-aloud interviews were conducted with a diverse group of young people with acne (13-25 years) to obtain in-depth, initial responses to behavioural techniques within Acne Care Online. Participants were recruited via mail-outs from six primary care practices and social media adverts on Facebook. Longitudinal interviews were also conducted to provide opportunity for independent use of the intervention for one week, to gain deeper insights into users' understanding of key messaging. Key stakeholders were also consulted for feedback, including public contributors and health professionals. A Person Based Approach was taken to modify the intervention between interviews. Interviews were recorded and transcribed, and a table of changes was used to record feedback and decisions. Changes were prioritised by their likelihood to influence key issues that behaviour change techniques should target. Interviews continued until no new concerns were being raised.

FINDINGS: : Fifty-three participants took part (69% female, 31% 13-15 years/69% 16-25 years, 62% white ethnicity). Overall, positive feedback was received, and intervention content and style were perceived as relatable. Participants valued the depth of information provided and the credibility of a resource developed by health professionals alongside shared experiences given by young people. Issues observed included lack of clarity around key messages, confusing navigation, and not knowing where to start within the website. This prompted changes such as the addition of: 'pop-ups' clarifying complex terms, personalised tailoring directing participants to relevant information, and improved navigation with the toolkit and main menu always accessible on each page. Other changes included adding information such as advice on

maintenance treatment to prevent acne returning and increasing the use of visual boxes to highlight important messaging. Subsequent interviews indicated that these changes were beneficial.

CONSEQUENCES: This extensive interview study provided insights into key psychosocial issues and preferences of young people with acne, including a need for easily accessible information. FINDINGS: have resulted in an optimised intervention, which is ready to be assessed for feasibility and effectiveness in a randomised trial. A process evaluation will further explore optimisation of the resource as well as dissemination plans to encourage wide use and uptake from young people across the UK. If effective, it is anticipated that various platforms will host the intervention to help improve acne management.

Funding Acknowledgement: This study is funded by NIHR Programme Grant for Applied Research NIHR202852.

3E.5

Understanding treatment adherence and help-seeking behaviours, and their relationship to outcomes in acne vulgaris: a mixed-methods systematic review

Presenter: Rosie Essery

Co-Authors: Emma Maund, Stephanie Easton, Mary Steele, Sebastien Pollet, William Price, Joanna Pang, Fathema Miah, Charlotte Cairns, Kelly Carden, Taeko Becque, Beth Stuart, Tracey Sach, Sophie Dove, Matthew Ridd, Kim S. Thomas, Ingrid Muller, Miriam Santer

Author institutions: University of Southampton, East Lancashire Hospitals NHS Trust, Southern Health NHS Foundation Trust, Queen Mary University of London, University of Bristol, University of Nottingham,

Abstract

PROBLEM: Acne is highly prevalent and often substantially impacts physical and/or mental health. Limited knowledge of evidence-based treatments alongside treatment adherence challenges can hinder effective acne management amongst young people. Understanding experiences of managing acne is vital for supporting effective treatment-seeking and adherence-related behaviours. This mixed-methods systematic review aims to collate existing evidence to inform interventions to address this. The qualitative aspect will update an existing qualitative synthesis of acne treatment experiences among 13-25 year-olds, caregivers, and health-professionals to identify the most salient issues. The quantitative element aims to synthesise evidence on factors associated with treatment adherence and help-seeking behaviours and how these relate to outcomes, to understand mechanisms through which these behaviours can be optimised. APPROACH: Medline, EMBASE, PubMed, PsychINFO and CINAHL databases were searched between 2019 and present for the qualitative literature update, and with no date restrictions for quantitative literature. Inclusion criteria were qualitative or quantitative studies that included 13-25 year-olds with acne, their caregivers or health professionals, or studies of multiple skin conditions if acne data could be extracted separately. Title and abstracts were independently screened by two reviewers, with subsequent full text screening completed by at least one reviewer, with a second independently reviewing at least 20% of records. Data were extracted, and quality appraisal completed using the Mixed Methods Appraisal Tool and checked by an independent reviewer. Qualitative and quantitative

Findings are being thematically synthesised - initially separately, then together if appropriate.

FINDINGS: 6 additional qualitative studies and 112 quantitative studies were identified for inclusion. Data extraction and synthesis is

ongoing and will be complete by the time of the conference. Preliminary review of the additional qualitative studies highlights experiences of frustration in consultation and treatment-seeking, and the perceived importance of communicative and respectful patient-professional interaction.

Findings also strongly reflect the common negative psychological consequences of acne and their impact on interactions with others, commonly leading to avoidance behaviours further exacerbating social challenges. Extraction of quantitative data is at earlier stages, but included studies are predominantly cross-sectional survey studies, with a smaller number of observational studies and randomised controlled trials.

CONSEQUENCES: Alongside evidence from qualitative interviews with young people, their caregivers and health professionals, these Findings inform the content of Acne Care Online, a digital intervention to support self-management for people with acne. Early insights highlight the importance of: tools and strategies for effective communication in acne consultations; support for managing the psychological consequences of acne to reduce potential negative impacts; and raising awareness around effective acne treatments. Furthermore, the findings provide insights into current behaviours and practices in the context of acne treatment-seeking that could shape recommendations for clinical practice, and will also inform how to effectively implement Acne Care Online within existing systems.

Funding Acknowledgement: Funded by NIHR PGfAR grant number: NIHR202852

3E.7

Capturing and reporting topical treatment use in children with eczema

Presenter: Katherine E. Memory

Co-Authors: Stephanie J. MacNeill, Matthew J. Ridd

Author institutions: Population Health Sciences Institute, Bristol Medical School, University of Bristol, Bristol, UK; Clinical Trials Centre, Bristol Medical School, University of Bristol, Bristol, UK

Abstract

PROBLEM: Topical therapies treat many dermatological conditions. With eczema, emollients and topical corticosteroids (TCS) prevent and treat flares. However, only 11/77 studies in the 2017 Cochrane Review of 'Emollients and moisturisers for eczema' reported on topical treatment use. Furthermore, multiple instruments exist, including electronic or self-report measures, with no clear consensus of how to use these. Using data from the Best Emollients for Eczema (BEE) trial, we aimed to compare different ways of capturing and reporting emollient and TCS use.

APPROACH: In BEE, 550 children were randomly allocated to use one type of emollient (lotion, cream, gel, or ointment) 'twice daily and when required' for 16 weeks. Parents completed weekly the Patient-Orientated Eczema Measure (POEM) and questions about topical therapy use. Two versions of topical treatment use questionnaires were used, both underwent Patient and Public Involvement (PPI) review, but Version 2 was tested more thoroughly with advisory groups using cognitive interviewing techniques. Version 1 asked parents to report treatment use on days 1 to 7, starting the day of randomisation. Version 2 asked parents to complete by day of the week (Monday to Sunday), starting the first Monday after randomisation. Analysis was descriptive with Chi-squared test for differences between groups.

FINDINGS: 450 participants provided ≥1 topical therapy use questionnaire and/or two consecutively paired POEMs. Overall,

questionnaire completion at weeks 1 and 16 were 84.7% (381/450) and 58.9% (265/450) for emollient use, and 94.2% (424/450) and 80.4% (362/450) for TCS use, respectively. In keeping with feedback that led to the change in questionnaire design (confusion about days of the weeks with number of days used), fewer emollient use questionnaires were completed by the 44.9% (n=202) participants given Version 1 ($p<0.001$). Completion of emollient use questions were 31.5% (1082/3434 patient-weeks) for Version 1 and 82.8% (3489/4216 patient-weeks) for Version 2. TCS use question completion were 82.8% (3489/4216 patient-weeks) for Version 1 and 82.3% (3468/4216 patient-weeks) for Version 2; no difference between versions ($p=0.52$). As part of this presentation, we will demonstrate different numerical and graphical ways of summarising topical treatment use and discuss their advantages and disadvantages.

CONSEQUENCES: Questionnaire completion for both emollient and TCS use decreased with time, but was higher for emollient use with the second version of the questionnaire. TCS completion was similar with both versions. When designing questionnaires, balancing the detail and complexity of questions is important, especially if being collected as process or secondary outcome measure. Numerous ways of summarising the same data can provide different information. Therefore, future collection and reporting of treatment use should reflect specific aims

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3F.1

Supporting self-management of low back pain with internet interventions in primary care (SupportBack 2): A nested qualitative study

Presenter: Adam Geraghty

Co-Authors: Adam W A Geraghty, Stephanie Hughes, Lisa C Roberts, Jonathan C Hill, Nadine E Foster, Lucy Yardley, Elaine M Hay, Gemma Mansell, Firoza Davies, Malcolm White, Paul Little.

Author institutions: University of Southampton, Keele University, The University of Queensland, University of Bristol, Aston University

Abstract

PROBLEM: Low back pain (LBP) is a highly prevalent symptom and a leading cause of disability globally. In a previous randomised controlled trial (RCT) we found the SupportBack internet intervention designed to support LBP self-management did not significantly reduce LBP-related disability over 12 months compared to usual care, regardless of whether the SupportBack intervention was supplemented by physiotherapist-led telephone support (SupportBack Plus). However, a health-economic evaluation found both SupportBack and SupportBack Plus interventions to be cost-effective, with the unsupported intervention 'dominating' usual care, meaning it was both more effective and less costly. The aim of the nested qualitative study was to explore participants' experiences of the interventions.

APPROACH: The SupportBack self-management internet intervention was co-designed with people experiencing acute and persistent LBP, focussed on physical activity and behavioural advice delivered through six weekly sessions. For SupportBack Plus, a brief physiotherapist telephone support protocol was added. People with back pain were recruited if they had consulted in primary care without indicators of serious spinal pathology.

The nested qualitative study involved telephone interviews with purposively sampled trial participants after 3, 6 and 12 months. Interviews were transcribed verbatim and thematically analysed.

FINDINGS: Forty-seven participants took part in the interviews (15 after 3 months, 14 after 6 months, and 18 after 12 months). Overall, most participants reported finding SupportBack easy to use, and many stressed the usefulness and importance of clear explanations and behavioural support. Those who had increased their activity to manage their LBP, suggested the reassurance provided facilitated their behaviour change. For those that did not increase their activity, some participants reported either being active already, or having tried many of the suggestions before without a positive impact. For those who reported reductions in pain, some suggested the intervention helped them to make the link between increased activity and sustained reductions in pain over time. Where this link could not be made experientially, either through trying activity and experiencing no benefit, or the presence of certain beliefs prohibiting engagement with activity, participants often reported little or no reduction in their symptoms. Generally, the telephone physiotherapist support was reported to be encouraging, reassuring, and enabling of additional tailoring of the SupportBack intervention.

CONSEQUENCES: The variety of experiences reported highlights the complexity inherent in the broad offer of internet-based self-management support for LBP in primary care. There is a need for further research to continue to inform targeting of these interventions to those most likely to benefit.

Funding Acknowledgement: This project was funded by the National Institute for Health Research (NIHR) Health Technology Programme (HTA, project number: 16/111/78). The views and opinions expressed therein are those of the authors and do not necessarily reflect those of the Health Technology Assessment Programme, NIHR, NHS or the Department of Health.

3F.2

What are patients' and primary care clinicians' views and experiences of using intra-articular corticosteroid injections for osteoarthritis? A qualitative interview study

Presenter: Andrew Moore

Co-Authors: Cecily K Palmer, Karen L Barker, Rachael Gooberman-Hill, Andrew Judge, Vikki Wylde, Michael R Whitehouse

Author institutions: University of Bristol, Oxford University Hospitals NHS Trust

Abstract

PROBLEM: Osteoarthritis is a leading cause of joint pain and disability. Intra-articular corticosteroid injections (IACs) are often used in primary care to provide short-term relief of osteoarthritis symptoms. However, limited evidence exists on their long-term efficacy and safety. As osteoarthritis rates rise, understanding patient and clinician perspectives becomes crucial for informing practice and policy recommendations. In this study we aimed to explore patients' and primary care clinicians' experiences and views about the use of IACIs for osteoarthritis.

APPROACH: Our qualitative study involved telephone/videocall interviews with 38 patients, 16 General Practitioners (GPs), and 3 First Contact Practitioners (FCPs) in 2021. A purposive sampling strategy was used to identify and recruit patients and clinicians from 10 primary care practices in the Southwest of England. Topic guides were developed in collaboration with clinical team members and Patient and Public Involvement and Engagement representatives. All participants provided written informed consent. Interviews were transcribed and analysed using an inductive thematic

approach with 25% of transcripts independently coded by a second researcher. The study received ethical approval in July 2020.

FINDINGS: Our analysis revealed six patient themes: variation in access, awareness of IACIs, views on risk and trust in GPs, perceived effectiveness, variation in effectiveness and duration, and seeking alternatives. Among GPs and FCPs we identified an overarching theme of caution and competence, encompassing eight subthemes including: confidence with procedures, risk concerns, training needs, uncertainty about evidence, technical issues, use in the osteoarthritis pathway, perceived benefits, and the potential for placebo effects. Key insights from the study included the variability in IACI access, which is linked to GPs' cautiousness and confidence. Caution is influenced by ad hoc training, concerns over risk of adverse outcomes, and a limited evidence base. In terms of treatment preferences, both patients and clinicians valued IACIs for improving quality of life and were an alternative to less desirable treatments. Finally, GPs tended to reserve IACIs as a last resort before considering surgery.

CONSEQUENCES: The study highlights a need for improved patient access to IACIs, with a focus on enhancing clinicians' confidence and competence in administering these injections. GPs tended to use IACIs as a last resort before considering surgery, which may mean that IACIs are not provided at the optimal time for achievement of patient benefit. It may be the case that many patients are towards the end of the inflammatory phase of osteoarthritis when they are offered IACs, therefore cutting short the potential benefit of IACIs to serve patients longer as an effective treatment against symptomatic osteoarthritis. GPs expressed concern that they lacked the necessary skills and confidence to administer IACIs, which suggests that there may be a potential role for FCPs to deliver treatment.

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3F.3

Can a multivariable prediction model identify anti-CCP positive individuals at risk of rheumatoid arthritis among those with non-specific musculoskeletal symptoms in primary care?

Presenter: Dr Heidi J Siddle

Co-Authors: Michelle Wilson, Jacqueline L Nam, Leticia Garcia-Montoya, Laurence Duquenne, Kulveer Mankia, Paul Emery, Elizabeth M A Hensor

Author institutions: University of Leeds, NIHR Leeds Biomedical Research Centre

Abstract

PROBLEM: A phase of immunologically imminent rheumatoid arthritis (RA) precedes the onset of clinical rheumatoid arthritis (RA), characterised by increased circulating anti-cyclic citrullinated peptide (anti-CCP) antibodies. Early identification in the pre-clinical phase of RA in primary care (PC), through targeted anti-CCP testing, could prompt secondary care referral for earlier diagnosis, achieving better long-term outcomes. This study aimed to develop a model identifying those likely to be anti-CCP positive amongst people presenting to PC with non-specific musculoskeletal symptoms.

APPROACH: Participants were recruited across the UK between 2014 and 2020 to the Leeds 'Co-ordinated Programme to Prevent Arthritis', a prospective, observational cohort study. Participants were aged ≥18 years who presented to PC with non-specific musculoskeletal symptoms and no history of clinical synovitis. Fifteen baseline predictors were considered: age; gender; smoking status; first degree relative (FDR) with RA; and patient reported pain in: neck; back; shoulders; elbows hips; wrists; thumbs; hand and/or fingers; knees; ankles; foot and/or toes. Participants were followed-up at 12 months to determine if they had developed RA. Analysis was performed in R. Variable selection was carried out via LASSO logistic regression. Model performance was assessed using area under the receiver operating characteristic curve (ROC AUC), decision curve analysis was utilised to assess clinical utility. Internal validation was carried out via 200 bootstrap re-samples with replacement to estimate corrected model fit estimates.

FINDINGS: Analysis included 6879 participants; 203 (2.95%) were anti-CCP positive. Thirteen predictors were retained (age and ankles omitted); scores for each predictor were: sex (male) [+3], FDR with RA [+3], smoking (ever) [+2], pain in back [-3], neck [-2], knee [-1], wrist [+4], foot/toes [+3], hand/fingers [+3], shoulder [+3], thumb [+1]. With a score of ≥11 (≥4% risk) for anti-CCP testing the ROC AUC was 0.65 (95% CI (0.61-0.69), corrected AUC=0.49). Choosing a threshold of 4% suggested that benefit of testing one anti-CCP positive patient is 24 times larger than the harm of testing one anti-CCP negative patient. Sensitivity and specificity were 38.42 and 81.88 and positive- and negative-predicted values were 6.06 and 97.76. The net benefit was 0.0040 (corrected=0.0026). This threshold resulted in 19% being tested, corresponding to 39% of all anti-CCP positive participants. Twelve-month follow-up data was available for 2480 participants, of those who would be tested using our model, 6.68% developed RA, compared with 1.94% if everyone was tested. Out of those tested who were anti-CCP positive 56.85% developed RA (amongst anti-CCP negative participants, 1.23% developed RA).

CONSEQUENCES: Targeted use of anti-CCP testing in PC may prompt earlier identification of people at risk of RA. A qualitative intervention development study with three sequential phases (IDEAS in Primary Care model; abstract submitted) has been undertaken to support clinicians using this prediction model, alongside heath economic modelling to explore potential cost-effectiveness.

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3F.5

Developing a novel intervention to support clinicians to identify people at risk of rheumatoid arthritis in primary care through targeted anti-CCP testing – what are the key considerations?

Presenter: Dr Heidi J Siddle

Co-Authors: Anna M Anderson, Stephen H Bradley, Caroline A Flurey, Suzanne H Richards

Author institutions: University of Leeds, University of the West of England Bristol

Abstract

PROBLEM: The early symptoms of rheumatoid arthritis (RA) are often non-specific. Correspondingly, delays in identifying RA in primary care are common. Anti-cyclic citrullinated peptide (anti-CCP) testing of

people who present to primary care with new-onset, non-specific musculoskeletal symptoms could help address this, as around one third who test positive for anti-CCP develop RA within a year. Inappropriate anti-CCP testing could have negative effects, so targeting anti-CCP testing is vital. This project aims to develop a novel intervention, the 'Improving iDEntification of rheumatoid ArthritiS (IDEAS) in primary care' (IDEAS-PC) model, to support clinicians to identify people at risk of RA in primary care through targeted anti-CCP testing.

APPROACH: This project is a qualitative intervention development study with three sequential phases. Phase 1 (completed)

• Semi-structured interviews with eight General Practitioners (GPs) and eight Musculoskeletal First Contact Practitioners (FCPs).

• Data were analysed using the framework method and Behaviour Change Wheel to develop themes and a list of candidate components for the IDEAS-PC model. Phase 2 (completed)

• Two workshops with three GPs and five FCPs.

• Data were analysed using content analysis to create a refined and prioritised list of components and inform the creation of an IDEAS-PC model prototype. Phase 3 (ongoing)

• Think-aloud interviews with six to twelve primary care clinicians to test the IDEAS-PC model prototype.

• Data will be analysed using a 'Table of changes' to enable the prototype to be iteratively refined.

A Project Advisory Group, involving Patient and Public Involvement representatives and professionals, are overseeing the study and contributing to the IDEAS-PC model development.

FINDINGS: : Four intersecting themes were developed from the Phase 1 FINDINGS: . 'Variations in current practice' is an overarching theme that highlights how clinicians' anti-CCP test requesting practices and other aspects of current RA diagnostic pathways vary widely. These variations appeared to underpin participants' differing views of the IDEAS-PC model. The following themes relate to additional factors that are likely to influence whether clinicians will use the IDEAS-PC model:

• 'Considering interpersonal influences across the whole healthcare system'

• 'Balancing potential benefits versus risks'

• 'Promoting access to and usability of the IDEAS-PC model' The Phase 1 FINDINGS: were used to develop a list of nine candidate components for the IDEAS-PC model. During the Phase 2 workshops four components were prioritised for inclusion in the IDEAS-PC model:

• Decision tool

• Guidance on using the decision tool and associated actions

• Evidence for the decision tool

• Patient education resources

CONSEQUENCES: Addressing unwarranted variations in primary care clinicians' anti-CCP test requesting practices is a priority. The IDEAS-PC model could be valuable for guiding targeted anti-CCP testing in primary care, but whether it is used in practice will depend on key considerations such as whether clinicians believe its benefits outweigh its risks and its usability.

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of the author(s) and not necessarily those of the NIHR, NHS or the UK Department of Health and Social Care.

3F.6

How can patient and primary care professional understanding of bone density (DXA) scans be optimised? Qualitative FINDINGS: from the INDEX study

Presenter: Chelsea Kettle

Co-Authors: Chelsea Kettle, Jo Butterworth, Jill Griffin, Beverly Henderson, Clare Jinks, Karen Knapp, Fay Manning, Laurna Bullock, Zoe Paskins

Author institutions: Centre for Musculoskeletal Health Research at Keele University, Midlands Partnership University NHS Foundation Trust, Exeter Collaboration for Academic Primary Care (APEx), University Hospitals Plymouth NHS Trust, Royal Osteoporosis Society, Keele University Research User Group, Faculty of Health and Life Sciences at Exeter University

Abstract

PROBLEM: Primary care is crucial to identifying, investigating, and managing people with, or, at risk of osteoporosis. Patient and primary care professionals (PCPs) report difficulty understanding dual-energy X-ray absorptiometry (DXA) scans and results, impacting decision-making about osteoporosis medicines. The Improving uNderstanding of bone DEnsity (dXa) scans (INDEX) study aims to explore patient and PCP understanding of DXA scans and results to identify opportunities to optimise DXA understanding.

APPROACH: Semi-structured think-aloud interviews with (1) patients attending DXA scans across 3 NHS sites and (2) PCPs that refer to, and receive results from, DXA services. Two Public Involvement meetings with people with osteoporosis shaped the study design, data collection materials, and early data interpretations. Interviews were transcribed verbatim and framework analysis is ongoing, sensitised by the common-sense model of illness self-regulation to explore how patients perceive, interpret, and respond to their condition.

FINDINGS: 28 patient (89.3% female; mean age of 67 years; 92.9% high health literacy) and 11 PCP (10 General Practitioners, 1 First Contact Practitioner) interviews have been completed. Recruitment is ongoing. Early analysis generated four themes relating to (1) the significance of bone health screening, (2) unmet information needs and the (3) consequences and (4) barriers and facilitators to addressing information needs. Patients had varying attitudes towards having a DXA scan. Some patients expressed apprehension about receiving DXA results whilst others described low concerns, often because 'higher priority' comorbidities were present that were perceived to be more 'important' or requiring more PCP attention.Unmet information needs were common; for patients these included (1) what DXA results meant, (2) treatment options and instructions and (3) ongoing osteoporosis management. PCPs also described unmet information needs regarding (1) who to target for osteoporosis screening, (2) medicine options and management, and (3) clinical report content. In result, patients reported consequences, with some describing anxiety from misinterpreting DXA results, causing them to look elsewhere for explanations. Also, PCPs reported reduced confidence communicating results and difficulties with clinical decision-making because of unmet information needs. Barriers to meeting information needs included DXA result content and delivery. Many patients with osteoporosis or osteopenia felt that written results (e.g. texts, clinical reports) were insufficient without further explanation and opportunities for questions. Likewise, PCPs described verbally communicating DXA results involving new diagnoses and/or medicine initiation. Often, patients wanted

but were unable to visualise their risk of osteoporosis due to the information provided. To address this, PCPs suggested inclusion of graphs within clinical reports to support DXA result communication.

CONSEQUENCES: The INDEX study highlights uncertainties about DXA among patients and PCPs and reveals opportunities to optimise understanding. FINDINGS: will inform coproduced resources to enhance DXA understanding, with the aim of supporting clinical and shared decision-making and osteoporosis medicine uptake.

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3F.7

Management of musculoskeletal pain in children and young people with mental health or neurodivergent comorbidity (CLIMB Study)

Presenter: David Jenkinson

Co-Authors: James Bailey, Faraz Mughal, Kate Dunn, Kayleigh Mason

Author institutions: Keele University

Abstract

PROBLEM: Previous research has shown children and young people (CYP) with a mental health condition or neurodiversity have higher rates of musculoskeletal pain than CYP without. There are currently no studies that investigated whether CYP with musculoskeletal pain are managed differently if they have a comorbid mental health condition or neurodiversity. The aim of our study was to investigate whether CYP with musculoskeletal pain are managed differently in primary care if they have comorbid mental health conditions or neurodiversity compared to young people with musculoskeletal pain only.

APPROACH: Data were obtained from national primary care records for patients aged 8-18 years in 2005-2019 with consultations for musculoskeletal pain (index date). Individuals consulting on or within the 2 years prior to the index date for depression or anxiety were categorised as having a comorbid mental health condition while consultations for autism spectrum disorder or attention deficit hyperactivity disorder were categorised as neurodiverse. A random sample of 25,000 CYP per calendar year was obtained. Management outcomes included referrals to secondary care, imaging and analgesia prescribed on or within 2 years of the index date. Robust Poisson regression estimated the relative risk of outcomes in those with musculoskeletal pain and comorbid mental health or neurodiversity versus musculoskeletal pain only. Models were adjusted for age, gender, region, ethnicity and deprivation, and are presented with 95% confidence intervals.

FINDINGS: 375,000 CYP were recorded with musculoskeletal pain. Compared to those with musculoskeletal pain only (median age 12, 47.9% female) individuals with comorbid mental health conditions were older and more commonly female (median age 15, 65.2% female) while those with neurodiversity were a similar age and more commonly male (median age 13, 17.9% female).Outcomes were common in those with musculoskeletal

pain only with 21.2% referred, 17.1% imaged and 33.7% prescribed analgesia within 2 years, although there were differences for those with comorbid mental health conditions (26.0%, 20.8% and 39.0%, respectively) and neurodiversity (26.6%, 17.5% and 29.2%, respectively).The adjusted risk ratios for those with comorbid mental health conditions compared to those with musculoskeletal pain only were 1.16 (1.10, 1.22) for referrals, 1.15 (1.09, 1.22) for imaging, and 1.06 (1.02, 1.10) for analgesia; and for those with neurodiversity compared to those with musculoskeletal pain only were 1.23 (1.18, 1.29) for referrals, 1.00 (0.944, 1.06) for imaging, and 0.939 (0.901, 0.978) for analgesia.

CONSEQUENCES: Musculoskeletal pain is managed differently in those with comorbid mental health conditions or neurodiversity. Individuals with comorbid mental health conditions were significantly more likely to be referred, imaged or prescribed analgesia with increased referrals, decreased prescribing of analgesia and no association with imaging for neurodiverse individuals. Determining differences in management is useful for healthcare planning to inform targeted and effective primary care.

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3G.1

Why didn't you just …. A workshop for early to mid-career researchers

Presenter: Richard Ma

Co-Authors:

Author institutions:

Abstract

Using a theatre and cabaret format, this workshop offers a supportive, non-judgmental environment for early to mid-career researchers to share experiences and learn from one another, and co-produce a song based on their experiences. Intended outcomes:

• Network with researchers of similar grades

• Share experiences and learn from one another

• Know how to access peer support, mentorship, financial and methodological resources

• Participants will contribute to rewriting the lyrics to a piece from a famous musical based on their experiences

• Contribute to healthy systems (of peer support and mentorship) and healthy people (supported and engaged) for better primary care research

We will use Theatre-in Education style (related to drama-based pedagogy) to deliver the workshop. Participatory arts-based approaches have been used in health research as a way of engagement with the public, co-creation and co-production. This method of research engagement and dissemination have been promoted by NIHR and Wellcome to make outputs more accessible and engaging. Theatre can evoke emotions and help participants identify with the characters and problems presented and might engage more fully in the discussion. The workshop will start with introductions and sketches for the first 10 minutes. The participants will have 30 minutes to discuss experiences and contribute to a "quick and dirty" thematic analysis. Themes might include: methods support, career progression, housekeeping issues and barriers to effective working. While some of us prepare the lyrics, we will present support and resources available to delegates from representatives including Becci Morris (10

minutes). At the end, participants are invited to listen to or sing along to a showtune with revised lyrics that they have co-produced (10 minutes). The workshop will begin with a few sketches performed by RM and SD. The sketches will give some examples of common barriers and frustrations experienced by many early career researchers. The sketches are a light-hearted way to set the context and to stimulate reflection and discussions among the attendees. In their round tables, attendees are open to discuss their experiences with others. This may be an opportunity for attendees to learn from one another as they share experiences and top tips to avoid pitfalls and improve the experience of research. Using post-it notes, participants will be invited to post some of these experiences and tips along the lines of "Why didn't you just …". These notes will be posted on a board for workshop presenters to conduct a real-time thematic analysis and form the lyrics to a song. This workshop is aimed at early to mid-career researchers from any discipline, from both clinical or non-clinical backgrounds . More senior academics also welcome to share experiences and offer advice.

Funding Acknowledgement:

4A.1

Palliative Chemotherapy: what are the demographic, clinical and temporal factors associated with receiving chemotherapy in people who go on to die from cancer

Presenter: Sarah Mills

Co-Authors: Deans Buchanan, Peter T Donnan, Blair H Smith

Author institutions: University of St Andrews (University of Dundee)

Abstract

PROBLEM: The decision whether or not to prescribe chemotherapy for someone who is possibly or likely going to die from their cancer is complex and challenging. While it may extend quantity of life, chemotherapy often has a negative effect on quality of life. In this cohort of cancer decedents (people who went on to die from cancer) we examine what demographic, clinical and temporal factors were associated with whether or not patients received chemotherapy.

APPROACH: Retrospective cohort study of all 2,443 people who died from cancer in NHS Tayside, in Scotland, between 01/01/2012-30/06/2015. Clinical population datasets including the Cancer Registry (SMR06) and GRO Death Data, were linked to routinely collected clinical data using the Community Health Index (CHI) number. The CHI is a unique patient identification number used in all clinical encounters in NHS Scotland. Anonymised CHI-linked data were analysed in SafeHaven, with descriptive analysis, using binary logistic regression for adjusted associations.

FINDINGS: Cancer decedents who were under 65 years old were substantially more likely to have receive chemotherapy than those who were aged >85 (AOR 0.03 95CI(0.017 to 0.051). Cancer decedents who lived in the least deprived areas - SIMD4 (AOR 1.58(1.07 to 2.33) and SIND5 1.80(1.20 to 2.71) - were nearly twice as likely to receive chemotherapy as those who lived in the most deprived areas. Compared to people with lung cancer, those with upper GI malignancies (AOR 0.52(95CI 0.37 to 0.73)) and bowel cancer (AOR 0.57(95CI 0.38 to 0.85)) were much less likely to receive chemotherapy. People who died from prostate cancer were 20 times less likely to receive chemotherapy than those who died from lung cancer (AOR 0.05(95CI 0.02 to 0.138)).Timing of diagnosis was strongly associated with whether or not people who died from cancer received chemotherapy. Compared to cancer decedents diagnosed 0-12 weeks before death, those who were diagnosed 13-25 weeks before death were seven times (AOR 7.64(4.73 to 12.31)) more likely to receive chemotherapy, decedents

diagnosed 26-38 weeks before death were twenty-three times (AOR 23.61(14.66 to 38.03)) more likely to receive chemotherapy, decedents diagnosed 39-51 weeks before death were twenty-six times more likely to get chemotherapy and cancer decedents diagnosed ≥52 weeks before death were nearly thirty times (AOR 29.52(19.28 to 45.19)) more likely to receive chemotherapy, compared to cancer decedents who were diagnosed 0-12 weeks before death.

CONSEQUENCES: There are multiple factors to consider when offering chemotherapy to patients with advanced cancer. While some of the associations observed in this study have direct correlations with side-effects, outcomes and anticipated benefits of chemotherapy, including age and anticipated prognosis, the variation in the provision of chemotherapy based on deprivation was unexpected and requires further analysis to explore a causal relationship.

Funding Acknowledgement: Funding for data collection and analysis costs has been gratefully received from Tayside Oncology Research Committee (TORC) Research Grant, and from a Palliation and the Caring Hospital (PATCH) Scotland National Research Grant. This analysis was completed during SM's Clinical Academic Fellowship, funded by the Chief Scientist's Office (CSO).

4A.2

Barriers and Enablers to providing Community Palliative Care to People with Poor Prognosis Cancers: A Survey of Scottish General Practitioners.

Presenter: Sarah Mills

Co-Authors: Shruti Sinha, Stephen Fenning, Jo Bowden

Author institutions: University of St Andrews

Abstract

PROBLEM: Poor prognosis cancers (PPC) are those where, at diagnosis, the patients are expected to live less than 12 weeks. Around 30,000 people are diagnosed with cancer in Scotland each year, of whom approximately one third live less than one year. With PPC, there is a small window of time from diagnosis until death; this makes delivery of high-quality Palliative and End of Life Care (PEOLC) and Anticipatory Care Planning (ACP) even more difficult. This project aimed to explore GPs' perspectives of advanced cancer care in the community to inform the development of improved care pathways for patients and families.

APPROACH: An previously-piloted electronic questionnaire survey was developed and distributed through Qualtrics XL and sent to GPs in Scotland via their regional cancer leads. A response rate could not be calculated as it was not possible to confirm the extent of the survey distribution. Respondents were distributed across all major regions and health boards in Scotland.

FINDINGS: The majority of respondents (80%) reported receiving written communication from Oncology about their patients' clinical management plans either 'always' (30/182, 16%) or 'most of the time' (117/182, 64%); only 43% (79/182) and 11% (21/181) received a similar frequency of communication around patient understanding of diagnosis. 72% of respondents reported receiving written ACP communication either 'sometimes' (107/181, 59%) or 'never' (23/181, 13%). Patients currently receive timely anticipatory care planning (134/161, 83%) and timely clinical assessments for uncontrolled symptoms (156/161, 97%) either 'always' or 'most of the time'.Inadequate GP time (42%) and lack of family support (30%) were most frequently ranked as the #1 barrier to providing PEOLC to people with poor-prognosis cancers. As well as being the single highest-ranked barriers to providing PEOLC to people with poor-prognosis cancers, inadequate GP time and lack of family support were ranked in the 'top

3’ most impactful barriers to PEOLC by 77% and 60% of respondents, respectively. Challenges in communication, both between primary and secondary care, and between community teams involved in patient care, both ranked in the ‘top 3’ barriers for 44% of respondents. Only a minority of respondents (25%) felt that a lack of specialist palliative care input was a barrier to providing PEOLC to people with poor-prognosis cancers.

CONSEQUENCES: A lack of adequate GP time and availability of family support were the most common barriers to providing PEOLC for people with PPCs. While this pattern generally persists across GP experience, practice size, and practice rurality, rural GPs felt that lack of family support was a greater barrier than inadequate GP time. Supporting PPC provision in rural settings may require a different intervention. Respondents felt that written communication from Oncology could be improved, particularly in relation to patient understanding of diagnosis and anticipatory care planning conversations.

Funding Acknowledgement: Shruti Sinha's involvement in this project was funded by a summer scholarship funded by The Melville Charitable Trust for the Cure and Care of Cancer.

4A.3

Exploring General Practitioners' Referral Behaviour to a Rapid Diagnostic Centre for Non-Specific Cancer Symptoms: A Qualitative Study

Presenter: Dr Joanne Reeve

Co-Authors: Caroline White, Prof Una Macleod

Author institutions: HYMS, University of Hull

Abstract

PROBLEM: Determining whether patient symptoms might be attributable to cancer can be associated with uncertainty for GPs; especially when patients present with non-specific symptoms (NSS). Rapid Diagnostic Centres (RDC) for NSS where cancer is suspected have been introduced using different approaches across NHS Trusts, as a new cancer diagnostic pathway. The NHS Trust in this study focused on a suite of pre-determined tests, ordered, and reviewed by GPs followed by potential referral to a RDC located within secondary care. Little is known about GPs’ experiences and perceptions of the RDC pathway, which is the focus of this study.

APPROACH: A qualitative study was undertaken within one NHS Trust to explore GP experiences of using this diagnostic pathway. GPs from city, rural and coastal practices were interviewed for the study. Interview data was analysed thematically.

FINDINGS: GPs confirmed the challenges inherent in determining when NSS might signal cancer. The initial suite of tests helped determine when onward referral was warranted and when ‘watch and wait’ or local management were appropriate. The pathway was felt to offer faster access to testing, diagnosis and treatment; gave GPs a referral route when patients were not eligible for established two-week wait pathways and reassured GPs and patients that appropriate action was being taken to investigate symptoms. Recent colorectal pathway changes have required patients to have a positive fit test. A positive outcome of the RDC pathway was that it provided an alternative route for fit negative patients where cancer was suspected. The RDC reported diagnosing a large range of cancers since inception, as well as a large number of other hard to diagnose conditions. There was evidence from the interviews that not all GPs knew about the pathway and that information about changes introduced had not been remembered by all. While patient views were not sought, GPs perceived they welcomed the referral and prompt investigation with most attending, and that non-cancer diagnoses provided relief to

patients. However, there was evidence that the time and costs of travel and clinic attendance were barriers for some in rural/ coastal areas. The majority of GPs expressed satisfaction with the RDC pathway and welcomed access to it. C

ONSEQUENCES: The RDC diagnostic pathway was introduced to fill a gap where patients present with non specific symptoms that could be cancer. It assisted GPs when they lacked an appropriate referral pathway for such patients and facilitated the diagnosis of cancer and other significant conditions. This underscores the value of continuing this diagnostic pathway. Ongoing efforts to ensure GPs are aware of the pathway and changes are needed. Patients reportedly valued referral to the RDC pathway; however, some barriers to attendance were highlighted. Research incorporating the patient perspective would provide a richer understanding of their experiences.

Funding Acknowledgement: This study was funded by the York and Scarborough NHS Teaching Hospital Trust. (though we will not be identifying them in the poster).

4A.4

Cancer risk assessment tools and GP consultation workload: an observational study

Presenter: Emily Fletcher

Co-Authors: John Campbell, Emma Pitchforth, Willie Hamilton, Gary Abel

Author institutions: University of Exeter Medical School

Abstract

PROBLEM: England has a shortage of General Practitioners (GPs). Consultation rates, consultation duration, and GP workload are increasing. Electronic clinical decision support (eCDS) tools assist decision-making for screening, diagnosis, and risk-management. Cancer detection is one area where tools are designed to support GPs. Electronic risk assessment tools (eRATs) estimate risk of current cancer based on symptoms. We aimed to assess eRATs' impact on GP workload and workflow during consultations.

APPROACH: Thirteen practices participating in the intervention arm of a pragmatic cluster randomised controlled trial of eRATs (ERICA) were recruited to an observational study. We measured the average duration of consulting sessions and consultations where eRATs were activated.

FINDINGS: there was no evidence that sessions where an eRAT was activated were, on average, longer than sessions where no eRATs had been activated. However, individual consultations involving an eRAT were longer on average by 3.96 minutes (95% CI: 3.45 to 4.47; $p<0.001$), when compared with consultations with no eRATs . Consultations occurring immediately after one where an eRAT was activated were similar duration to consultations occurring in sessions where no eRATs were activated.

CONSEQUENCES: There was no evidence to suggest that eRATs should not be used to support GPs in early cancer diagnosis from a workload perspective. eRATs did not increase workload across a session. Definitive FINDINGS: regarding the clinical effectiveness of eRATs, not the related workload/workflow implications, will ultimately determine whether the use of eRATs should be rolled out more widely.

Funding Acknowledgement: The Dennis and Mireille Gillings Foundation, the University of Exeter Medical School, and Cancer Research UK

4B.1

Predictors of post-concussion syndrome in children following a traumatic brain injury

Presenter: Rebecca Wilson

Co-Authors: Joni Jackson, Sharea Ijaz, Kate Birnie, Julie Mytton, Matthew Booker, Giles Haythornthwaite, Ingram Wright, Mark D Lyttle, Lauren Scott, Jelena Savović, Maria Theresa Redaniel

Author institutions: University of Bristol, University of the West of England, University Hospitals Bristol and Weston NHS Foundation Trust

Abstract

PROBLEM: Traumatic brain injury (TBI) is a leading cause of death and disability in people under 40 in the UK. Following a TBI, some people develop post-concussion syndrome (PCS), which includes somatic, cognitive, psychological, and/or behavioural symptoms that can continue for several months. While most recover over time, a proportion of cases experience long term symptoms. It is likely that early recognition and targeted interventions speed recovery and reduce persistence of symptoms in the longer term. To target interventions for children who are at higher risk of developing PCS, it is important to know who the risk groups are. We aimed to identify predictors of PCS in children, following any medically attended TBI event. APPROACH: Using linked Clinical Practice Research Datalink (CPRD) and Hospital Episode Statistics (HES) data we identified patients aged 1-17 years with a medically attended TBI event. Our primary outcome was a binary indicator of PCS or suspected PCS, measured using either a clinical code for PCS or medical attendances for one or more PCS symptom 3-12 months after a TBI. Patient descriptives (age, gender, area-level deprivation and ethnicity) and potential clinical predictors of PCS (headaches, learning disabilities, ADHD, anxiety, depression and sleep disorders preceding TBI) were derived from CPRD and HES data. We included all potential predictors in a multivariable logistic regression model. FINDINGS: We identified 137,873 children with TBI between 2013-17 from CPRD and HES data and 4,620 (3.4%) children with PCS or suspected PCS. More female TBI patients (3.8%) had PCS, compared with males (3.1%). Those with PCS were, on average, older at the time of TBI compared with those without PCS (7.8 vs 6.5 years). In a fully adjusted model, older age (odds ratio [OR]=1.02 per year increase in age, 95% confidence interval [CI] 1.01-1.03), female gender (OR=1.20, 95% CI 1.13-1.28), being Asian (OR=1.37, 95% CI 1.22-1.54) or mixed ethnicity (OR=1.18, 95% CI 1.01-1.37) (compared with white ethnicity), and having a history of headaches (OR=3.52, 95% CI 3.13-3.95), learning disabilities (OR=2.06, 95% CI 1.69-2.52), ADHD (OR=2.41, 95% CI 1.91-3.04), anxiety (OR=2.58, 95% CI 2.18-3.05), depression (OR=4.00, 95% CI 3.28-4.89) and sleep disorders (OR=2.35, 95% CI 1.99-2.78) were all associated with increased odds of PCS.

CONSEQUENCES: These results may be used to identify patients who are more likely to develop PCS following a TBI and patients who may benefit from targeted health care for any PCS symptom. Identifying cases of PCS in primary care data was a challenge as perhaps many children do not attend services for suspected PCS, or, if they did, are not diagnosed with PCS and no record is made. Furthermore, the clinical predictors are a measure of healthcare access for these symptoms, thus results could be influenced heavily by patients' health seeking behaviour.

Funding Acknowledgement:

4B.2

Exploring the influence of Post-acute Covid-19 on health-related quality of life (KIDSCREEN-10) in children aged 8-17 years

Presenter: Claire Burton

Co-Authors: Claire Burton, Helen Twohig, Milica Blagojevic-Bucknall, Will Carroll, Carolyn Chew-Graham, Kendra Cooke, Kate Dunn, Alice Faux-Nightingale, Francis Gilchrist, Toby Helliwell, Oliver Lawton, Sarah Lawton, Christian Mallen, Benjamin Saunders, Glenys Somaya

Author institutions: Keele University

Abstract

PROBLEM: Covid-19 in children and young people (CYP) usually causes mild illness, but some experience longer-term consequences. Long-covid is a patient-derived term describing symptoms lasting more than 4 weeks. The overarching aim of the cohort study "Symptom Patterns and Life with Post-acute Covid-19 in Children aged 8-17 years (SPLaT-19_C)," is to understand how Long-covid affects CYP, to better inform clinical practice and interventions. The impact of the Covid-19 pandemic on the mental health and wellbeing of CYP has been widely reported. We now seek to more specifically describe the impact persisting symptoms of Covid-19 (Long-Covid) have on health-related quality of life, as measured by the KIDSCREEN-10.

APPROACH: CYP aged 8-17 years, registered at general practices selected based on variability in ethnicity and deprivation, were invited to participate by SMS. CYP with no recorded mobile number or who had dissent codes for research and/or messaging, were not contacted. Consent/assent was obtained electronically. Cohort data is being collected prospectively every 3 months, for 1 year and includes the KIDSCREEN-10 quality of life measure, symptom inventories, service utilisation questions and other biopsychosocial variables.

FINDINGS: 40,874 SMS invites were sent out from 40 general practices. Baseline data was collected between October 2022 and February 2023. At baseline, there were 507 participants (288, 56.8% female), mean age 13.11 years, and 41 (8.09%) describing their ethnicity as none-white. To date, we have observed that the CYP identified as experiencing persisting symptoms following an acute episode of Covid-19 had a lower (more adverse) KIDSCREEN-10 score at baseline, than those who did not describe persisting symptoms (32.8 (sd 7.5), 39.6 (sd 6.3), $P<0.01$). We will further describe symptom profiles and their association with quality of life and use statistical modelling techniques to consider other potential associations with candidate predictors including age, sex, pre-existing conditions, severity of acute Covid-19, vaccination status and experience of long Covid in the household. We will repeat these models using 6 month data, whilst appreciating attrition may add bias to these results.

CONSEQUENCES: Despite best efforts, recruitment of a diverse CYP cohort presented challenges and the results are at risk of selection bias. However, to date, the ongoing cohort study has sent a strong signal in its baseline data of a significant difference in the quality of life of CYP who have experienced Post-acute Covid-19. It is crucial to know how their quality of life improves over time, and what other factors may be influencing their experience. It is with this information that primary care clinicians and other health and social care providers can best support CYP. The impact of Covid-19 and Long Covid should not be underestimated and it is likely that CYP will continue to require additional holistic support. Longer term follow-up will help to describe the CYP journey with Long-covid, in terms of duration, severity and impact of symptoms.

Funding Acknowledgement: This work presents independent research funded by the NIHR School for Primary Care Research (Grant Reference Number 517) and the NIHR West Midlands Clinical Research Network. CB, HT and VW are funded by a National Institute for Health Research (NIHR) Clinical Lectureship.

CDM is funded by the NIHR School for Primary Care Research. The views expressed are those of the author(s) and not necessarily those of the Keele University, the NHS, the NIHR or the Department of Health and Social Care.

4B.3

"There must be something wrong, or else I'm just a terrible parent": Systematic review of experiences parenting unsettled babies

Presenter: Amy Dobson (1)

Co-Authors: Samantha Hornsey (1), Daniela Ghio (2), Susan Latter (3), Miriam Santer (1) & Ingrid Muller (1)

Author institutions: 1 - Primary Care Research Centre, School of Primary Care, Population Sciences and Medical Education, University of Southampton, UK; 2 - University of Manchester, UK; 3 - School of Health Sciences, University of Southampton, UK

Abstract

PROBLEM: Parents often feel intense distress in the transition to parenthood over baby unsettled behaviours. There is concern that these behaviours are increasingly attributed to medical causes such as reflux or cows' milk allergy. When inaccurate, this can cause harm to parents and babies, may have negative consequences for their breastfeeding journey and increase costs for healthcare systems. This study explores parent experiences of unsettled babies, with emphasis on thoughts and feelings about medical labels.

APPROACH: Systematic review of primary, qualitative research into parents' experiences of unsettled babies (<12months age). 'Unsettled' was defined as perception of excessive crying with additional feature(s) such as vomiting, skin or stool problems. Structured searches were completed in CINAHL, Medline, Embase, PsychINFO and Cochrane Clinical Trials on 23.03.2022 and rerun on 14.04.2023. The Critical Appraisal Skills Programme (CASP) checklist assessed trustworthiness of included studies. Analysis utilised inductive thematic synthesis and resulted in the development of a conceptual model summarising parents' experience.Public Involvement and Engagement (PPIE) included a series of four in-depth 'listening cafes' with eight low-income parents of unsettled babies; informal drop-in engagement at parent playgroups and children's centres; digital 1:1 conversations with families of diverse cultural heritage and ad-hoc engagement with healthcare professionals working in areas of relative affluence and deprivation. These activities contributed to the choice of the term 'unsettled', supported themes emerging from the systematic review and gave insight into parent experience from perspectives of underserved communities.

FINDINGS: Ten eligible studies conducted in high (n=8) and middle income countries (n=2) were included, contributing data from 103 mothers and 24 fathers. Two analytical themes and 8 descriptive themes were developed. Firstly, parents described strategies to construct an "Identity as a 'Good Parent'". Within this, descriptive themes included parents experiencing "Transition from 'me' to 'me as a parent'" where reality contrasts with idealised perfection. Parents reported feelings of "Guilt and failure" about infant unsettled behaviours and "Feeling responsible and wanting control" The second analytical theme "Searching for an explanation" captures parents seeking external (medical) causes for babies' unsettled behaviours. Descriptive themes illustrated parents' "Expectations" of themselves and their baby. "Feeding is linked to unsettled behaviour" and is frequently changed. Repeated "Help seeking" leaves parents feeling ignored and experiencing a "Lack of certainty". Parents reported "Hypervigilance and desperation" during the search.

CONSEQUENCES: Parents can become trapped in a cycle of 'searching for an explanation' for

their baby's unsettled behaviours, experiencing considerable distress, exacerbated by feelings of guilt and failure. Primary care professionals could support a positive parenting identity by managing expectations, normalising the continuum of infant behaviours, reducing feelings of guilt or uncertainty and helping parents regain feelings of control. Insight gained from this systematic review will inform interventions to support parents, reducing harm caused by inaccurate medicalisation.

Funding Acknowledgement: Review funded by NIHR School of Primary Care Research. AD is SPCR Doctoral Fellowship Awardee.

4C.1

Hi, I've brought you a pot of my wee: how does digitalisation improve clinical practice efficacy?

Presenter: Katie Davies

Co-Authors:

Author institutions: Dr Katie Davies National Institute for Health Research School for Primary Care Research, Centre for Primary Care, Manchester Academic Health Science Centre, University of Manchester, Manchester, UK

Abstract

PROBLEM: Digitalisation of health is a key current UK government focus, with the introduction of The Plan for Digital Health and Social Care in 2022. Rapid digitalisation has occurred across General Practice, with significant learning from the Covid-19 pandemic, where digital consultation was used to minimise infection risk. Accurx, a digital software start up created by Innovate UK, has been increasing used for teleconsultation and facilitates video and text consultation. Accurx enable pre-made questionnaires (Floreys) and the ability to create individual templates. These allow collection of structured information by text to patients and direct transfer into electronic health records with appropriate coding.Urinary Tract Infections (UTI) are a common presentation to GP, where virtual consultation has been shown to be feasible for average risk patients, saving clinician time and costs.

APPROACH: We aimed to examine healthcare professions' perception of the processing of urine samples dropped into a small inner-city General Practice in Stockport prior to and following introduction of a Digital Health Intervention (DHI). We anonymously surveyed a range of clinical and non-clinical staff including Administration staff, Nurses, Healthcare Assistants, General Practitioners (GPs) and GP Registrars. We then piloted a DHI using a pre-made Florey assessing urinary symptoms. This was sent to patients by reception staff where patients had dropped in urine sample which were random or pre-requested by a clinician. This occurred prior to clinical triage and assessment. We performed a further anonymous survey to assess impact of the DHI.

FINDINGS: Prior to development of the DHI, of the General Practice staff surveyed (Admin/Nurses/GPs/HCA) 70% felt the system could be improved. The majority felt a DHI could be feasible to improve time efficiency for staff and improve clinical decision making. After introduction of the DHI, 90% of respondents found an improvement in clinical practice and 10% felt there may have been improvement. Feedback included increased patient autonomy, relevant information capture, increased speed of information gathering and improved triage. Staff felt teleconsultation was still required following. Suggested improvements included adding patient leaflets. Overall, the feedback was positive for expanding the use of floreys across other areas.

CONSEQUENCES: DHI using text questionnaire can be useful in clinical triage and information

gathering. We have capitalised on the success of this initial pilot and will be looking to incorporate further clinical text questionnaires within triage. This may prove increasing useful with the recent announcement of changes in the GP contract, which require all patients to have assessment of need and signposting to services at initial contact. Verbal patient feedback has been positive but further work will access patient views.

Funding Acknowledgement: NIHR Funded Academic Clinical Fellow in General Practice

4C.2

MED GPT – Use of AI to Transcribe and Summarise GP Consultations

Presenter: Bhautesh Jani

Co-Authors: Bhautesh Jani, Zaiqiao Meng, Tanatapanum Pongkemmanun

Author institutions: University of Glasgow - School of Health and Wellbeing

Abstract

PROBLEM: This study aims to develop a program based on Large Language Model and Natural Language Processing technologies to transcribe and generate clinically accurate and complete summaries of general practice consultations in real-time.Artificial intelligence has seen many recent advancements, making it more accessible and implementable within the healthcare profession. New Large Language Models LLMs such as Chat-GPT and BioBart have presented the possibility of developing tools to handle common administrative and documentation tasks in general practice, with some options already appearing on the market without any peer-reviewed evaluations. A general practitioner in the UK, on average, spends 12.8% of their day on clinical administrative tasks, and greater administrative burden is known to be associated with increased physician burnout.

APPROACH: This study quantitatively compares 4 Large Language Models (LLM) trained on a bank of 1700 patient-doctor dialogues to develop a model capable of listening in real-time to patient consultations to auto-summarise the consultation. Of the four models, a single best-performing model was selected and assessed on its output of 50 pre-recorded mock consultations; each summary was viewed by two reviewers and marked on a questionnaire based on a modified form of the QNote Score (to assess quality of documentation in electronic health records) and a question assessing whether LLM had captured broader social context if it was discussed during the consultation.

FINDINGS: At the time of writing, the results have yet to be fully completed. From preliminary findings , the evaluation of the three locally run models was stopped early due to the incompleteness of their outputs, with each producing truncated and incomplete summaries. The final model, dubbed 'Med GPT' built on GPT -4's API, will be assessed on whether it can consistently generate accurate and complete summaries of patient consultations without human input or correction. The final evaluation looks at whether the notes were 'unacceptable' due to false information or 'incomplete,' 'partially complete,' or 'fully complete,' as well as looking at the reviewer's notes and topic of the consultation for trends or common issues.

CONSEQUENCES: This study will discuss whether the FINDINGS: demonstrate that an LLM/AI-driven model could reliably generate complete and accurate summaries for general practice consultations in real time. The barriers to its implementation are also discussed, such as issues with high energy and infrastructure requirements associated with the use of LLM, as well as concerns around data security for such applications. The possible future of the technology is also discussed, including trials with real patient groups. A limitation of the study is the gap in GP practice scenarios, including patients with

risk of health inequalities due to their social, economic, and wider contextual situation, which potentially could be trained into future AI tools reinforcing bias.

Funding Acknowledgement:

4D.1

Miscarriage Australia- Navigating miscarriage together

Presenter: Meredith Temple-Smith

Co-Authors: Meredith Temple-Smith, Amy Webb, Jennifer McIntosh, Van-Hau Trieu, Gemma Sharp and Jade Bilardi

Author institutions: University of Melbourne, Monash and Deakin Universities

Abstract

PROBLEM: About 25% of pregnancies end in miscarriage. Although considered by health practitioners as routine and easily managed, miscarriage often has significant psychological impacts on women, partners and families, exacerbated by public silence around this event. Our previous qualitative research explored women's, men's and health care practitioners' experiences of clinical and social care connected to miscarriage, as well as perceived needs for psychosocial support. GPs reported the lack of guidelines on miscarriage care, especially around emotional and psychological support, and noted difficulty in locating relevant resources. Our survey of 400 women who experienced miscarriage showed 88% would have liked to be asked how they were coping emotionally, to be referred for counselling or receive information about pregnancy loss support organisations. The aim of this study was to design, develop and evaluate the Miscarriage Australia website.

APPROACH: Our body of research showed stakeholders wanted local evidence-based information that was more focussed on miscarriage than the UK Tommy's site, which manages pregnancy and birth as well. Using a human centred design approach, we collaborated with clinicians and users to produce the website Miscarriage Australia.

FINDINGS: In its first 15 months, Miscarriage Australia has had over 100,000 visits (from Australia, US, UK, Canada, Phillipines, New Zealand, South Africa, Singapore and Ireland). Feedback from over 1000 users shows the most visited page is "Supporting someone who has had a miscarriage', followed by pages describing types of miscarriage and asking 'Am I having a miscarriage?' Over 85% users find the information useful, clear and easy to understand, helpful, easy to find, and would recommend the site to others. We have over 700 Facebook Followers, and 200 on Instagram. C

ONSEQUENCES: In Australia pregnancy care is often shared between general practice and hospital. While large public hospitals may offer some patient support, rural areas are particularly bereft of support services and can rarely offer anything other than physical care. The Miscarriage Australia website, which uses quotes and advice based on evidence from our research, has been officially recognised as a reputable source of miscarriage information by Healthdirect, Australia's national health advice service which provides 24/7 helplines, Better Health Victoria, and over 20 other organisations. It is filling a much-needed gap in the system. In October 2023, Miscarriage Australia co-initiated the first ever Miscarriage Roundtable for the Australian Government. Miscarriage Australia is filling a much-needed gap in health support, providing information and advocacy not only for those who experience miscarriage, but also those who care for them.

Funding Acknowledgement: Australian Research Council Discovery Early Career Research Award Fellowship - Dr Jade Bilardi

4D.2

Maternal perinatal anxiety and infant primary care use: a cohort study

Presenter: Holly Christina Smith

Co-Authors: Holly C Smith1, Tamsin Fisher2, Katrina Turner2, Victoria Silverwood2, Tom Kingstone2, Charlotte Archer2, James Bailey2, Jonathan Evans2, David Kessler3, Janine Procter4, Noureen Shivji2, Amy Spruce5, Pensee Wu2, Dahai Yu2 and Irene Petersen1

Author institutions: 1University College London, 2 School of Medicine, Keele University. 3University of Bristol. 4Just Family CIC. 5Keele University (PPIE contributor).

Abstract

PROBLEM: Perinatal anxiety (PNA) is estimated to affect 21% of women during pregnancy or up to 12 months after birth and can have a negative impact on mothers, their children, and partners. There is a suggestion that PNA is associated with lower rates of vaccinations, decreased access to preventative healthcare, and increased healthcare use in infants; but the results across studies have not been conclusive. The aim of this study was to use linked mother and infant primary care records to investigate if infants had higher primary care use and were less likely to receive planned preventative care after birth if their mother had a record of PNA. We also explored how birth characteristics (such as gestation and birthweight) impacted on this relationship.

APPROACH: We conducted a cohort study using data from the IQVIA Medical Research Database (IMRD), a large UK primary care electronic health record database. We identified 248,618 mother-infant pairs, where pregnancy started between 1998-2016. PNA was identified through prescriptions, diagnosis, and symptom records during the perinatal period. Infant outcomes included primary care consultation rate, attending a 6-8-week infant check appointment and uptake of the 5-in-1 vaccination. We compared unadjusted rates of infant primary care consultations and used random-effects logistic regression models to analyse other outcomes, comparing children of women with perinatal anxiety to those without.

FINDINGS: Of the 248,618 women, 11,558 (4.7%) had a record of perinatal anxiety. Infants of mothers with perinatal anxiety had on average 1 more primary care consultation/person-year in the year after birth compared to those without (9.7 vs 8.7). Primary care consultation rates were also higher for infants who were born prematurely, were low birth weight or who had low APGAR scores. We found no difference in infant vaccination uptake between mothers with/without PNA in our crude analysis (94.7% vs 95.3%); however, in adjusted analysis, mothers with PNA were more likely to have an infant who was vaccinated (OR: 1.33, 95% CI: 1.20-1.48). There was a small difference in attendance of the 6-8-week infant check between mothers with/without PNA (80.7% vs 82.7%) in crude analysis, in our adjusted analysis mother with PNA were 12% less likely to have a record of an infant check (aOR: 0.88, 95% CI: 0.81-0.95).

CONSEQUENCES: Overall, our FINDINGS: across outcome measures presents a mixed picture. It is reassuring that infants of mothers with PNA were more likely to be vaccinated than those with no anxiety; however, we found that these infants were less likely to have a record of a 6-8-week infant check and have slightly higher primary care consultation rates. Future research should consider how infant health has an impact on the relationship between perinatal anxiety and infant healthcare use.

Funding Acknowledgement: This study was funded by NIHR School for Primary Care Research (SPCR)

4D.3

What are the health conditions and behaviours of women who regularly consult their GP across their childbearing years in Australia?

Presenter: Mr Luke Dcaccia

Co-Authors: Dr Elizabeth Lovegrove, Dr Danielle Schoenaker

Author institutions: Mr Luke Dcaccia, Faculty of Medicine, University of Southampton, Southampton General Hospital, Southampton, SO16 6YD. Dr Elizabeth Lovegrove, Primary Care Research Centre, University of Southampton, Aldermoor Health Centre, Southampton, SO16 5ST. Dr Danielle Schoenaker, School of Human Development and Health and MRC Lifecourse Epidemiology Centre, University of Southampton, Southampton,SO16 6YD.

Abstract

PROBLEM: In recent years, there has been increasing awareness of the importance of women's health before pregnancy (preconception health). There are a wide range of preconception risk factors that can affect women's health and the health of their children. Health organisations and governments have started to recognise the importance of preconception health at national and global levels, which has been translated into preconception care guidelines and policies. A key recommendation is for healthcare professionals to take advantage of routine consultations with women and use these as opportunities to support women to prepare for a healthy pregnancy. General practices see women across their childbearing years (age 15-49), placing them in a prime position to implement these guidelines. Therefore, the aims of this study were to 1) describe how often women of childbearing age in Australia visit their general practitioner (GP); and 2) examine whether women's health conditions and behaviours are associated with their frequency of attending general practice throughout their childbearing years.

APPROACH: This longitudinal study used data from the 1973-78 cohort of the Australian Longitudinal Study on Women's Health, an ongoing nationally representative population-based cohort study. Women of childbearing age were recruited in 1996 and completed eight questionnaires from baseline (18-23) until 2018 (age 40-45). Descriptive statistics were used to describe the proportion of women who reported not consulting their GP in the past year and who consulted their GP one to two times or multiple times in the past year. Further analyses are in progress, and associations between health conditions and behaviours and frequency of consulting a GP will be examined using logistic regression.

FINDINGS: This study includes 4,083 women who responded to all eight surveys. The proportion of women who did not consult their GP in the past year ranged from 3.5% (age 22-27) to 6.8% (age 40-45). Between 22.6% (age 22-27) and 42.1% of women (age 25-30) consulted their GP one to two times, and 53.7% (25-30) to 73.9% (age 22-27) consulted their GP three times or more in the past year. Data will also be presented on women's preconception health conditions and behaviours and their associations with frequency of consulting a GP.

CONSEQUENCES: The initial FINDINGS: show a high prevalence of women of childbearing age consulting their GP at least once over the past year in this study. This provides promise when considering the opportunities for preconception care in general practice. Understanding the prevalence of women's health conditions and behaviours, and the association with visiting a GP will inform at a deeper level how preconception care could be effectively delivered in general practice to support patients prepare for a healthy pregnancy and baby.

Funding Acknowledgement: The research on which this abstract is based was conducted as part of the Australian Longitudinal Study on Women's Health by the University of

Queensland and the University of Newcastle. We are grateful to the Australian Government Department of Health and Aged Care for funding and to the women who provided the survey data.

4D.4

Exploring how people make decisions about using (or not using) fetal Dopplers outside of clinical settings

Presenter: Rosa Mackay

Co-Authors: Sabrina Keating, Jennifer MacLellan, Abigail McNiven, Sharon Dixon

Author institutions: University of Oxford

Abstract

PROBLEM: Fetal Dopplers are handheld devices that use ultrasonography to listen to an unborn baby's heartbeat. In recent years, medical regulatory bodies and charities have issued warnings advising against the use of at-home fetal Dopplers because of concerns including safety and (mis)interpretation, delayed care-seeking and exacerbation of anxiety. However, they are widely available and utilised outside of medical settings by pregnant people. Little is known about the drivers for this use, or how this intersects with medical care.

APPROACH: We conducted semi-structured interviews with individuals who chose to use an at-home Doppler (N=15) and those who did not choose to (N=5) to explore decision-making around and experiences with at-home Dopplers. Interviews were transcribed verbatim and analysed thematically (NVivo12). We will gather feedback on the potential implications of our

FINDINGS: in focus group discussions with healthcare practitioners (midwives, GPs, and obstetricians). FINDINGS: The tensions between awareness of surrounding safety concerns (including misidentification of maternal and foetal heartbeats), alongside widespread commercial availability was apparent to both Doppler users and non-users. In navigating decision-making about Doppler use, individuals constructed a nuanced set of 'right' and 'wrong' reasons which informed what was deemed acceptable use.. Acceptable Doppler use was typically framed as 'non-medical', including social listening in with family, for early pregnancy validation and bonding, and for reassurance about the baby and pregnancy. Accounts differentiated (acceptable) checking in at home for maternal reassurance from (unacceptable) use in response to pregnancy 'medical' concerns, for example reduced movements, or anything which warranted medical assessment. Some Doppler users identified the potential for Doppler use, intended to mitigate against pregnancy-related anxiety, to instead paradoxically exacerbate this. The need for training or skills to make Doppler use 'safe' was identified as important. Awareness of the messaging against at-home Dopplers resulted in hesitancy towards initiating conversations around the use or desire to use the devices with medical professionals. Participants reported avoiding conversations about Dopplers as they worried that they would be judged negatively or reprimanded. This resulted in secrecy and stigma around the devices, and reduced opportunities to discuss how to approach Doppler use more safely, or to explore underlying concerns that act as drivers towards use.

CONSEQUENCES: Despite the saturation of messaging about the risks and harms of at-home Doppler use, the devices remain commercially available and desirable to pregnant people. Our interviews with people who considered using at-home Dopplers highlight potential opportunities for pregnancy care to account for this by enabling open conversation about the devices and their interactions with anxiety during pregnancy. In upcoming clinician focus groups, our study will

further explore the potentials to provide increased support and communication to facilitate safer use of at-home Dopplers.

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4E.1

TRAINDEEP (TRaining Assistance INitiative in DEep End Practices) pilot evaluation: transforming GP practices into training practices in deprived areas of the North East and North Cumbria region of England

Presenter: Alisha Gupta

Co-Authors: Sarah Sowden, Matthew Armstrong, Gillian Vance

Author institutions: Population Health Sciences Institute, Newcastle University

Abstract

PROBLEM: The Deep End Network was set up to address challenges posed by the inverse care law and to help deliver high quality to patients with the greatest need. It enables local GPs working within the most deprived communities to share ideas and develop interventions to positively change primary care delivery for patients, practices, and communities. Research shows that there is an uneven distribution of GPs, with there being low numbers in the most socioeconomically deprived areas, highlighting that the inverse care law applies to GP training practices. GP training disproportionately occurs in affluent areas; therefore, by increasing the number of training practices, it is hoped that this will increase GP recruitment and expand services. This is a pilot intervention whereby an experienced external GP trainer goes to a non-training DeepEnd practice twice weekly for 12 months to transform the practice into a training practice. The external trainer will also provide clinical supervision while a DeepEnd GP partner goes on an intending trainer's course. On completion of the pilot, the DeepEnd practice will take on trainees regularly. Aims to evaluate the implementation by: Qualitatively exploring the feasibility and acceptability of transforming non-training practices to training practices Understanding the views and experiences (including opportunities and challenges) of delivering this pilot in the context of high deprivation.

APPROACH: Semi-structured in-depth interviews with staff involved will be done at three points during the pilot, to capture their insights at various stages. Thematic analysis is in-progress, to generate insights and perspectives from the interviewees. Once the pilot has ended, the FINDINGS: will be written up into a manuscript.

FINDINGS: The first round of interviews has been completed, with several key points have been drawn thus far; Providing time and knowledge is preferred when establishing a training practice, as practices struggle to have the time and expertise to utilise funding. The nature of the work in the DeepEnd is challenging, as patients have complex histories with social issues, and there is a high workload. However, the work is rewarding, and trainees will learn a lot. Some potential challenges of the intervention have arisen, including providing space for trainees, and appreciating that trainees may be of different abilities and therefore require varying levels of supervision. Success of the pilot can be measured in several ways, notably the practice becoming a training practice and taking on trainees regularly.

CONSEQUENCES: On completion of the pilot and evaluation, it is hoped that the pilot can be rolled out across the DeepEnd network regionally and nationally, to increase training opportunities and reduce health inequalities.

Funding Acknowledgement: NIHR, DeepEnd NENC

4E.2

What are the effects of sociodemographic variables on the association between a weighted lifestyle score and mortality in the UK Biobank cohort?

Presenter: Hamish Foster

Co-Authors: Dr Hamish M E Foster, Prof Jason M R Gill, Prof Frances S Mair, Dr Carlos A Celis-Morales, Dr Bhautesh D Jani, Dr Barbara I Nicholl, Prof Duncan Lee, Prof Catherine A O'Donnell

Author institutions: University of Glasgow

Abstract

PROBLEM: Unhealthy lifestyles are associated with disproportionate mortality among deprived populations where need for lifestyle support is greatest. Lifestyle scores can support individuals make healthy change across a range of factors to prevent adverse health outcomes. However, barriers to use and effectiveness of scores in more deprived populations include: 1) physiological (e.g., weight or blood pressure) score components, requiring time and resources, 2) arbitrary weighting of different lifestyle factors (e.g., smoking given the same weighting as physical inactivity) thereby missing opportunities to convey more accurate personalised risk, and 3) failure to account for additional risk associated with deprivation (e.g., as done for ASSIGN/QRISK but not yet done for lifestyle scores). We aimed to create a simple weighted lifestyle score and examine the effects of sociodemographic variables on the association between score and mortality.

APPROACH: Prospective analysis of 462,235 UK Biobank participants aged 37-73 years. A weighted lifestyle score was developed using 11 self-reported lifestyle factors (LFs): smoking, alcohol, physical activity, TV time, intake of red meat, processed meat, salt, oily fish, fruit and vegetables, sleep, social participation. Cox models adjusted for demographics and health conditions were used to examine associations between individual LFs and all-cause mortality to determine score weightings. Weightings were combined into a lifestyle risk score to then explore the effects of deprivation, sex, ethnicity, and age on the association between weighted score and all-cause and CVD mortality.

FINDINGS: Over 12.0 years median follow up, 30,687 (6.6%) participants died including 4,632 (1.0%) CVD deaths. Each LF was independently associated with both outcomes and hazard ratios (HR (95%CIs)) ranged from 2.20 (2.03, 2.15) for smoking to 1.02 (1.00, 1.05) for low oily fish intake. Weighted score (maximum 30 points indicating unhealthy) comprised 14 points for smoking, 1 each for unhealthy levels of intake of oily fish, red meat, processed meat, salt, and 2 each for remaining factors. There were dose-response increments for all-cause and CVD mortality HRs with each additional score point. Associations were stronger in more deprived quartiles and among men. With least deprived and lowest score category as reference, all-cause mortality HRs for highest (unhealthiest) score was 2.67 (2.43, 2.92) in the least deprived and 4.71 (4.43, 5.01) in the most deprived. Equivalent figures but with women and lowest score category as reference, were 3.07 (2.88, 3.26) among women and 4.66 (4.44, 4.89) among men.

CONSEQUENCES: An extended weighted lifestyle score comprised of 11 self-reported factors has strong associations with mortality, particularly among more deprived and male participants. Deprivation and sex could be incorporated into a simple lifestyle risk score that could convey personalised risk and inform policy and future interventions in areas of deprivation.

Funding Acknowledgement: HF is supported by Medical Research Council Clinical Research Training Fellowship (grant number MR/T001585/1). Remaining co-authors received no funding for this work.

4E.3

Distinguishing appointment patterning in primary care: an unsupervised machine learning approach

Presenter: Jamie Scuffell

Co-Authors: Stevo Durbaba, Mark Ashworth

Author institutions: King's College London

Abstract

PROBLEM: Since the COVID-19 pandemic, primary care has pivoted towards telephone consultations and adopted same-day care models to accommodate increased patient demand. However, there is sparse evidence on the implications of such same-day triage systems for primary care equity, efficiency, and accessibility. The heterogeneity in implementing these systems, which vary across practices by appointment type, consultation modality, and healthcare workforce utilisation, complicates the categorisation of GP appointment systems using administrative data. This study addresses the challenge of distinguishing between same-day and other appointment systems within routine datasets using unsupervised machine learning.

APPROACH: We used the Appointments in General Practice dataset from NHS England from October 2023 . This publishes appointment data crosstabulations at practice level. We included practices with greater than 90% of appointments mapped to an NHS Digital harmonised appointment type. Eight variables were derived a priori, deemed likely to differentiate practice appointment systems: the proportion of total appointments that were booked more than one week in advance; with a GP; GP telephone consultations; coded as clinical triage; same-day GP appointments; telephone consultations; acute telephone consultations; appointment rate per 1000 patients .K-means clustering with 25 randomisations and up to 500 iterations was used to group practices into clusters. The optimal number of clusters was determined by silhouette width. Differences in sociodemographic characteristics between the two clusters were described using Census 2021 data and Quality Outcomes Framework data for 2022-2023.

FINDINGS: Of 6,290 practices listed in the dataset, 4,080 (65%) had adequate data quality for analysis.K-means clustering yielded two distinct clusters. Cluster 1 (“Acute care practices”, n=1539) comprised practices tending towards same day care, delivered by telephone by GPs with triage support. Cluster 2 (“Routine care practices”, n=2539) was characterised by a greater proportion of appointments over one week in advance (40% of total appointments vs 27% for acute care practices), greater use of non-GP appointments (proportion of appointments with a GP 40% vs 54%) and fewer telephone appointments (16% versus 34%).Routine care practices tended to be in rural settings (16%, vs 10% of acute care practices) and were less likely to be in London (11% versus 30%). Acute care practice patients were younger on average (mean age 39.8 vs 41.8; percentage over 65 years 16% vs 19%) and less likely to identify in a White ethnic group (71% White versus 84% in routine care practices). Acute care practices are also more likely to be situated in the most and second-most deprived quintiles of England (55% vs 50%).

CONSEQUENCES: This study reveals two divergent approaches to UK primary care appointment access. Acute care practices tend to have younger and more diverse and deprived populations. Further work will describe any implications for cardiovascular screening, long-term conditions management and patient-recorded quality of care.

Funding Acknowledgement: JS is funded by an NIHR In-Practice Fellowship (NIHR303520).

4E.4

South Asian uptake and experience of professional interpreting services in primary; a national cross-sectional study

Presenter: Graham Hieke

Co-Authors: Graham Hieke, Emily Williams, Paramjit Gill, Judith Yargawa, Georgia Black, Cecilia Vindrola, Lily Islam, Sabine Braun, Katriina Whitaker

Author institutions: University of Surrey, King's College London, University of Warwick, Queen Mary University of London, University College London

Abstract

PROBLEM: When patients and healthcare professionals do not share a common language, the use of professional interpreters becomes fundamental to communication, as well as avoiding exacerbation of inequalities in healthcare access and outcomes. Primary care consultations are often the first line of contact, and require a high degree of language proficiency. Prior research highlights the benefits to patients of using professional interpreters in terms of experience and outcomes however use is poor, and little is understood about their quality and impact. Addressing these concerns, this study explored the uptake and experience of professional interpreting services in primary care (general practice) among South Asian communities in England.

APPROACH: Through a national cross-sectional survey of participants from Bangladeshi (n=213), Indian (n=200), and Pakistani (n=196) backgrounds we examined a) the barriers and facilitators to uptake of GP professional interpreting services; and b) the association between healthcare access, patient characteristics, self-reported health, and uptake. The fieldwork took place in four regions in England between January and June 2023. Trained multilingual researchers used their personal networks to recruit participants with limited or no English proficiency using nonprobability convenience/snowball sampling. The researchers translated the survey into the language of choice of the participant. The survey included items exploring the prior use of and experience with GP professional interpreting services, as well as questions on barriers to access; experience of other forms of language support (e.g. family members acting as interpreters); self-rated health; and socio-demographics. Logistic regression analysis was used to identify correlates with uptake.

FINDINGS: Just under two-thirds of participants (63%) reported having previously used the professional interpreting services provided by their GP. Face-to-face interpreting was the most common modality, followed by telephone and video interpreting. Several key influences on uptake were identified in multivariable analysis including ethnic origin, education; region; number of primary care visit within the last 12 months; participants being told about professional interpreting services; and participants being given a choice over the language support service offered. Those who had used a professional interpreter offered by their GP within the last 12 months reported moderate satisfaction with the service. We identified several opportunities for improvement including interpreters/doctors' understanding of health concerns; patients' understanding of information from doctors; and the extent to which patients felt comfortable using the professional interpreters provided by their GP surgery to communicate with healthcare professionals.

CONSEQUENCES: Our approach provided novel data on professional interpreting service use and evidence about the factors that may play a role in patient uptake and experience. Understanding the experience of professional

interpreting services from a patient perspective is vital in optimising how interpreting services are offered and used to ensure equitable healthcare access.

Funding Acknowledgement: Health and Social Care Delivery Research (HSDR) grant, awarded to the University of Surrey by the National Institute for Health Research (NIHR)

4E.5

A behaviour change techniques analysis, systematic review, meta-analysis and meta-regression of behavioural communication interventions supporting influenza vaccination uptake in adults in primary care settings

Presenter: Melissa Chang

Co-Authors: Daniel-Paul Osahon, Nia Roberts, Melissa Chang, Ibrahim El-Gaby, Faraaz Khan, Charlotte Albury, Joseph Lee

Author institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford (Bilal Qureshi, Daniel-Paul Osahon, Melissa Chang, Charlotte Albury, Joseph Lee), Bodleian Health care Libraries, University of Oxford (Nia Roberts), John Radcliffe Hospital (Ibrahim El-Gaby and Faraaz Khan)

Abstract

PROBLEM: Low vaccine uptake and vaccine hesitancy is a limitation for influenza vaccination programmes. Communication from healthcare professionals plays a critical role in decisions about vaccination uptake. Behavioural communication interventions designed to increase vaccine uptake have used many approaches. The active 'ingredients' of these interventions can be classified using Behaviour Change Techniques (BCTs), allowing meta-analyses of different trials, and comparison between approaches. We systematically reviewed randomised controlled trials of behavioural communication interventions aiming to increase adult influenza vaccination uptake in primary care settings, classified by their BCTs.

APPROACH: We searched Medline, Embase, CINAHL and the Cochrane library. We screened studies in duplicate. Two authors independently screened by title and abstract and then full text. We coded BCTs using BCT taxonomy version 1 (BCTTv1). We assessed risk of bias using the Cochrane Risk of Bias tool 2.0 and assessed publication bias by generating a funnel plot. We performed prespecified subgroup analyses and meta-regression of studies using BCTs from domains 5 (natural consequences) and 9 (comparison of outcomes), and the number of BCTs used. These BCT domains align with those used in NICE guidelines for increasing flu vaccine uptake.

FINDINGS: We identified and screened 1,662 studies, 14 were included. We judged all studies as 'some concern' of risk of bias. We found evidence of possible publication bias. The most common BCTs were: 'information about health consequences,' 'credible source,' and 'adding objects to the environment'. Other BCTs commonly used in effective interventions were 'social support (emotional)' and 'instruction on how to perform the behaviour.' Pooled results showed that behavioural communication intervention improves vaccine uptake (odds ratio 1.43, 95% CI 1.21-1.69); no significant differences were found between subgroups. The meta-regression found significant improvements associated with using more BCTs (p=0.026, R2=40.00%), and the BCTs 5.1 (information about health consequences) and 9.1(credible source) was associated with higher vaccine uptake (p=0.018 and p=0.027 respectively, adjusted R2=41.94%).

CONSEQUENCES: We found evidence that behavioural communication interventions with higher numbers of BCTs and those using 5.1 (information about health consequences) or 9.1 (credible source) were associated with higher vaccine uptake. Our results support

NICE best practice for increasing influenza vaccine uptake, which centres around the BCTs 5.1 (information about health consequences) and 9.1 (credible source). The BCTs 'social support (emotional)' and 'instruction on how to perform the behaviour' should be added in future trials to assess their effectiveness. Guidance should be updated to reflect evidence we found that using higher numbers of BCTs increases the effectiveness of interventions. Overall, to improve the effectiveness of communication interventions for influenza vaccine communication should include information about health consequences, originate from a credible source, and include a higher number of BCTs.

Funding Acknowledgement: No funding was received for this work.

5B.1

What is the role of the GP in modern general practice?

Presenter: Charlotte Paddison

Co-Authors: Rebecca Rosen

Author institutions: Nuffield Trust

Abstract

PROBLEM: With too few GPs policy has focused on increasing use of a multi-professional workforce: in comparison to ARRS roles much less attention has been given to the role of the GP or to identifying how to make best use of the GPs that are available. The aim of this paper is to provoke thoughtful debate on the role of the GP, identify key issues, and support policy development.

APPROACH: We reviewed relevant peer-reviewed and policy literature, using a discursive approach to explore the role of the GP from a variety of perspectives including practicing GPs, wider members of the general practice team (advanced nurse practitioners, clinical pharmacists, paramedics), patients, and policy leaders.

FINDINGS: A decade of sustained policy reform across multiple areas (access, workforce, digital, organisational scale) has shifted and significantly reshaped the role of the GP. The work GPs do in making sense of ambiguous symptoms (undifferentiated illness), demedicalising where appropriate, and holding clinical risk in the community is highly skilled - but it's importance, including to safety and efficiency of care, is often poorly understood and not always recognised in wider policy conversations. Our analysis highlights the need for stronger alignment between the role of the GP and the purpose and function of general practice. And to understanding the contribution GPs make to high quality care and productivity in the NHS both in terms of what GPs do and, just as importantly, what they do not do.

CONSEQUENCES: Greater clarity on the role of the GP, and a reinvigorated emphasis on medical generalism, are needed as part of the bedrock for building a strong vision for the future of primary care. Policy must strike a balance between use of GP time to support and supervise multidisciplinary teams, and making the most of what it is that general practitioners are highly skilled and experienced at and do best. Current policy approaches are leading towards a more transactional model of care and risk losing sight of – potentially even 'designing-out' – the highly-skilled work GPs do in managing clinical risk and uncertainty: work that supports better health outcomes for individuals and adds value to the wider health system. The challenge for GP practices is finding ways to hold on to these benefits in the context of new ways of working. Primary care research is needed to understand how in the context of multi-professional team working clinical assessment of ambiguous symptoms can be done safely, and efficiently - especially if patients are moving between different members of a clinical team. The

implications of role substitution, vicarious risk, and the taskification of general practice should also be addressed in future research and policy development.

Funding Acknowledgement: Not external funded. Salary costs for CP and RR, and policy roundtable funded internally by the Nuffield Trust.

5B.2

Evaluating the use of Additional Roles in primary care as a sustainable approach to expanding workforce capacity and improving the quality of service delivery

Presenter: Chris Penfold

Co-Authors: Jialan Hong, Gareth Myring, Peter J Edwards, Mavin Kashyap, Hugh McLeod, Chris Salisbury, Nicola Walsh, Ben Bennett, John Macleod, Maria Theresa Redaniel

Author institutions: National Institute for Health Research Applied Research Collaboration West (NIHR ARC West), Bristol Medical School, Centre for Academic Primary Care (Bristol Medical School), Health Innovation West of England

Abstract

PROBLEM: The Additional Roles Reimbursement Scheme (ARRS) began in 2020 to expand the non-medical practitioner workforce in primary care. The ARRS is expected to improve primary care delivery across networks, expedite patient access, help mitigate rising demand, and provide an advanced career pathway for non-GP practitioners. At present there are 15 direct patient care ARRS roles eligible to be commissioned through the scheme. It is not known how the rapid expansion of the primary care skill mix will affect the delivery and outcomes of primary care services.The aims of our study were to:

1. Describe the trend in consultations with roles eligible to be funded through ARRS compared with GPs and nurses

2. Explore the outcomes of consultations (prescriptions, referrals, re-consultations)

APPROACH: We used a longitudinal cohort study design.We used data from the Clinical Practice Research Datalink (CPRD) 2015 to 2021 to describe the overall consultation rate and rate by mode (in-person and remote) with ARRS eligible roles, nurses and GPs. We described the types of patients seen by each role (age, gender, IMD quintile). We also compared the outcomes (prescriptions, any onwards referrals, re-consultations within 1-14 days) of consultations with ARRS eligible roles and with nurses compared with GPs.Analyses included descriptive statistics, age and sex standardised rates, and adjusted regression models.

FINDINGS: We included all consultations between 1st April 2015 to 31st December 2021 from a random sample of 600,000 patients from 400 Practices in CPRD, resulting in 12,122,373 consultations. We identified nine ARRS eligible roles from CPRD: Chiropodist/Podiatrist, Dietician, Occupational Therapist (OT), Paramedic, Pharmacist, Physician Assistant, Physiotherapist, Nursing Associate (NA), Advanced Nurse Practitioner (ANP). Consultations with these roles comprised 9% of the study sample (n=1,102,810) and were predominantly with ANPs (54.9%), Pharmacists (22.5%), NAs (9.7%), and Paramedics (6.6%). Consultations with Paramedics, Pharmacists and Physician Assistants were more likely to be remote compared with GPs, all other roles were more likely to be in-person. The re-consultation rate was 29.1% for GPs and varied minimally between other roles, but was notably higher for Physiotherapists (33.3%) and Physician Assistants (34.1%). The prescribing rate for GPs was 14.3%. It was slightly higher for ANPs (14.9%), around 10% for Paramedics and NAs (9.3%), and considerably lower (<5%) for other

roles. The referral rate for GPs was 2.5%, was slightly lower for Physiotherapists (1.7%) and Physician Assistants (1.4%), and much lower for all other roles (<1%).

CONSEQUENCES: The job roles captured in CPRD do not cover all ARRS eligible roles, notably not social prescribing link workers and physician associates. Rates of prescribing and onward referrals are comparable between the main ARRS roles and much lower than for GPs, but re-consultation rates may be slightly higher for ARRS roles.

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5B.3

"It's a lot more in-depth for us than it was before": A multi-methods study of community nurses' extended roles in palliative care

Presenter: Ben Bowers

Co-Authors: Kristian Pollock, Alessandro Bosco, Simon Etkind, Alison Leary, Stephen Barclay, Louisa Polak

Author institutions: University of Cambridge, University of Nottingham, Queen's Nursing Institute, London South Bank University

Abstract

PROBLEM: Community nurses have always worked very closely with patients and their families at the end of their life. Changes in ways of working, accelerated by the Covid-19 pandemic, have placed community nurses even more centrally than before within the complex patchwork of community palliative care provision. Our study aims were to explore UK-based community nurses' views and experiences of their new or extended roles in palliative and end-of-life care since the pandemic, including what has been helpful or requires improvement.

APPROACH: We conducted a multi-methods e-survey and focus group study between February and April 2023, about a year after UK lockdowns ended. A social constructionist perspective underpinned the research. A detailed e-survey of 51 community nurses generated a descriptive overview of some specific areas of change in participants' roles since the beginning of the pandemic. This was followed by focus groups; as well as serving to recruit focus group participants, the survey results provided a robust starting point for our subsequent in-depth qualitative exploration of 35 community nurses' perceptions of their new or extended roles.E-survey responses were analysed descriptively. Qualitative data were analysed inductively using thematic analysis.

FINDINGS: Participants identified two specific roles that were new to many of them: verifying death and prescribing. Many community nurses also talked about a broader, more fundamental expansion of their role; they described themselves as replacing general practitioners and palliative specialists in making important and often complex decisions with patients and families. Nurses expressed a mixture of positive and negative feelings about these extended roles. Most expressed pride in their new knowledge and skills, and satisfaction with the care they were providing. Yet many also expressed dissatisfactions, particularly concerning the quantity of work expected of them and the extent to which they had to take the lead in managing complex problems. They described heavy workloads impairing their capacity both

to provide good clinical care and to train junior colleagues, and highlighted the importance of more general practitioners' support with complex cases. However, accessing general practitioners' input was difficult in some areas, and there was concern that many general practitioners lacked adequate expertise to provide effective back-up.

CONSEQUENCES: These FINDINGS: have two broad implications for policy-makers and commissioners seeking to recruit and retain more community nurses. First, they should recognise the importance of allowing experienced nurses enough time to facilitate their juniors' experiential learning, alongside providing high-quality care for patients. Second, medical back-up for nurses managing complex end-of-life situations should be strengthened, in response to its perceived inadequacy in some areas. Addressing these two issues, we suggest, would reinforce community nurses' already-strong commitment to fulfilling an expanding role in caring for the increasing number of people who die at home.

Funding Acknowledgement: This study was funded by the General Nursing Council for England and Wales Trust. Dr Ben Bowers receives funding from the Wellcome Trust [225577/Z/22/Z]. Prof. Stephen Barclay is supported by the NIHR Applied Research Collaboration East of England (NIHR ARC EoE) at Cambridge and Peterborough NHS Foundation Trust.

5B.5

An umbrella review of systematic reviews and selective review of recent primary studies on additional healthcare worker roles in general practice.

Presenter: Jane Smith

Co-Authors: Ian Porter(1), Louise Cooper(1), Nada Khan(1), Alison Bethel(1), Imelda McDermott(2), Sharon Spooner(2), Maria Panagioti(2), Georgette Eaton(3), Chris Salisbury(4), Danielle Van Der Windt(5), Stavros Petrou(3)

Author institutions: (1) University of Exeter Medical School, (2) University of Manchester, (3) University of Oxford, (4) University of Bristol, (5) University of Keele

Abstract

PROBLEM: To address growing workforce pressures and patient needs, policymakers have encouraged increased use of "additional healthcare workers" (AHWs) in general practice, such as through the Additional Roles Reimbursement Scheme (ARRS). Despite this, there is a lack of synthesised evidence about the impacts of employing existing practitioners (e.g. physiotherapists, paramedics, dieticians) or newer professionals (e.g. social prescribing link workers, care co-ordinators) in these roles. To address this, we conducted an "umbrella review" examining studies on AHWs in general practice.

APPROACH: In line with our protocol (https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42022341281), we searched Cochrane, Medline, EMBASE, PsycInfo, CINAHL and Web of Science Core Collection, for systematic reviews reporting on AHWs working in or closely with general practices. For roles where reviews were lacking, we undertook supplementary searching for UK-focussed primary research. We extracted quantitative and qualitative data on: roles and responsibilities; training; models of integration; impacts on practices (e.g. team-working, culture), existing staff (e.g., workload, well-being, retention), care provision (e.g., services offered, access, quality), patients (e.g., satisfaction, health outcomes, safety) and costs. We synthesised

Findings taking account of the quality of included reviews assessed using the Risk of

Bias in Systematic reviews (ROBIS) tool. FINDINGS: From 5104 records screened and 422 full texts assessed for eligibility, we included 29 reviews in the main synthesis of Findings 12 on paramedics; five on care co-ordinators; three each covering physician associates and social prescribing link workers; and two on each of physiotherapists, health and well-being coaches, and mental health workers.

FINDINGS: from five identified umbrella reviews on pharmacists were summarised separately. We found only three primary studies on podiatrists, two on dieticians and none examining pharmacy technicians, occupational therapists or nursing associates. Although most reviews were rated as at low risk of bias, the quality of their included studies was mostly poor. There was some evidence describing the roles and responsibilities of AHWs, highlighting the importance of role definitions and boundaries. Training, supervision and good communication appeared key to facilitating integration of AHWs into general practices. Apart from for health and wellbeing coaches (where good-quality evidence from two reviews suggested positive effects on managing chronic diseases), there was limited conclusive and good-quality evidence for the impact of AHWs on patient outcomes, care provision, resource use and costs. There was little evidence for any roles relating to impacts on wellbeing and workload, amongst the AHWs themselves or existing general practice staff (e.g. only 2/12 reviews on paramedics covered impacts on staff).

CONSEQUENCES: For most AHWs reflecting ARRS-funded roles, positive impacts on general practice are yet to be established, highlighting the need for high quality primary research evaluating impacts of the ARRS workforce, particularly on patient outcomes, staff workload and costs.

Funding Acknowledgement: This review forms part of the "Assessing the contributions of additional role practitioners to general practice in England" (CARPE) study led by the University of Oxford and funded by the National Institute for Health Research (NIHR) School for Primary Care Research, Grant Reference Number: 568. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

5B.6

What are the perceptions and experiences of nurses, occupational therapists, pharmacists, and physiotherapists certifying fit notes?

Presenter: Diane Trusson

Co-Authors: Jade Kettlewell, Denise Kendrick, Stephen Timmons, Avril Drummond, Claire Anderson, Jain Holmes, Nick Pahl, Gill Phillips, Shan Martin

Author institutions: University of Nottingham, Society of Occupational Medicine

Abstract

PROBLEM: Legislation introduced in 2022 allows nurses, occupational therapists, pharmacists, and physiotherapists (NOPPs) to certify fit notes. The aim was to alleviate pressure on GPs and allow NOPPs to use their rehabilitation expertise to support patients to return-to-work (RTW). This is important because there are growing numbers of people who are economically inactive due to long-term sick absence. Research indicates that the longer someone is off work, the less likely they are to return. Furthermore, there are physical and mental benefits associated with working, as well as economic benefits for individuals and society.Aims: to explore the knowledge, experiences, and perspectives of NOPPs around certifying fit notes, identify barriers/facilitators that might affect fit note completion, and identify NOPPs' training needs.

APPROACH: Qualitative methods enabled in-depth exploration of NOPPs' experiences. Most participants volunteered to be interviewed after completing an associated survey; others were accessed through snowball sampling. Data were collected through semi-structured interviews/focus groups conducted online via Microsoft Teams and thematically analysed using framework approach, informed by the Consolidated Framework for Implementation Research and the Theoretical Domains Framework. Themes were discussed and agreed between the research team. PPI were involved in designing the interview schedule and associated documentation; they also contributed to analysis and dissemination of the findings .

FINDINGS: One focus group and 18 interviews were conducted with nurses (n=3,12%), occupational therapists (n=12,48%), physiotherapists (n=9,36%) and pharmacists (n=1,4%). Two-thirds of participants (n=17, 68%) were experienced in certifying fit notes. Facilitators included NOPPs' perceiving fit notes as tools for enabling patients to RTW and enthusiasm about the legislation change. They valued the opportunity to use their skills and enhance their professional role. Some participants accessed training through professional bodies, others independently sourced training. Some NOPPs were involved in creating guidelines for their healthcare organisations. Participants without fit note experience reported barriers including lack of policies/guidelines, poor communication about the legislation change and available training, being told it is not their role, concerns about legal implications, and lack of confidence.Other barriers included insufficient resources, e.g. time pressures when completing fitness-to-work assessments, and limited access to electronic forms. Online training was considered adequate, but participants suggested improvements e.g. topic-specific modules, interactive training sessions, and peer support.Interim conclusions:Despite the willingness of NOPPs to undertake fit note certification, the current lack of policy/guidelines is a barrier to implementing the legislation change. Further work is required to develop training courses/materials that provide NOPPs with relevant skills and knowledge to assess fitness-to-work and confidently certify fit notes.

CONSEQUENCES: NOPPs' enthusiasm for completing fit notes should be supported at organisation level. Organising training and implementing policies/guidelines would allow more NOPPs to certify fit notes, maximising potential benefits for general practice and patient care.

Funding Acknowledgement: This study is funded by a NIHR School for Primary Care Research (SPCR).

5B.7

Patient Allocation in Multi-Specialist GP Practices: A Scoping Review

Presenter: Mel Smith

Co-Authors: Nicky Harris, Laura Dumpleton

Author institutions: UWE Bristol

Abstract

PROBLEM: Pressure on General Practice is increasing in England because the population both growing and getting older and sicker (ONS, 2022), and the number of practicing GPs is falling (BMA, 2024). Therefore, many GP Practices are starting to direct patients to other health professionals where appropriate, including physiotherapists, pharmacists and paramedics, in addition to GPs, driven by the introduction of the Additional Roles Reimbursement Scheme (ARRS) by NHS England in 2019. The expectation is that these new healthcare professionals will improve patient access and that at least some of these roles will be First Contact Practitioners (FCPs), who see patients directly, without them

needing to see the GP first. However, recent research shows that most appointments to FCP physiotherapists came after referral from a GP (Lamb et al, 2023), thereby retaining the GP as the bottleneck in the process. This suggests that there is a fundamental gap in understanding how to operationalise FCP roles effectively within GP practices and there is currently little research to understand the mechanisms and impact of this change. This paper therefore aims to undertake a scoping review to assess the extent of the literature on patient allocation processes in general practice, with a focus on how patients are allocated to GPs and other multi-specialist healthcare professionals.

APPROACH: The scoping review follows PRISMA guidelines and is broad in scope, considering all relevant studies published in selected academic databases, along with grey literature from grant databases and health organisations in the UK. The search strategy was developed through discussions between the researchers and pilot searches to identify appropriate keywords and search combinations. Once these were confirmed, full searches were undertaken across both academic and grey literature databases. Titles were excluded if they were older than 20yrs, not written in English or were not directly related to patient allocation or care navigation in primary care. Data from included papers was extracted and checked by the review team and key themes were identified.

FINDINGS: Initial results show that academic literature typically reports issues around access (getting appointments), the triage process to establish appointment urgency and often also the mode of appointment (ie. online, in-person, by phone), or referrals onward (after the appointment). The grey literature, in addition, discusses the additional roles, along with the skills and capabilities they bring and the practical aspects of utilising this new resource. However, there is limited research focusing on first contact practitioners and the process of allocating patients to them in GP Practices.

CONSEQUENCES: Whilst GP practices are already implementing processes to allocate patients to FCPs in addition to GPs, existing research on this topic is sparse. Research is required to understand FCP allocation models in terms of effectiveness and its impact on patients and staff.

Funding Acknowledgement: This work was funded through a BNSSG ICB RCF grant and an allocation through UWE Bristol's HEIF award.

5C.1

Diabetes Prevention - An in-depth case study exploring the complexity of lifestyle change in those with 'pre-diabetes'.

Presenter: Eleanor Barry

Co-Authors: Professor Trish Greenhalgh, Professor Sara Shaw, Associate Professor Chrysanthi Papoutsi

Author institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford

Abstract

PROBLEM: Due to the personal impact on the individuals and the economic impact on the NHS, type 2 diabetes is a national health priority; in the UK, five million people are living with diabetes, 90% of whom have type 2 diabetes. A further 2.4 million people are estimated to be at risk of diabetes. 10% of the NHS budget is spent on diabetes and related conditions, and the cost is anticipated to rise from £23.7 billion to £39.8 billion by 2035/2036. GPs are incentivised through the NHS GP contract to diagnosis people with a HbA1c between 42-47mmol/l with 'pre-diabetes' and offer referrals to interventions. Despite the introduction of the NHS Diabetes Prevention Programme and other disease prevention initiatives the incidence of

diabetes continues to rise. There is limited evidence on how receipt of a pre-diabetes diagnosis influences a patient's health-related lifestyle choices. The aim of this qualitative study was to understand how people interpret and internalise the pre-diabetes diagnosis and how this influences their health-behaviours.

APPROACH: An in-depth case study of twenty-five people with pre-diabetes was undertaken using narrative interviews, a cultural probe exercise (collecting observational data) and follow up reflective interviews. A thematic and theoretical analysis was undertaken using Bourdieu's theory of practice.

FINDINGS: Participants diagnosed with pre-diabetes accepted it without resistance but discussed difficulties in lifestyle change. Lifestyles are complex social constructs and people found it difficult to adapt their lifestyles if their habitus (embodied traits and behaviours) didn't align with health promotion messages from interventions and primary care teams. We identified three different life-worlds which interacted with an individual's habitus and led to the production of different health behaviours (figure 1). The first was the social context of the home and work – people were strongly influenced by health beliefs of the people immediately around them (e.g. spouse, children, work colleagues). The second comprised wider experiences and settings (e.g. birthday party, going out for dinner). Going against social norms in either life-world risked an individual's social positioning, cultural belonging and sometimes, job security. This risk was greater than a hypothetical future risk of diabetes. The third life-world was the wider environmental pressures which influence the ability to eat well and exercise (e.g. commercial food environment, access to green spaces, housing insecurity, rising cost of living, food affordability).

CONSEQUENCES: Current diabetes prevention policies emphasise the individual reducing their own diabetes risk and downplay social and contextual influences on health. Individuals able to sustain long-term lifestyle change were those whose habitus and social context aligned with prescribed behaviour change. They also needed the financial means to effect change and live in communities which encourage health promoting practices.

Funding Acknowledgement: This study was undertaken as part of an NIHR Doctoral Research Fellowship.

5C.2

Effects of HbA1c variability on serious infection risks and the influence of age, sex, and ethnicity: a primary care cohort of patients with type 2 diabetes

Presenter: Liza Bowen

Co-Authors: Iain M Carey, Julia A Critchley, Umar A R Chaudhry, Derek G Cook, Stephen DeWilde, Elizabeth S Limb, Liza Bowen, Stephen Woolford, Peter H Whincup, Tess Harris

Author institutions: St George's, University of London

Abstract

PROBLEM: Long-term HbA1c variability is associated with micro- and macro-vascular complications in type 2 diabetes, but it is not well established if it also increases the risk of infections. We explored prospective associations between HbA1c variability and serious infection; how these relate to HbA1c average level, and whether these are modified by age, sex, and ethnicity.

APPROACH: 411,963 patients with type 2 diabetes in England, aged 18-90, alive on 01/01/2015 in the Clinical Practice Research Datalink were included. HbA1c measurements made during 2011-14 were used to estimate an average level and a HVS variability score (HVS). The HVS counts how frequently HbA1c rises or decreases by a fixed threshold or

more, across a series of successive measurements made over time and is summarised as a percentage (0-100). Poisson regression estimated incidence rate ratios (IRRs) for infections requiring hospitalisation during 2015-19 by HVS categories, adjusting for confounders, stratified by age, sex, ethnicity and average HbA1c level. To compare the potential overall impact of variability versus average level, attributable risk fractions (AF) were calculated. These estimate the proportion of all infections attributable to higher variability or average level compared to a hypothetical reference category for both variability (HVS 0-20) and average level (42-48mmol/mol).

FINDINGS: While increasing HbA1c level and variability were both independently associated with infections, a greater infection risk (IRR>1.2) was seen with modest variability (HVS≥20, 73% of patients). However, infection risk was elevated only at higher average levels (≥64mmol/mol, 27% of patients). Estimated AFs were markedly greater for variability than average level (17.1% vs. 4.1%). The positive association between variability and infection was more apparent among patients with the lowest average HbA1c levels (<48 mmol/mol) and observed at all levels except the very highest (≥86 mmol/mol). Associations with variability were greater among older patients (>60y) and those with lower HbA1c levels, and not observed among people from Black ethnicities. Associations were similar whatever the direction of the last recorded HbA1c change.

CONSEQUENCES: At a population level, HbA1c variability between primary care visits among patients with type 2 diabetes appears to account for more serious infections than average HbaA1c level. Since individual risks with variability were observed at lower average levels, greater clinician and patient awareness of HbA1c variability may be beneficial. However, only well-designed trials can establish whether there are long-term benefits of directly treating variability in HbA1c on infections, quality of life and other diabetes complications.

Funding Acknowledgement: This study is funded by the National Institute for Health and Care Research (NIHR) - Research for Patient Benefit Programme (NIHR202213) and supported by the NIHR Applied Research Collaboration South London (NIHR ARC South London) at King's College Hospital NHS Foundation Trust.

5C.3

Comparison of Mortality Outcomes in Type 2 Diabetes amongst different Ethnic Groups: Systematic review and Meta-analysis of Longitudinal Studies

Presenter: Umar A R Chaudhry

Co-Authors: Umar A R Chaudhry[1], Rebecca Fortescue[1], Liza Bowen[1], Stephen Woolford[1], Felicity Knights[2], Julia A Critchley[1], Derek G Cook[1], Tess Harris[1]

Author institutions: [1] - Population Health Research Institute, St George's, University of London, London; [2] - Institute for Infection and Immunity, St George's University of London, London

Abstract

PROBLEM: Type 2 diabetes is a leading cause of morbidity and mortality. People of certain ethnic groups are known to be disproportionately affected by type 2 diabetes. Its prevalence is higher and age of onset up to ten years earlier in people of in South Asian and Black ethnicities compared to people of White ethnicities, which can lead to several complications. Comparisons of mortality outcomes by different ethnic groups have however not been extensively studied to include the more recent larger studies, and robust estimates are important to identify key risk factors for any mortality differences. The aim of this systematic review and meta-analysis is to compare mortality outcomes in

people with type 2 diabetes amongst different ethnic groups. A

PPROACH: This systematic review follows PRISMA guidelines, and a PROSPERO protocol has been registered(CRD42022372542). Eight databases and grey literature were searched in March 2023 for longitudinal follow-up studies (prospective and retrospective cohorts) using suitable MeSH headings and keywords. Studies among adults with type 2 diabetes managed in community-based settings, published after 01/01/2000 and containing ≥100 participants in each reported ethnic group were included. Two independent reviewers undertook title/ abstract and full-text screening, data extraction, quality assessment using the using Newcastle-Ottawa Scale (NOS) and data synthesis with group consensus to resolve any conflicts. The primary outcome was all-cause mortality rates amongst different ethnic groups in type 2 diabetes, with comparisons reported as a hazard ratio (HR) with 95% confidence intervals (95%CI).

FINDINGS: 30,825 records were identified through initial database searching, 14,640 studies were eligible fortitle/abstract screening, of which 258 studies underwent full-text screening. 13 studies met the selection criteria to be included in the systematic review, of which 9 studies had sufficient data for quantitative synthesis in a meta-analysis. The 13 studies included were predominantly conducted in UK, north America and Australasia countries, incorporated a total of 812,049 participants and 12/13 were rated as good using the NOS for quality assessment. The overall risk of mortality was lower amongst people with type 2 diabetes from South Asian [HR 0.68 (0.65-0.72); 4 studies], Black [HR 0.82 (0.77-0.87); 5 studies] and Chinese [HR 0.57 (0.46-0.70); 2 studies] ethnicity compared to people of White ethnicity.

CONSEQUENCES: People with T2D of South Asian, Black and Chinese ethnicity have a lower risk of all-cause mortality compared to people of White ethnicity. This is the first systematic review providing comprehensive estimates for mortality risk by ethnicity in people with type 2 diabetes, incorporating more recent, larger cohorts. Key influences explaining higher mortality risk in certain ethnic groups therefore require further study, which will provide opportunities for more focussed interventions to reduce these differences, and lead to more equitable type 2 diabetes management.

Funding Acknowledgement: No funding was available for this study.

5C.5

Did practice location and patient-perceived access predict achievement of good diabetes glycaemic control in English practices recovering from COVID lockdown?

Presenter: Louis Levene

Co-Authors: Richard Baker, Christopher Newby, Emilie Couchman, George K Freeman

Author institutions: University of Leicester; University of Nottingham; University of Sheffield; Imperial College London

Abstract

PROBLEM: Better glycemic control leads to better health outcomes for patients with diabetes. Practices offered fewer appointments during lockdown. The subsequent backlog of demand exacerbated the huge pre-existing pressures on practices and adversely affected their capacity to provide planned care for long-term conditions. Our aims were to:

1. describe practice achievements of good diabetes glycaemic control post-lockdown.

2. investigate whether practice location and patient-perceived access independently

predicted variations in these achievements, after adjustments.

APPROACH: We studied English general practices in two post-lockdown years, 2021-22 and 2022-23, using published data from NHS Digital, Department of Local Government and the GPPS (2020-21 data were incomplete but we used 2019-20 data for comparison). We excluded practices with <750 patients or average NHS payments >£500/patient. Each year's outcome was %patients aged 17 years or more on a QOF diabetes register whose last glycosylated haemoglobin (HbA1c) was 58mmol/mol or less. We fitted 12 relevant non-correlated independent variables into two ordinary least squares regression models for each year. These variables represented baseline (previous year's outcome), practice location (deprivation, NHS region, rurality), demography (%white ethnicity), practice characteristics (list size, % on QOF diabetes register, average adjusted NHS payment/patient, FTE GPs and nurses/10,000 patients), and patient-perceived access (% with regular GP, %good experience making an appointment).

FINDINGS: Our study populations were 6381 (2021-22) and 6326 (2021-22) practices [92.2% and 91.4%, respectively, of 6920 practices]. The means and (standard deviations) of %patients <58mmol/mol were 51.6% (7.5%) in 2021-22 and 55.4% (6.8%) in 2022-23, compared to 56.9% (6.6%) in 2019-20.Positive predictors were:

- in both years higher previous % with HbA1c <58mmol/mol (2021-22 estimate 0.66 [CI 0.63-0.68, p<0.001]; 2022-23 - 0.65 [0.63-0.67, p<0.001])higher % on diabetes registers (0.15 [0.06-0.24, p=0.001]; 0.08 [0.02-0.15, p=0.016]) %good experience making appointments (0.06 {0.04-0.07, p<0.001], 0.03 [0.02-0.04, p<0.001]
- in 2021-22 higher payments (0.003 [0.00-0.01, p=0.037])more GPs (0.06 [0.04-0.07, p=0.017])
- in 2022-23 higher %white ethnicity (0.02 [0.01-0.03, p<0.001]) Negative predictors were:
- in both years higher IMD (-0.07 [-0.09 to -0.06, p<0.001]; -0.04 [-0.05 to -0.03, p<0.001])living outside London (except South West in 2021-22)
- in 2021-22 higher %white ethnicity (-0.02 [-0.03 to -0.01, p<0.001])The other variables were not predictors.Adjusted R-squared values were 0.438 (2021-22) and 0.589 (2022-23).

CONSEQUENCES: Compared with 2019-20, the %achieving good glycaemic control dropped post-lockdown before partially rebounding. Higher previous achievement, populations living in London or less deprived areas, and better perceived access independently predicted higher achievement in both years. More funding and GP numbers were predictors only in 2020-21, when practices were under even greater pressure and overall achievement was lower. Building on previous achievement, improving access, and considering where patients live should inform strategies to increase the %achieving good glycaemic control. Optimising management of long-term conditions could help to reverse declining life expectancy.

Funding Acknowledgement: No funding received.

5C.6

ENERGISED mHealth intervention in Czech republic general practice to increase physical activity of patients with prediabetes and type 2 diabetes: protocol and baseline FINDINGS: from a pragmatic randomised controlled trial

Presenter: Tess Harris

Co-Authors: Tomas Vetrovsky, Norbert Kral, Marketa Pfeiferova, Jitka Kuhnova, Jan Novak, Charlotte Wahlich, Katerina Jurkova, Katerina Malisova, Iris Maes, Jana Pelclova, Michal

Steffl, Michael Ussher, Steriani Elavsky, Delfien Van Dyck, Richard Cimler, Tom Yates, Bo

Author institutions: St George's University of London, Charles University Prague, Czech Republic, University of Hradec Kralove, Czech Republic, University Olomouc, Czech Republic, Ghent University Belgium, University of Stirling, University of Ostrava, Czech Republic, University of Leicester

Abstract

PROBLEM: The growing number of people living with prediabetes and type 2 diabetes is a major public health concern. Physical activity is crucial to diabetes prevention and management, but many people with (pre)diabetes remain physically inactive. Primary care is well-situated to deliver interventions to increase their patients' physical activity levels, but effective, sustainable physical activity interventions for (pre)diabetes patients that can be translated into routine primary care are lacking. This study aims to assess the effectiveness of an mHealth intervention delivered in general practice in the Czech Republic (ENERGISED) at increasing physical activity levels in patients with prediabetes or type 2 diabetes.
APPROACH: We describe the rationale and protocol for this 12-month pragmatic, multicentre randomised controlled trial. Twenty-eight general practices across the Czech Republic recruited 340 patients with (pre)diabetes during routine health check-ups. Active control arm participants receive a Fitbit activity tracker to self-monitor their daily steps. Intervention arm participants additionally receive the mHealth intervention, including delivery of several text messages weekly, with some delivered as “just in time adaptive intervention” tailored physical activity prompts, based on data continuously collected by the Fitbit tracker. The trial consists of two six-month phases: the lead-in phase, supported by phone counselling, and the maintenance phase, fully automated. The primary outcome, average ambulatory activity (steps/day) measured by a wrist-worn accelerometer, will be assessed at 12-month follow-up.

FINDINGS: Trial recruitment has now been completed to target. Recruitment rate, baseline findings and initial findings from intervention implementation will be reported.

CONSEQUENCES: The trial has several important strengths: the choice of active control to isolate the net effect of the intervention beyond simple self-monitoring with an activity tracker; broad eligibility criteria allowing inclusion of patients without a smartphone; procedures to minimise selection bias; and involvement of a relatively large number of practices. These design choices contribute to the trial’s pragmatic character and ensure that the intervention, if shown to be effective, can be translated into routine primary care practice with the potential to increase physical activity levels in people living with prediabetes and type 2 diabetes.

Funding Acknowledgement: This work was supported by the Czech Health Research Council, Ministry of Health of the Czech Republic (grant number NU21–09–00007)

5C.7

Improving cardio metabolic health in people with lower educational attainment

Presenter: Kate Woolley

Co-Authors: Samuel Seidu (1), Abbie Davies (1), Monisha Gupta (2)

Author institutions: (1) University of Leicester, (2) University of Nottingham

Abstract

PROBLEM: People with lower educational attainment (PLEA, those who left school at or before the age of 16) are more at risk of cardio metabolic conditions such as heart disease and type 2 diabetes. Once established,

they also tend to have worse outcomes. A key aspect of managing these conditions is learning about and making lifestyle changes to help. My previous research has identified that this group prefer to learn about their health in different ways than the general population, therefore they represent a distinct and vulnerable target group for specially designed educational interventions. A realist review and synthesis of the literature was performed to understand how and what cardio metabolic health education interventions work for this population and in what circumstances.

APPROACH: A realist review was performed to address the research question. Candidate theories about how such an intervention could work were identified from an initial review of the literature. A systematic search of the literature on cardio metabolic health education in the PLEA group was then performed and evidence for and against candidate theories selected. Context-mechanism-outcome configurations were produced to explain how interventions interact with the circumstances of their delivery, to bring about the desired outcome.

FINDINGS: The work is in progress, but theories generally fall into one of 4 categories: reaching the population of interest, engaging the population, presenting the right information and ensuring this information is assimilated.

CONSEQUENCES: The outcomes of this work will be used to assist in the design of an evidence based, tailored cardiometabolic health education intervention that specifically meets the needs of people with lower educational attainment, that can be commissioned in geographic area where education status is low, to improve health in this vulnerable group.

Funding Acknowledgement: This work is funder by NIHR

5D.1

What do women who suffer from recurrent UTIs believe could be causing them and how do they approach early pre-antibiotic management?

Presenter: Gail Hayward

Co-Authors: Margaret Glogowska, Christopher Butler

Author institutions: University of Oxford

Abstract

PROBLEM: Recurrent UTI (rUTI) is common, disruptive to women's quality of life, and assocatied with antibiot use and resistance. However there has been limited work, particularly in the UK context, to understand women’s beliefs surrounding behavioural and non-behavioural causes of their recurrent UTI and how they try to avoid recurrence. There has also been limited exploration of women’s experiences and approaches to using early non-antibiotic treatments before seeking healthcare.

APPROACH: Semi-structured qualitative interviews were conducted with 34 participants recruited from the MERIT trial, evaluating the effectiveness of D-Mannose as prophylaxis for UTI. A flexible topic guide included questions about what the women believed could cause a UTI recurrence, how they tried to avoid recurrence, and how they approached early phases of management. Interviews were audio-recorded and transcribed and thematic analysis was facilitated by NVivo.

FINDINGS: Women described a wide range of beliefs regarding causation, including non-modifiable factors such as age, and potentially modifiable behavioural factors such as stress, sex, diet and hydration. Other gynaecological or urinary tract conditions were commonly mentioned as being possibly related to recurrent UTIs, including ones that impacted cleanliness, such as incontinence. Some

women had been unable to identify any factors which could be potentially causative. Early treatments included modifying diet and hydration. A range of opinions were offered about over the counter treatments and more home-made remedies, but no treatment was endorsed by a majority of participants. Information on possible causes and early treatments was frequently gained from informal discussions with friends and family, whereas clinical advice was highlighted by some as simplistic and unhelpful.

CONSEQUENCES: There is an absence of clear evidence based guidance for women with recurrent UTI on early non antibiotic treatment options or on behaviour changes which could reduce the chance of recurrence. Better evidence and education could contribute to reducing the frequency of UTI and the need for antibiotics.

Funding Acknowledgement: This study was funded by the NIHR SPCR (project no: 385), and an NIHR Advanced Fellowship awarded to GH

5D.2

Influences on use of antibiotics without prescription in low- and middle-income countries: a qualitative evidence synthesis

Presenter: Christie Cabral

Co-Authors: Tingting Zhang, Isabel Oliver, Paul Little, Lucy Yardley, Helen Lambert

Author institutions: Centre for Academic Primary Care University of Bristol, UK Health Security Agency, University of Southampton,

Abstract

PROBLEM: Self-medication with antibiotics is common practice in many Low- and Middle-Income Counties (LMIC). These antibiotics are bought over the counter, without prescription, from retail pharmacies or drug sellers. This persists despite improved regulatory frameworks to control access that have been implemented in most LMIC over the last decade, since antibiotic resistance became recognised as a global threat. A better understanding of what continues to drive self-medication practices in LMIC is needed. This review synthesised the qualitative evidence on influences on perceptions and practices in relation to self-medication with antibiotics in LMIC.

APPROACH: A systematic search was conducted of relevant medical, international and social science databases including MEDLINE, CINHAL, EMBASE, WHOLIS, GIM, LILACS, and Anthropology Plus. Searching, screening and data extraction followed standard methods. Quality appraisal was done using Popay's tool and used to inform the order in which studies were incorporated into the synthesis. A meta–ethnographic approach was used for synthesis, starting with translation of studies and using line of argument approach to develop the final themes.

FINDINGS: The search identified 78 eligible studies with relevant evidence and the synthesis produced six themes. Antibiotics were understood as a powerful, potentially dangerous but effective medicine for treating infections. This perception was strongly influenced by the common experience of being prescribed antibiotics for infections, both individually and collectively. This contributed to an understanding of antibiotics as a rational treatment for infection symptoms that was sanctioned by medical authorities. Public health Antimicrobial Stewardship messaging that emphasised the dangers of antibiotics tended to reinforce the perception of antibiotics as powerful and therefore efficacious. Accessing antibiotics from medical professionals was often difficult logistically and financially. In contrast, antibiotics were readily available over the counter from local outlets. People viewed treating infection symptoms with antibiotics as a rational self-care practice, although they were concerned

about the risks to the individual and only took them when they believed they were needed.

CONSEQUENCES: Primary health care systems need to be strong and well-resourced if regulations to restrict antibiotic access to prescription only are to succeed. Self-medication with antibiotics is strongly influenced by clinical prescribing of antibiotics. Therefore, interventions to reduce overuse of antibiotics in LMIC need to address both clinical practice and community self-medication practices together. There are potential lessons for high income countries, such as the UK, where the pharmacy first initiative has just started. This initiative is designed to both reduce pressures on primary care appointments and increase access to antibiotics for uncomplicated infections. Access is quite strictly controlled but this is major change that will influence public perceptions and practice. Understanding what has happened elsewhere, may help anticipate any unintended consequences.

Funding Acknowledgement: This research was supported by funding from the MRC & Newton Fund through a UK-China AMR Partnership Hub award (MR/S013717/1).

5D.5

Urine cultures from asymptomatic UK care home residents: early results from the DISCO UTI study

Presenter: Abi Moore

Co-Authors: Nick Francis, Gail Hayward, Chris Butler, Margaret Glogowska, Mark Lown, Beth Stuart, Alastair Hay, Michael Moore, Paul Little, Mandy Wootton, Elizabeth Miles, Kristin Veighey, Chris Wilcox, Elizabeth Lydia

Author institutions: University of Oxford, University of Southampton, University of Bristol, Queen Mary, University of London, Public Health Wales

Abstract

PROBLEM: The diagnosis and treatment of urinary tract infection (UTI) is particularly common amongst care home residents. However, establishing an accurate diagnosis is challenging in this population because: (i) symptoms and signs can be non-specific; (ii) histories can be unreliable due to cognitive impairment; (iii) obtaining an uncontaminated urine sample can be difficult; and (iv) there is a high prevalence of asymptomatic bacteriuria (ASB), estimated at 30-50% in this population. Research is urgently needed to address this problem. The aim of the DIagnoSing Care hOme UTI Study (DISCO UTI) is to assess feasibility and acceptability of conducting a prospective cohort study of urinary tract infections in care home residents and explore potential future diagnostic or prognostic strategies.

APPROACH: DISCO UTI is a cohort study of up to 100 care home residents, with a 6 month follow up. We are collecting baseline (asymptomatic) urine samples from all participants and repeated (asymptomatic) samples (weekly for 4 weeks) from a subset. Three further samples are sent during any possible UTI episodes during follow up. We will describe the urine samples in terms of appearance, microscopy and significant growth on culture and have included exploratory work on urinary biomarkers and novel point-of-care tests. There were two public co-applicants on the grant application, and our PPI group continues to contribute to the study. They informed discussion around the early design and management of the project and have had input on the participant facing materials.

FINDINGS: We will be presenting findings from the baseline and weekly urine cultures. We have currently recruited 38 participants to the cohort from five care homes. Mean age of participants is 87.2 years. To date 37 baseline (asymptomatic) urine results are available. Only 2 of these samples (5%) show no growth. Fifteen samples (41%) meet the laboratory definition of UTI based on microscopy and

culture. There are currently 35 weekly culture results from 12 asymptomatic participants. These appear to show weekly variation in bacterial growth. These results will be updated at the conference. CONSEQUENCES: Early indications suggest a larger, definitive cohort study could be feasible and that urine culture may not be diagnostically useful in the care home population. Alternative diagnostic strategies for care home UTI are being explored.

Funding Acknowledgement: This study is funded by the National Institute for Health Research School for Primary Care Research (Grant 578). Additional support is provided by Abigail Moore's Wellcome Trust Doctoral Fellowship Grant, RCGP Scientific Foundation Board Grant and the NIHR Community Healthcare MedTech and IVD Cooperative (MIC).

5D.6

Development of a behaviour change intervention to improve antibiotic use among university students from low- and middle-income countries, a study using evidence- and person-based approaches

Presenter: Jiexin Zhang <jiexin.zhang@bristol.ac.uk>

Co-Authors: Tingting Zhang, Christie Cabral, Alastair Hay, Lucy Yardley

Author institutions: School of Psychological Science, University of Bristol, Population Health Sciences, University of Bristol

Abstract

PROBLEM: Antimicrobial resistance (AMR) is a health threat in low- and middle-income countries (LMICs). Antibiotic misuse in LMICs is a main contributing factor to AMR. Studies indicated that contextual factors, including social and cultural factors, could affect people's antibiotic use behaviours. University students in LMICs frequently self-medicate with antibiotics, often inappropriately, although they have relatively high educational level. Therefore, they should be a key population for reducing antibiotic misuse. However, there is no behaviour change intervention aiming to improving antibiotic stewardship for this population. This study aims to identify antibiotic misuse factors, and co-design an intervention with LMIC students to improve antibiotic stewardship.

APPROACH: First, we drew on a systematic review to understand factors for antibiotic misuse among the general public in LMICs. These were collated in an Intervention Planning Table to be used as the basis for co-designing the intervention. We are now using leaflets and snowballing methods to invite LMIC students to a PPI panel. They will be consulted through a workshop to discuss the synthesis results, and co-design target behaviours, beliefs and attitudes. Students, as part of the general public and antibiotic consumers, are able to express their views about these factors, being similar to the whole general public in some ways but also having different perspectives and experiences, to co-design an intervention that is more suitable for themselves. By working with PPI, we hope to be able to develop an intervention that is more feasible, acceptable and engaging.

FINDINGS: Having a strong belief in the curative power of antibiotics, and successful experiences of antibiotic treatment are associated with inappropriate antibiotic use. Easy access to antibiotics and long waiting time and high cost of medical consulting also drive antibiotic use. The interplay of individual, social, cultural, and organisational factors affects people's antibiotic use behaviour. The synthesis results will be tabulated and provided in the workshop to support co-designing the intervention with students. During the workshop, in-depth discussion will be conducted to define and prioritise target behaviours, beliefs and attitudes. Based on their individual experiences and cultural backgrounds,

students will contribute to the intervention development by expressing their perspectives towards antibiotic misuse and relevant factors.

CONSEQUENCES: The qualitative synthesis helps provide an explicit and detailed understanding of how and why the students in LMICs misuse antibiotics, based on which we will be able to develop a suitable intervention targeting these factors to improve their beliefs, attitudes, and practices. It is important that students are able to express their thoughts and co-design an intervention that suits themselves. The process of co-designing the intervention highlights PPI as an essential part of a research team in decision making, to ensure the acceptability and engagement of the intervention, as well as its future generalisability.

Funding Acknowledgement: JZ is supported by the China Scholarship Council – University of Bristol joint-funded PhD Scholarship

5E.1

Introducing Eczema Care Online into routine use: lessons learnt in developing an implementation strategy for a digital health intervention

Presenter: Miriam Santer

Co-Authors: Ingrid Muller, Laura Howells, Kate Greenwell, Amanda Roberts, Mary Steele, Paul Leighton, Katy Sivyer, Matthew Ridd, Kim Thomas

Author institutions: University of Southampton, University of Nottingham, Public contributor

Abstract

PROBLEM: Eczema management can be challenging for people with eczema, or parents of children with eczema, as it involves regular topical treatment use and avoidance of triggers. It can be difficult for health professionals explain eczema treatments and resolve concerns within time-limited consultations and previous research has found that patients often find advice confusing or insufficient. Eczema Care Online is a web-based behavioural intervention to support people with eczema and parents of children with eczema, developed following the Person-Based Approach by researchers, clinicians and people with eczema. The website includes videos, advice from others with eczema and all content is evidence-based. The website (www.EczemaCareOnline.org.uk) has been shown in two large RCTs to improve eczema outcomes for children with eczema and young people at 6 and 12 months. Implementation requires adoption at patient/family, clinician and organisational levels. We sought to learn lessons from developing and delivering an implementation strategy for the intervention.

APPROACH: Data from stakeholder consultation meetings, interviews with trial participants, and intervention usage data, informed our implementation plan. A scoping search of existing eczema websites helped identify the 'unique selling points' of Eczema Care Online. Drawing on a theoretical framework (Normalization Process Theory), we developed an action plan for implementation, and monitored website use and sources of referrals.

FINDINGS: Eczema Care Online has been used by over 40,000 people in its first year. Key features of the website valued by stakeholders were that it is: evidence informed, created in partnership, comprehensive, independent, accessible and proven to improve eczema. Barriers to implementation included the subtle distinctions from other eczema resources and potentially adding further 'noise' to existing resources, where conflicting messages can be found. Facilitators included perceptions of ease-of-use and trustworthiness. The action plan included involving clinical champions, guideline authors, providers of continuing professional

development for GPs and pharmacists, GP clinical software providers and direct social media advertising. All routes have met with successes and challenges. Key lessons learnt include 1) start implementation work early 2) maintain flexibility to explore multiple routes to implementation 3) plan early for longer-term maintenance beyond the life of the research project.

CONSEQUENCES: Implementation planning ensures that effective health interventions are used in everyday practice. Implementation requires a flexible approach, and while available data and theoretical frameworks can inform implementation strategy, this may then have to adapt over time. We reflect on key challenges and successes in implementing Eczema Care Online.

Funding Acknowledgement: This study presents independent research funded by the National Institute for Health and Care Research (NIHR) under its Programme Grants for Applied Research programme (grant ref No RP-PG-0216-20007). The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.

5E.2

'Everyone has heard of it, but no one knows what it is': A qualitative study of patient understanding and experience of herpes zoster

Presenter: Sophie Rees

Co-Authors: Rees, S., Ridd, M., Hunt, L., Everett, H., Gilbertson, A., Johnson, R., Pickering, AE., Van Hecke, O., Wylde, V., Wells, S., and Banks, J.

Author institutions: University of Bristol, University of Southampton, University of Oxford, University Hospitals Bristol & Weston NHS Foundation Trust

Abstract

PROBLEM: Shingles (herpes zoster), caused by reactivation of the varicella-zoster virus, is usually diagnosed and managed in primary care. 1 in 3 people will develop shingles, and its effects can impact on quality of life, yet there has been little qualitative research about patient experience and understanding of shingles. Exploring patients' understanding of the condition will help address any misconceptions, and facilitate better communication between patients and primary care practitioners and reduce the impact of the condition on quality of life.

APPROACH: Qualitative semi-structured interviews were undertaken remotely with 29 patients participating in a randomised controlled trial in primary care in England (ATHENA, ISRCTN14490832). ATHENA is a trial comparing amitriptyline with placebo for the prevention of post-herpetic neuralgia. Participants were aged ≥50 and had all been diagnosed in primary care within six days of shingles rash onset. Interviewees were sampled for diversity in terms of pain, intervention adherence, age, gender, and ethnicity. We sampled from both trial arms, remaining masked to study allocation. Data were analysed using reflexive thematic analysis. Members of a patient and public involvement group, all with experience of shingles, were involved in refining the topic guide and interpretation of FINDINGS .

FINDINGS: Participants' understanding of shingles was limited, particularly pre-diagnosis. They looked to the experiences of others to understand how it would affect them, but found little consistency, and so prognostic uncertainty was a source of concern for participants. The diagnosis led some to reflect on their status as ageing individuals. Some participants attributed their diagnosis to 'low' mental wellbeing due to various factors e.g. caring responsibilities, work stress, or the season. Participants reported that healthcare professionals sometimes reinforced this. Such explanations and narratives, which have limited supportive

evidence, led to some people blaming themselves and instigating life changes with far reaching consequences.

CONSEQUENCES: Shingles intersected with a wide range of social and biographical aspects of individuals' lives. It raised questions for them about their age, everyday life stresses, and mental wellbeing. Uncertainties regarding causation and prognosis should be acknowledged by primary care practitioners to improve understanding and moderate the impact of the condition on patients' lives. Primary care practitioners and public health campaigns should ensure patients understand that they should not blame themselves for their illness.

Funding Acknowledgement: This study was funded by the National Institute for Health Research (NIHR) Health Technology Assessment as part of ATHENA: AmiTritypline for the prevention of post-HErpetic NeuralgiA (Award ID: NIHR129720). Jon Banks's time is supported by the National Institute for Health and Care Research Applied Research Collaboration West (NIHR ARC West).

5E.3

Potent topical corticosteroid is more effective compared to mild potency in children in primary care with a moderate flare-up of atopic dermatitis; results of a randomized controlled trial.

Presenter: Karlijn van Halewijn

Co-Authors: Arthur M. Bohnen, Suzanne G.M.A. Pasmans, Patrick J.E. Bindels, Gijs Elshout

Author institutions: Erasmus MC, University Medical Center, Rotterdam, The Netherlands

Abstract

PROBLEM: Topical corticosteroids (TCS) of different potencies are the main pharmacological treatment to control atopic dermatitis (AD) in general practice. Different initial therapy strategies are advocated for a disease flare-up: starting with a short burst of high-potency TCS, starting with the lowest TCS potency possible, and starting with a TCS tailored to severity. To our knowledge, no study has assessed the effectiveness of treatment with mild TCS versus a potent TCS in children in primary care with moderate AD. Therefore, we conducted the Rotterdam Eczema Study to assess the effectiveness of a potent TCS as an initial treatment in children with a moderate AD flare-up in primary care, compared to starting with a mild TCS. The primary objective was to investigate whether starting with a potent TCS is superior to starting with a mild TCS for long-term disease control (6-months follow-up).

APPROACH: The Rotterdam Eczema Study was an observational prospective cohort study with an embedded pragmatic multi-centre open-label randomized controlled trial. We chose this design since it can be difficult to randomize children who are experiencing a flare-up in primary care when they visit the GP. Our approach allowed us to monitor the AD-affected children who were already enrolled in the cohort and incorporate them into the study immediately in the event of a flare-up. If cohort participants experienced a moderate flare-up (ie, need to intensify topical treatment) from the child's and/or parents' point of view of AD and a three-item-severity score from 3 to <6 scored by their GP) during cohort follow-up, they were randomised to either the intervention group, a strong TCS (class III, fluticasone propionate 0.05%), or the control group, a mild TCS (class I, hydrocortisone acetate 1%). : We measured outcomes at baseline and 1, 4 and 24 weeks. The primary outcome was AD-related symptoms (POEM score) measured over 24 weeks of follow-up. Secondary outcomes included the Eczema Area and Severity Index, the Investigators Global Assessment, quality of life, Patient Global Assessment, Numeric Itch Intensity Score and topical corticosteroid use.

FINDINGS: The primary outcome showed a significant difference in the POEM score over 24 weeks of follow-up between the intervention group (n=17) and control group (n=15) (3.3 versus 9.4, p=0.023). Also, potent TCS significantly improved the POEM at 1 week (5.5 versus 12.0, p=0.042) and over 4 weeks (4.4 versus 12.7, p=0.030). Improvement in the QoL was significant at 4 weeks (1.0 vs. 4.5, p=0.014) and 24 weeks (0.0 vs. 2.0, p=<0.000).

CONSEQUENCES: Despite the small sample size, the data suggest clinical benefit from starting with a potent TCS compared to a mild TCS when a flare-up of AD is moderate.

Funding Acknowledgement: None

5E.5

Development of an online intervention and embedded decision-aid to support self-management of acne vulgaris: qualitative interviews with healthcare professionals

Presenter: Mary Steele

Co-Authors: Rosie Essery, Fathema Miah, Harshee Baxi, Sebastien Pollet, Stephanie Easton, Rebekah LeFeuvre, Paul Little, Nick Francis, Matthew Ridd, Ingrid Muller, Miriam Santer

Author institutions: University of Southampton, University of Bristol

Abstract

PROBLEM: Acne is common and has a significant impact on quality of life. Topical treatments are effective, but adherence is low. Acne Care Online is an online intervention to support acne self-management. Embedded within the intervention is a decision-aid tool to facilitate discussions in consultations with healthcare professionals (HCPs). This study aimed to explore experiences and views of HCPs and assess the acceptability of implementing the intervention.

APPROACH: We recruited HCPs working in primary care, using purposive sampling to seek a range of roles. Eighteen semi-structured qualitative interviews were conducted with; seven GPs, three nurses, five pharmacists and three paramedic prescribers. Interviews explored experiences of treating acne, thoughts on implementing an online intervention, and feedback on the output of the decision aid tool. Interviews were recorded and transcribed. Data were analysed using thematic analysis.

FINDINGS: Challenges reported by HCPs in managing acne included patients' limited understanding of effective treatments, perceived treatment non-adherence, addressing psychosocial impact and time-limited consultations. The decision-aid was perceived as potentially beneficial in addressing these challenges, and improving shared decision-making with patients. Suggestions for improvement included asking for additional information from patients, and providing HCPs with an option to see further detail about the decision aid.

CONSEQUENCES: HCPs were positive about the potential for the intervention to be implemented as a useful adjunct to time-limited consultations in primary care. These interviews highlighted challenges faced by HCPs, and provided feedback on the decision aid tool which will inform the development of the intervention.

Funding Acknowledgement: This project is funded by the NIHR Programme Grants for Applied Research (NIHR202852). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

5E.6

Transforming Outcomes for Paediatric allergy In Primary care – The TOPIC programme

Presenter: Andrew Turner

Co-Authors: Andrew Turner, Raquel Granell, Phuong Hua, Alyson Huntley, Roxanne Parslow, Catriona Rutter, Matthew Ridd

Author institutions: Centre for Applied Excellence in Skin and Allergy Research (CAESAR) Centre for Academic Primary Care University of Bristol

Abstract

PROBLEM: Eczema and food allergy are distinct but related problems. Eczema is a risk factor for food allergy, and having eczema and food allergy is doubly burdensome. However, not everyone with eczema has a food allergy and vice versa. There has been more primary care-relevant research done in eczema but important questions remain unanswered. Applied food allergy research is more limited and priorities are unclear.

APPROACH: TOPIC is an ambitious programme of work that will transform the treatment of eczema, and research into food allergy and its prevention, in children by:

1. a) Conducting a systematic review, surveys and interviews to improve understanding of real-world use of topical treatments; and

b) Co-designing a trial of how best to use emollients and topical corticosteroids (TCS) in combination.

2. a) Developing a primary care eczema clinic; and

b) evaluating it in a cluster trial.

3. a) Determining the research priorities of parents and clinicians for food allergy in children, and

b) delivering at least one study addressing at least one of the identified research priorities.

4. Conducting surveys, interviews and establishing a cohort study to assess understanding, implementation and effects of early allergen introduction advice.

5. Integrating public, patient (parent/child) and stakeholder opinion into all of the above, ensuring inclusivity and relevance of the research to all of society.

FINDINGS: TOPIC will address the following questions:

- What are the most effective and safe ways to use emollient and topical corticosteroids individually and/or in combination to treat children with eczema?
- Does an eczema clinic in primary care improve disease control in children?
- What are parents' and clinicians' priorities for food allergy research in children?
- What awareness is there of early allergen introduction advice, is it being followed and is it preventing food allergy?

CONSEQUENCES: The findings will improve the experience of care and outcomes for affected children and their families; and may reduce demand for appointments in primary and secondary care, with attendant cost savings. In addition, FINDINGS: may improve the developmental and nutritional outlook of children, by improving eczema control and preventing/discouraging unnecessary dietary restrictions.

Funding Acknowledgement: This project is funded by the NIHR Research Professorships scheme [Professor Matthew Ridd - NIHR303123]. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

5E.7

A new paradigm for conducting efficient, online, co-produced eczema trials – the Rapid Eczema Trials project

Presenter: Kim Thomas

Co-Authors: Kim S Thomas, Amanda Roberts, Ingrid Muller, Arabella Baker, Emma Campbell, Tracy Owen, Firoza Davies, Matthew J Ridd, Miriam Santer, Eleanor J Mitchell, Paul Leighton. Eleanor Harrison on behalf of the Rapid Eczema Trials Team

Author institutions: 1. University of Nottingham, University of Southampton, Bristol University (plus PPI partners)

Abstract

PROBLEM: Clinical trials are the best way of comparing different treatments, but they can be time consuming, expensive, and do not always answer questions that are important to patients. The Rapid Eczema Trials project provides an innovative way of delivering sustainable, patient-centred clinical trials.This project combines the benefits of citizen science and co-production with efficient clinical trial design to deliver multiple online trials about how to improve self-management of eczema.

APPROACH: We have established an Eczema Citizen Science Community of people interested in co-producing online clinical trials to answer questions about the self-management of eczema http://www.RapidEczemaTrials.org">www.RapidEczemaTrials.org. Working with researchers and clinicians, this community of citizen scientists are prioritising research questions and designing trials to address questions of importance to people living with eczema. They are also promoting the project amongst their wider networks and will help analyse qualitative data from the process evaluation of the project.This 5-year project will deliver multiple eczema trials. All trials will be conducted according to a master protocol, database, and analysis plan to ensure efficiency whilst maintaining quality standards.

FINDINGS: The Rapid Eczema Trials project started in Sept 2022. We currently have 359 members who have signed up to receive monthly newsletter updates. Three topics for online clinical trials have been prioritised:

1) Best way to bathe when you have eczema;

2) Best ways to keep control of eczema between flare-ups; and

3) Psychological interventions for people with eczema.

Trials are being co-produced by the Eczema Citizen Science Community in partnership with healthcare professionals and researchers. Decisions are informed by targeted surveys amongst the wider Eczema Citizen Science Community to ensure inclusivity by design.All trials are delivered online – bringing research to people with eczema without geographical or socio-economic barriers. We are also exploring the feasibility of using machine learning to evaluate eczema severity based on digital photos, to supplement participant reported outcomes.Our first trial will answer the question: "Is it better to bathe daily or weekly when you have eczema?"; a commonly asked question in clinical practice that has not been addressed by research. The trial is recruiting 390 people with eczema of all ages and all eczema severities. Primary outcome is patient reported eczema symptoms (Patient Reported Eczema Measure, POEM) assessed weekly for 4 weeks. Recruitment is via the Eczema Citizen Science Community, social media advertising and through mailout from GP surgeries.

CONSEQUENCES: This innovative programme will deliver multiple, high-quality randomised controlled trials that address topics that are important to people with eczema. By sharing our protocols, database and analysis plans, we hope to encourage others to design rapid and efficient trials in other healthcare settings.

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5F.1

Policy analysis lessons for primary care education reform: What can the UK learn from Canada's attempt to expand family medicine residency training?

Presenter: Meredith Vanstone

Co-Authors: Lawrence Grierson

Author institutions: McMaster University, Hamilton, Ontario, Canada

Abstract

PROBLEM: Primary care systems in many countries are struggling, and many policy interventions have targeted improved access, quality of professional life, and interprofessional team work. This presentation demonstrates the relevance of policy analysis to understanding health system transformation efforts, using the example of a failed Canadian initiative to expand family medicine residency training from two to three years. This education effort aimed to increase the proportion of family physicians providing comprehensive, community-based care in interprofessional teams in order to improve access to primary care, health system cost, and clinician satisfaction.

APPROACH: This is an interpretive policy analysis conducted by two education policy scholars engaged as consultants on the residency expansion project. Data are public materials including reports, open letters, publicly available recordings of annual member meetings, news coverage, social media discussion. Analysis was guided by the 3I+E framework, describing and explaining how this education reform arrived on the agenda and why implementation ceased. We discuss examples of the Interests, Institutions, Ideas, and External factors which shaped this recent trans-jurisdictional education policy reform initiative, paying particular attention to the forces which coalesced to result in termination of the reform effort.

FINDINGS: There are conflicts at each level of the 3I+E framework. Primary care access challenges have been exacerbated since the Covid-19 pandemic. This set the stage for political involvement and competing discourses about how family physicians should be trained, remunerated, and deployed. Conflicting explanations about the origins and solutions to the problem of access played out in debates about residency expansion, alongside rhetorical arguments about the quality and type of evidence needed to justify education reform. While political, professional, and regulatory interests interacted in public discourse, the voices and interests of patients were absent. The autonomy and remuneration of physicians was prioritized in many discourses opposing residency expansion.

CONSEQUENCES: This presentation documents multiple conflicting interests which coalesced in the cessation of efforts to expand family medicine residency in Canada. By doing so, it analysis demonstrates the challenge of education reform and the importance of aligning interests, institutions, and ideas to initiate primary care policy change.

Funding Acknowledgement: none

5F.2

Evaluating five years of a BSc in Primary Care: a resource to increase sustainability

Presenter: Niki Jakeways & Mark Smith

Co-Authors: Mark Smith, Martin Sands

Author institutions: King's College London

Abstract

PROBLEM: An intercalated BSc in Primary Care presents an opportunity to showcase the rich diversity within general practice and explore its theoretical underpinnings. It is also a potential resource to drive recruitment into the speciality: undergraduate educational experiences that increase exposure to, and appreciation of the many career opportunities within, general practice have been shown to increase recruitment [1-3]. Amidst growing concern surrounding recruitment and retention of the GP workforce [4] a range of strategies are needed to generate awareness and interest in academic Primary Care. Our evaluation aims to share our learning from five years' experience of running the programme; and explore how a BSc can act as a resource to help support the sustainability of Primary Care.

APPROACH: Now in its fifth year, the BSc in Primary Care at King's College London combines a general practice clinical experience with studying aspects of primary care in more depth. It aims to inspire doctors and health care leaders of the future and give an excellent generalist grounding to students planning a career in both general practice and other medical careers. We will present the results from our course evaluations through the lens of increasing the sustainability of Primary Care, considering how our course can impact on both healthy systems and healthy people. Evaluation results are drawn from student feedback; faculty reflections; analysis of student assignments including research projects, quality improvement and reflective writing; student scholarly achievements; and student-led content from the course.

FINDINGS: Results are yet to be fully analysed but emerging themes are purposefully developed through the lens of the sustainability of Primary Care and include developing rich professional identities as academic, leader, and clinician; developing skills as an agent for change and innovation in areas such as climate sustainability, artificial intelligence, and coaching; and developing awareness of the necessary facets of a healthy system such as increasing inclusion, and reducing health inequality and workforce burnout.

CONSEQUENCES: We will share our learning from five years' experience of running the programme; and explore how a BSc in Primary Care can act as a resource to help support the sustainability of Primary Care by developing clinicians who are equipped for the challenges of future healthcare. References:

1. Alberti, H., et al., Exposure of undergraduates to authentic GP teaching and subsequent entry to GP training: a quantitative study of UK medical schools. British Journal of General Practice, 2017. 67(657): p. e248.

2. Carlin, E., et al., Denigration of general practice as a career choice: The students' perspective. A qualitative study. BJGP Open, 2021. 5(1)

3. Wass, V., et al., By Choice not By Chance: Supporting medical students towards future careers in General Practice. 2016, Health Education England.

4. Marshall, M. and M. Ikpoh, The workforce crisis in general practice. British Journal of General Practice, 2022. 72(718): p. 204.

Funding Acknowledgement:

5F.3

Livestreaming GP consultations for medical education – developing a safe and sustainable approach working with patients, GPs and medical students

Presenter: Helen Edwards

Co-Authors: Jane Kirby, Kelvin Gomez

Author institutions: Leeds School of Medicine, University of Leeds, United Kingdom

Abstract

PROBLEM: We need to increase primary care exposure for medical students. Current guidance suggests that 25% of the undergraduate medical curriculum should be covered in primary care, yet a survey of medical schools in 2020 demonstrated an average of 9%. Finding sufficient primary care placements is increasingly challenging and innovative and sustainable solutions to increase placement capacity are needed. Livestreamed clinical experiences (LCE) offer potential to expand traditional in-person placements, livestreaming authentic clinical experiences to remotely located medical students. We reviewed evidence for previous LCE (using existing videoconferencing platforms) and identified limitations including patient safety concerns, technological problems, low levels of learner interactivity, and absence of underpinning educational theory. These limit the potential of LCE to address placement capacity problems. We set out to develop a bespoke LCE platform that addresses limitations of existing LCE solutions, is acceptable to stakeholders and feasible for use in primary care, bringing more primary care consultations to more students without geographical boundaries. Aims: 1. To develop VCE (Virtual Clinical Experiences), a bespoke, pedagogically-driven LCE platform with patient safety at its core. 2. To test the feasibility and acceptability of VCE in primary care settings for all stakeholders (patients having consultations streamed, GP Educators using VCE, students attending remote consultations). 3. To develop patient information and consent materials in conjunction with patients. APPROACH: The approach followed three phases to map onto the aims: 1. We used an iterative Design-Based Research approach, informed by educational theory and stakeholders, to develop VCE. 2. We tested the feasibility and acceptability of VCE to stakeholders through pilot phases. We conducted semi-structured interviews, focus groups and questionnaires and used thematic analysis and Epistemic Network Analysis to explore stakeholders' acceptance of VCE. 3. We worked with a Patient Participation Involvement and Engagement group using User-Centred Design Principles to develop information and consent materials. We conducted semi-structured interviews with patients to determine whether the materials were sufficient to provide informed consent. FINDINGS:

1. We developed the VCE platform. Important features included first-person view from the clinician using smartglasses, built-in session structure including debrief, three-way communication enabling triadic consultations, chat function enabling peer collaboration and patient safety features.

2. We found high levels of acceptance for VCE among medical students. Clinical educators indicated VCE had high utility for clinical teaching, including potential to supplement placement capacity.

3. We developed a patient information video with supplementary information sheet and consent form. All patients felt the information reflected their VCE experience and facilitated informed consent.

CONSEQUENCES: We have shown that a bespoke LCE platform such as VCE is feasible for use in primary care, acceptable to stakeholders, and delivers an authentic clinical experience. Such solutions have potential to expand placement capacity and offer innovative learning opportunities.

Funding Acknowledgement: NHS England (formerly Health Education England)

5F.5

Can medical students be effectively taught about homeless health using remote large group teaching sessions?

Presenter: Nicola Roberts

Co-Authors: Kanayo Odunze, Lisa Hallam, Jo Protheroe

Author institutions: Keele University

Abstract

PROBLEM: Patients experiencing homelessness are often encountered by students by chance rather than by purposeful or taught activity. This leads to unequal exposure for students, with the possibility of students avoiding patients, or increasing student stigma to this patient group. Keele University has had an increase in medical student numbers and uses primary care placements across six counties, so allocating clinical placements for all students in these specialist areas is impossible. Previous research into student attitudes towards homeless patients demonstrated that students were anxious about their safety. Dixon et al reported students wanting teaching to prepare them to meet these groups of patients, feeling that opportunities to meet patients with 'lived experience of exclusion' would have the biggest impact upon learning. In the UK there has been a shift towards including patients experiencing health inequity in the curriculum, usually as optional activities. To overcome these issues a full-day online teaching session was developed for all fourth-year medical students. This includes the use of prerecorded patient videos to protect this vulnerable population, whilst maintaining a patient centred teaching. This study examines whether it is feasible to teach every student about homeless health, using a digital approach, whilst remaining patient centred. There is paucity of evidence about how effective remote teaching sessions are in teaching these topics.

APPROACH: The students function as their own control by completing questionnaires before and after the teaching day. This is a questionnaire based upon a validated questionnaire used in US research of medical students' attitudes towards homeless patients by Feldman et al, modified for use for UK medical students. Further qualitative interviews are planned to look at medium-term implications of this teaching for students that had this teaching session in the previous academic year.

FINDINGS: Interim FINDINGS :There have been five teaching days so far in the academic year 2023-24 involving 61 students. 27 students completed both questionnaires.25 students demonstrated a change in their attitudes following the teaching day. The key areas included feeling more confident managing complexity and an increased willingness to work with homeless patients once qualified.

CONSEQUENCES: So far this study shows that it is possible to use vulnerable patients sensitively in teaching whilst giving a sense of real-patient teaching for the students. It is providing evidence that a remote session can be used effectively to teach large groups of students, negating issues with geography when placements are spread over a wide area.

Funding Acknowledgement:

5F.6

Insights into international medical graduates' experiences of reflection in UK general practice training: A qualitative study integrating verbatim survey and in-depth-interview data

Presenter: Laura Emery

Co-Authors: Dr Ben Jackson, Dr Caroline Mitchell

Author institutions: The University of Sheffield

Abstract

PROBLEM: International medical graduates (IMGs) have less experience of reflection than their UK based colleagues, as more didactic methods of education are often favoured in international medical schools. This lack of experience in reflective writing can be problematic in General Practice (GP) training where reflection is used to evidence curriculum competencies, achievement of which is required for progression to completion of training. The aim of this study was to gain insight into IMG experiences of reflection in UK GP training, specifically views on the purpose of reflection and best and worst things about reflection.

APPROACH: This qualitative study had 2 phases. Phase 1 involved analysis of open question verbatim data from a national cross-sectional survey conducted in March-April 2021. The survey was circulated to IMG trainees working in 12 of the 14 UK training regions. All 485 survey respondents completed at least one of the open questions. The survey had a 14% overall response rate and demographics were representative of UK IMGs. Preliminary analysis of verbatim data regarding the purpose of reflection and the best and worst thing about reflection were used to generate questions for Phase 2; semi-structured interviews. Interviews continued to data saturation in a purposive maximum variety sample of 11 IMGs. Both survey and interview datasets were analysed thematically.

FINDINGS: Most IMGs articulated a good understanding of the purpose of reflection in both their survey responses and in-depth interviews. Themes identified in IMG responses to the question 'what is the purpose of reflection?' were consistent with at least one component of the Academy of Medical Royal Colleges (AoMRC) definition of reflection; analytical thinking, gaining insight, lessons learned and maintain/improve practice. Similar themes were identified in responses to the question 'what is the best thing about reflection?': reflection provided an effective approach for learning, opportunities for self-assessment and professional development, and was a means of developing self-awareness. Answers to the question 'what is the worst thing about reflection?' revealed concerns about how time consuming reflection is, that it is mandated and can feel forced, and the fear of medico-legal consequences. The interview topic guide included these open survey questions but also allowed rich contextual exploration of how reflection encompasses more than the education and assessment objectives. CONSEQUENCES: There are a wide variety of educational interventions to assist IMGs in adapting to the NHS and the requirements of UK GP training, but few have educational research exploring the lived experiences of IMGs at the core. The results of this study offer an opportunity to look at how we use reflection in GP training through the lens of IMGs and co-design interventions to assist the development of this valuable skill.

Funding Acknowledgement:

5F.7

Use of an artificial intelligence driven voice recognition platform for training communication skills in undergraduate primary care

Presenter: Edward Tyrrell

Co-Authors: Kathryn Berry, Sardip Sandhu, Daniel Crowfoot, Gurvinder Sahota, Julie Carson, Emma Wilson, Jaspal Taggar

Author institutions: University of Nottingham

Abstract

PROBLEM: The utility of virtual/augmented reality and artificial intelligence (AI) for developing communication skills in

undergraduates are yet to be appraised. These technologies have potential for enhancing existing methods of education and building capacity for clinical training. In partnership with a provider of a generative AI-driven voice recognition platform for developing communication skills in healthcare professionals, we compared the effectiveness and cost-effectiveness of this platform with conventional methods of communication skills training in primary care undergraduate education.

APPROACH: During a one week, 3rd year undergraduate medical student primary care attachment (University of Nottingham), we implemented this technology using a randomised crossover-design, comparing half-day AI-based consultation skills training (AICST) with half-day simulation-based consultation skills training (SBCST) with actors. Pre-post test changes in self-reported consultation skills acquisition and self-efficacy were measured using 10-point linear scales, with consultation skills measurements anchored to the Calgary-Cambridge model. Aggregated mean scores for communication skills were used as the primary outcome. Additionally, student satisfaction was measured in post-test surveys. Mean differences in pre-post scores and mean differences between interventions were determined using paired t-tests. The costs of implementing AISCT and SBCST were calculated and compared as cost per student taught.

FINDINGS: Provisional FINDINGS: are presented: 391 students were enrolled on the attachment. 307 students (79%) completed SBCST pre-session surveys and, of these, 268 (87%) completed post-session surveys. For AICST, 337 (86%) completed pre-session surveys and, of these, 292 (87%) completed post-session surveys. Aggregated mean communication skills scores significantly improved with both methods of training: 6.36 pre-SBCST and 7.86 post-SBCST; 6.70 pre-AICST and 7.84 post-AICST (both $p<0.001$). The mean difference in communication skills acquisition was greater for SBCST than AICST (1.5 versus 1.14; $p=0.045$). Student satisfaction scores were generally high for both modalities, but were higher for SBCST than AICST (accessibility: 9.26 versus 8.76; timing: 9.03 versus 8.08; Engaging: 9.11 versus 7.45; well-structured: 9.26 versus 7.93; ILO attainment: 9.28 versus 8.26; all $p<0.01$). Mean score of students recommending AICST to others was 8.03 versus 9.34 for SBCST ($p<0.01$).The cost of delivering SBCST per student was £61.75 compared with £33.48 for AICST.

CONSEQUENCES: Provisional FINDINGS: suggest AICST was effective in improving communication skill acquisition for undergraduate 3rd year medical students and this was similar to the skills acquisition from SBCST. Furthermore, the cost of using AICST was substantially lower than SBCST. However, student satisfaction was greater for SBCST than AICST. AICST may facilitate enhancement of communication skills training in undergraduate medical students and provide a cost-effective opportunity to build capacity for training within education curricula. However, further research testing the generalisability of FINDINGS: across other year and professional groups, and methods for improving student satisfaction of AICST is warranted.

Funding Acknowledgement:

5G.1

Let's talk differently about medicines

Presenter: Deborah Swinglehurst, Nina Fudge, Malcolm Turner

Co-Authors:

Author institutions:

Abstract

Participants will: • Work with a new public engagement resource designed to spark conversations about addressing problematic polypharmacy; • Reflect on the value of narrative for health improvement; • In small groups:

o Discuss issues raised by one polypharmacy story

o Share ideas on how to increase the reach/impact of the resource

• Have opportunity to collaborate in supporting patients/professionals/public talk differently about medicines.

1) 5-minute description of how we created the resources

2) Divide participants into small groups of 3-5 and allocate one story per group. We will ask people to:

a. Read the story independently (5min)

b. Spend 30 minutes interacting around 3 discussion points, tailored to the stories (10m each)

c. (15 minutes) Discuss and collate ideas for:

i. How to use these stories in practices/communities;

ii. Maximizing reach of the materials;

iii. Evaluating their implementation

iv. Developing the resource further

We will ask small groups to appoint a note-taker to list ideas. After the workshop we will bring ideas together and share them with participants who would like to receive them. We will ask participants to share their email addresses and advise us whether and how they might like to be involved in our ongoing efforts to support patients and professionals in talking differently with each other about medicines. 'Let's talk differently about medicines' is a public engagement resource designed for patients/carers/clinicians. It is a collection of seven illustrated fictional story booklets and accompanying discussion prompts (See also www.medicinestalk.co.uk). Each story (800 – 1600 words) features one key character (a patient) and presents polypharmacy through the lens of patient experiences. Our aim is to raise awareness of polypharmacy and invite patients into new conversations about polypharmacy with friends, family and clinicians involved in their care (e.g. GPs, pharmacists). Our research has shown that sometimes the issues that polypharmacy raises are difficult for professionals and patients to talk about in a meaningful way. The characters, names and narratives are fictional but are inspired by the participants and

FINDINGS: of our ethnographic research on polypharmacy (2017-2021) conducted in patients' homes/general practice/community pharmacy. We also used a design-led method, 'Storytelling Group' technique, with a patient participation group. We tested and refined a prototype through user-testing with older adults. Intended audience: • Healthcare professionals involved in prescribing, dispensing or reviewing medicines • Patients/carers • Professionals/patients interested public engagement • Researchers interested in: o Narrative methodologies o Ethnographic research o Study of lived experience o Multimorbidity/polypharmacy o Participatory approached to research e.g. co-design

Funding Acknowledgement:

6A.1

Collaboration across Primary Care and Early Intervention in Psychosis services – supporting the health of service users and carers: a qualitative study

Presenter: Michelle Rickett

Co-Authors: Tom Kingstone, Veenu Gupta, David Shiers, Paul French, Belinda Lennox, Ed Penington, and Carolyn Chew-Graham

Author institutions: Keele University, University of Durham, Manchester Metropolitan University, University of Oxford

Abstract

PROBLEM: Early Intervention in Psychosis (EIP) services offer up to 3 years' treatment in the community to people with a first episode of psychosis. Service users (SUs) are then discharged to primary care or Community Mental Health Teams. There is limited research on SU and carer experiences of EIP services, planning discharge and their relationships with primary care.

APPROACH: Longitudinal qualitative study. Ethics and HRA approvals gained. Semi-structured interviews conducted with SUs (x13 at point of discharge or shortly after discharge from EIP; x9 second interviews after 6months) and carers (x11). Interviews conducted online or by telephone, digitally-recorded and transcribed with consent. Thematic analysis conducted using principles of constant comparison. Patient and public involvement key at all stages, including contributing to data analysis.

FINDINGS: All SUs expressed the desire to take part in decision-making and planning around discharge from EIP services and felt more supported and confident if they were involved in this process. They described feelings of abandonment if they were discharged before they felt ready, particularly when discharged to primary care. SUs and carers expressed concerns about the loss of the relationships formed in EIP services with little or no relationship with primary care. They expressed concern about being discharged to GPs they didn't know and having to retell their story and felt that support for the transition to primary care was needed. They expressed a wish for continuity of care in general practice following discharge. Carers expressed concern that they may not be able to re-access specialist support for their loved ones if needed, and that SUs may not engage with an unfamiliar primary care professional. They raised concerns about ongoing physical health needs and how these might be managed post-discharge. Carers described taking on a 'case manager' role during the discharge process, due to their knowledge of SUs and gaps in support. However, some carers felt that they were not listened to. They felt that a closer relationship with primary care would improve the discharge experience for them and their loved ones.

CONSEQUENCES: This study highlights the importance of involving SUs and carers in EIP decision-making and planning about discharge from EIP services to primary care, and of listening to and valuing carer expertise. We suggest that collaboration is needed between SUs, carers and primary care while SUs are under EIP services, to support discharge. Primary care should maintain contact with, and offer support to, carers. We suggest that primary care should conduct regular health checks with SUs while they are under EIP so that discharge can be a well-managed transition. Our longitudinal approach has enabled us to explore SU and carer experiences during and after discharge, as well as highlight gaps in care.

Funding Acknowledgement: This study is funded by the NIHR [NIHR Programme for Applied Research (NIHR 203277]. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

6A.2

Primary care practitioners' and patients' views on the benefits and challenges of remote consulting for anxiety and depression in general practice

Presenter: Charlotte Archer

Co-Authors: David Kessler, Nicola Wiles, Louise Ting, Katrina Turner

Author institutions: University of Bristol

Abstract

PROBLEM: Research conducted prior to the pandemic suggested that around 40% of primary care consultations were related to mental health. There is evidence that this figure has increased since COVID. Whilst research has focused on the implementation of remote consulting across primary care, we do not know what the benefits and challenges are for those with diagnosed common mental disorders (CMD) – depression and anxiety. Understanding practitioners' and patients' views of remote consultations (e-consults, telephone, videocalls) for CMDs will inform how and when these modes should be used in general practice.

APPROACH: We interviewed 20 primary care practitioners (GPs, nurses, pharmacists, wellbeing coaches) and 21 patients from five general practices in Bristol and the surrounding areas. Interviews were audio-recorded, transcribed verbatim and analysed thematically. A PPI co-applicant and PPI group with lived experience of anxiety and/or depression were actively involved throughout. They provided input on patient-facing materials, topic guides, analysis and dissemination.

FINDINGS: Themes suggest many practitioners found remote consulting helpful for patients with CMDs because they increased accessibility and helped manage demand. However, they found assessing risk challenging and found telephone and e-consults transactional. To mitigate this, practitioners said that continuity of care was even more important for remote mental health care, compared to remote physical health care. Patients said continuity of care was important, but that it was easier to withhold information about their mental health over the telephone, although some added the 'anonymity' of a telephone call could make it easier to disclose sensitive information.Some practices required a telephone or e-consult prior to in-person appointments, and in urgent scenarios, telephone consults were often the only option available, despite this not always being the patient's preference. Many patients did not like this approach, and thought it was important that they were offered a choice between consultation modes. Patients who appeared to prefer consulting remotely were younger, living in less deprived areas, reporting less severe symptoms, or had such severe symptoms they felt unable to leave their home. Many patients described waiting between four to 12 hours for a telephone call as anxiety-provoking, but suggested a narrower calling 'window' would alleviate this. Patients thought telephone consultations were more time efficient for GPs than in-person, but GPs reported no difference when compared to in-person consults for mental health. Practitioners and patients reported a need for practitioner training in what makes a 'good' remote mental health consult, particularly for assessing risk and building rapport. CONSEQUENCES: This project reinforces the importance of continuing to offer patients a choice of consultation modes, but also highlights a need for practices to consider if modes offered are being provided in a patient-centred way, and for training for practitioners to discuss mental health remotely and assess risk.

Funding Acknowledgement: This project was funded by NIHR School for Primary Care Research (Grant 598).

6A.3

UNderstanding SErvices for people with Complex MENtal Health Difficulties (UNSEEN): a mixed methods study

Presenter: Chris Burton

Co-Authors: Ada Anansinya, Phillip Oliver, Vyv Huddy, Michelle Horspool

Author institutions: University of Sheffield, Sheffield Health & Social Care NHS Trust

Abstract

PROBLEM: This work aimed to understand the experience of GPs and people with complex mental health difficulties. We used the term complex mental health difficulties as a broad term to include to personality disorders, the consequences of trauma and persistent depression. People with complex mental health diffiulties frequently experience poor care as they are seen as too complex for services such aimed at common mental disorders but not serious enough for specialist mental health teams. We aimed to examine how general practices can better identify people with complex mental health difficulties and integrate primary care and specialist psychological input. Objectives related to

(1) GP's perceptions of complex mental health difficulties,

(2) patient experience, particularly of general practice,

(3) using electronic health data to facilitate better recognition of complex mental health difficulties

(4) synthesising the findings to provide guidance for practices.

APPROACH: We conducted a mixed methods study. This presentation will describe two qualitative workstreams:

1. interviews with 11 GPs' to understand how they recognise and provide care for people with complex mental health difficulties; 2
2. interviews with 19 people with complex mental health difficulties about their experience of primary care and its relationship with specialist psychological services. Both sets of interviews were analysed using reflexive thematic analysis. A third workstream relating to electronic health records has been submitted separately. We then triangulated all three studies. People with lived experience contributed to study materials, analysis, and reporting.

FINDINGS: The results will present a triangulation of the

FINDINGS: from the two interview studies and the database study. Key themes included

(1) Complexity: both professionals and people with lived experience recognised this, but there was no common language for communicating it;

(2) Experience of trauma: this was recognised by professionals and those with lived experience as central, but by the professionals as outside their scope and by the patients as something often handled badly;

(3) Diagnosis: professionals were agnostic or negative about diagnoses such as personality disorder; those with lived experience included people who had found diagnosis valuable and affirming (if handled well).

CONSEQUENCES: This research surfaced important but frequently hidden issues relating to the care of people with complex mental health difficulties. These issues still largely remain "Unseen"

Funding Acknowledgement: This study was funded by the National Institute for Health and Care Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number NIHR203473). Phillip Oliver was funded by the NIHR (Clinical Lecturer, CI-2018-04-501). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

6A.4

Antidepressant deprescribing: an investigation of what, who, how and why it works in general practice

Presenter: Amy Coe

Co-Authors: Dr Cath Kaylor-Hughes, Prof Jane Gunn, Ms Zoe Allnutt

Author institutions: The University of Melbourne

Abstract

PROBLEM: Antidepressants are the first line treatment for depression, however concerns about long-term use and side effects have prompted calls for the need to conduct routine deprescribing. GPs prescribe the most antidepressants making them key to this process. However, cessation is intricate due to psychological and physical barriers, hindering routine deprescribing in clinical practice. Patients express willingness to discontinue, yet often rely on GPs to start the conversation. However, reports indicate that this initiation from the GP seldom occurs. With patients taking greater responsibility for the management of their own healthcare, it is vital to offer evidence-based support for safe and effective self-management. This project aimed to identify the support or resources needed by general practice patients to discontinue their antidepressants when no longer clinically required.

APPROACH: The study comprised three components: 1. A comprehensive scoping review examining 50 deprescribing interventions, aimed at understanding the existing knowledge and resources available for deprescribing in general practice. 2. A thematic content analysis of the reasons provided by 178 antidepressant users for discontinuing their medication, conducted as part of a naturalistic longitudinal study of general practice patients with depressive symptoms. 3. A mixed-methods study, guided by the principles of Realist Evaluation, investigating the experiences and perceptions of 13 patients regarding the patient facing WiserAD approach to antidepressant deprescribing.

FINDINGS: From study 1, the current literature was found to be focused on encouraging clinician led deprescribing efforts rather than empowering patients to broach to conversation. In study 2, patients were found to abruptly cease their medication without clinical support or supervision during periods of stable mental health and often mistook withdrawal for a recurrence of symptoms. The WiserAD pragmatic framework was formed from the results across each of the three studies and included:

1. Initiation of the deprescribing discussion;

2. Patient self-efficacy;

3. Provision of structured guidance;

4. Coaching and clinical advice;

5. Mood, sleep and activity tracking and;

6. Feelings of safety during the tapering period as key mechanisms for commencing and successful completing antidepressant deprescribing. Having established coping skills, prior knowledge and perceptions of antidepressants and stable mental health were found to be important contextual factors for patients deprescribing.

CONSEQUENCES: This research provided valuable patient perspectives on antidepressant deprescribing in general practice, and the multifaceted considerations involved. The findings underscore the willingness of patients to cease their antidepressants when they are ready and feeling well. The results also emphasize the importance of proactive identification, patient agency, providing clear next steps to initiate deprescribing and clinical support throughout the tapering process. Implementation of the WiserAD framework in clinical practice may empower patients and GPs to engage in routine antidepressant deprescribing and curb long-term antidepressant use.

Funding Acknowledgement: AC is funded by the Rotary Club of Richmond and Kaiyu

Scholarship for PhD Research in Mental Health, Australian Rotary Health.

6A.8

PRECIPICE - PREventing Suicide In PrImary CarE

Presenter: Jack Marshall

Co-Authors: Phillip Oliver, Joe Hulin, Vyv Huddy, Caroline Mitchell

Author institutions: University of Sheffield

Abstract

PROBLEM: Suicide represents a serious public health issue and is the largest killer of men under the age of 50 in the UK. A third of patients visit their General Practitioner (GP) in the months leading up to their suicide attempt and up to 75% of individuals who die by suicide have not been in contact with mental health services in the previous year. This highlights the key role of Primary Care in the system wide approach to suicide prevention. Previous work has highlighted the barriers and challenges GP's face when managing suicidal behaviour. Less is known about the approaches GP's find effective in managing suicidality and their training needs to deliver effective suicide prevention responses. This work, commissioned by the Yorkshire and the Humber Mental Health & Suicide Prevention Community of Improvement (Y&H MH&SP CoI), aims to explore GP perspectives on suicide prevention in the Yorkshire and Humber Region.

APPROACH: GP and GP trainees were recruited from across the Yorkshire and Humber Region using a snowball sampling method. Participants underwent semi-structured qualitative interviews using a topic guide. This topic guide was informed by a systematic scoping review and the four research aims provided by the commissioners of this work.

1. What are the barriers and challenges relating to suicide prevention?

2.What approaches work well?

3. What additional training is needed for GP's?
4. How are cases of suspected suicide reviewed in their place of work?

The interview transcripts were analysed using Framework Analysis; a seven-step qualitative thematic analysis which aims to produce summarising themes that best describe the data set. Emerging themes from the participant interviews underwent regular internal review by the research team, with any new areas for discussion being added to the topic guide as per the iterative process of qualitative research.

FINDINGS: Five interviews have taken place so far and are currently ongoing. Early analyses suggest there is a lack of support from secondary care services when managing acutely unwell patients. Patients presenting from ethnic minority groups present a challenge when performing a suicide risk assessment due to language barriers and mental health presenting differently in different cultures. GPs would like a stronger presence of mental health professionals in primary care to help assess and manage acutely unwell patients.

CONSEQUENCES: The interviews in this study are ongoing. We aim to produce a rich data set describing the perspectives of GP's regarding suicide prevention in the Yorkshire and Humber Region. The results of our work will help to inform policy relating to suicide prevention plans in the region and inform future work to gain the perspectives of other stakeholders in suicide prevention such as charities, public health leads and service users.

Funding Acknowledgement: Yorkshire and Humber Mental Health and Suicide Prevention Community of improvement Kingston Upon Hull City Council

6A.9

How, why, for whom and when do help-seeking interventions for anxiety and/or depression work among older adults: a realist review.

Presenter: Tamsin Fisher

Co-Authors: Tamsin Fisher, Carolyn A. Chew-Graham, Nadia Corp, Tom Kingstone, Samantha Hider, Jane Southam, Geoffrey Wong

Author institutions: Keele University, University of Oxford

Abstract

PROBLEM: 1-in-4 older adults (60+ years of age) in the UK experience a mental health problem each year. Only 1-in-6 with potential symptoms will seek help from a healthcare professional. Older adults may not seek help for a variety of reasons: feelings such as low mood or worry may not be understood as symptoms of a mental health problem; engagement with formal services may be perceived as a threat to independence or not offering acceptable support; services may be inaccessible due to physical disability or lack of transport. Stigmatised views linked to ageism and mental ill-health may also inform attitudes towards help-seeking. This research aims to understand how, why, for whom and in what circumstances interventions to facilitate help-seeking for anxiety and/or depression work among community-dwelling older adults.

APPROACH: A realist review to identify and synthesise existing evidence of help-seeking interventions for anxiety and/or depression. Systematic search conducted in several databases including MEDLINE, EMBASE, Cochrane library. Protocol published on Prospero: crd.york.ac.uk/PROSPERO/display_record.php?RecordID=451756. A patient/public advisory Group contributed to the study design and conduct. External topic experts from academia, clinical practice and voluntary sector contributed to an external advisory group.

FINDINGS: 1095 papers were reviewed against inclusion/exclusion criteria, 80 papers were identified for full text review. 25 papers have been analysed to refine an initial set of candidate theories. Interventions identified include cognitive behavioural therapy, bibliotherapy, and befriending delivered by a diverse range of providers. Analysis indicates that help-seeking interventions are complex due to the interaction between attitudes, intentions, behaviours but also factors linked to inequalities (e.g. access to existing resources, education). Important aspects to consider in intervention design include: individual preferences, cultural backgrounds, co-morbidities, and personal resources. Interventions must have a theoretical basis in relevant social-psychological theory. Debates around what defines self-help and help-seeking also seem important but under-considered.

CONSEQUENCES: Analysis is ongoing. The research will generate a programme theory to inform future help-seeking initiatives and interventions delivered in primary care and offer suggestions for initiatives that prove more sustainable and inclusive to patients and service users across primary care.

FINDINGS: suggest that providers in the wider health and social care system could play important roles in offering alternative interventions to primary care which could be more accessible to more older adults with potential anxiety and/or depression.

Funding Acknowledgement:

6B.1

“My only option was to leave my job”: a survey to investigate the experience and

impact of domestic abuse on healthcare professionals (the PRESSURE study)

Presenter: Sandi Dheensa

Co-Authors: Janine Doughty, Alison Gregory

Author institutions: University of Bristol (Dheensa, Gregory), University of Liverpool (Doughty)

Abstract

PROBLEM: Healthcare professionals (HCPs) are expected to identify and respond to domestic abuse among their patients. Although research suggests that a high proportion of HCPs are affected by domestic abuse, the impact of their experiences has been under-researched.

APPROACH: We aimed to assess UK HCPs' experiences of domestic abuse and develop a broad understanding ofits impact on work and HCPs' support needs. We used an online cross-sectional survey, promoted via multiple professional channels (October-December 2022). We adopted convenience sampling and analysed data descriptively

FINDINGS: Among the 192 HCP-survivors who responded, all abuse subtypes—psychological, sexual, economic, and physical—were common. Ninety percent of abusers were male (ex)partners. Eighty-five percent reported abusers directly interfered with their work and 92% reported their work and career were affected. Almost all reported physical and mental health consequences. Eighty-nine percent reported their own experiences shaped their responses to patient-survivors. On average, per year, HCP-survivors had 13 sick days, 5 days' leave, 10 days' lateness, and 6 days' early departure due to domestic abuse. Only 20% reported their workplace had a staff domestic abuse policy, and over 50% were unsure what workplace support mechanisms were available. Just over half disclosed at work; concerns that others would question their fitness to practice were common. Twenty-two percent reported aspects of work, e.g., long hours, stopped them from seeking support outside work. CONSEQUENCES: HCPs face unique barriers to domestic abuse disclosure and support-seeking and may benefit from tailored support from specialists who understand both domestic abuse and the healthcare context.

Funding Acknowledgement: Funding from the National Institute for Health and Care Research (NIHR) School for Primary Care Research (SPCR) (reference NIHR SPCR-2021-2026) supported this research.

6B.2

How are Primary Care Panel Sizes changing in the United States, and what are the implications for Physician wellness?

Presenter: Andrew Bazemore

Co-Authors: Zach Morgan

Author institutions: American Board of Family Medicine; Center for Professionalism and Value in Healthcare

Abstract

PROBLEM: In an age of team-based, increasingly complex primary care(PC) in the U.S., there are gaps in our understanding of trends in physician panel size, optimal panel sizes and their relationship to physician well-being. It is important to fill this gap amidst increasing consolidation of primary care practices into large hospital and venture capital financed health systems which frequently create pressures to expand panels and add new patients. We used unique data from a national survey with 100% response rates to investigate trends in U.S. Family Physician panel sizes and the association between panel size and physician burnout. APPROACH: To determine trends in panel size, we used self-reported data from practicing Family Physicians collected on the American Board of Family Medicine Continuing Certification Questionnaire between 2013 to

2022. The questionnaire is a mandatory component of exam registration, resulting in a 100% response rate and a partial annual census that captures all diplomates once every 10 years. Some 55,605 US-based Family Physicians completed the survey between 2013-2022 who reported providing ambulatory continuity care. We then pooled survey responses from 2,041 board-certified family physicians (FPs) between 2017 and 2021 who provided continuity patient care and were randomly selected to respond to a survey module that included burnout questions. We estimated the odds of burnout by panel size adjusting for physician age, gender, race, and their practice characteristics including practice organization, rurality, percentage of vulnerable patients, team composition, and hours spent on direct patient care and administrative tasks.

FINDINGS: Between 2013-2022, self-reported mean panel size among U.S. Family Physicians decreased by 25%, from a high of 2,362 in 2013 to a low of 1,760 in 2021. Despite variations across practice organizational types, larger panel sizes were consistently associated with higher risks of burnout, specifically emotional exhaustion and callousness towards patients. Physicians with larger panels had significantly increased odds of experiencing burnout symptoms, even after adjusting for relevant covariates. Notably, deviance in panel size estimates was not linked to the likelihood of burnout, ruling out potential biases in reporting practices.

CONSEQUENCES: Monitoring and addressing optimal PC patient panel size is crucial amidst national workforce shortages and rising PC physician burnout. National workforce planners must account for decreasing panel size trends in their projections. Hospitals and health systems must reduce pressures to expand PC panels and advance interventions aimed at optimizing panel sizes, such as implementing robust PC teams. Finally, investments in increasing PCP supply are essential to ensure equitable access to high-quality primary care, aligning with national goals outlined by in the U.S. National Academy of Medicine recent landmark report on high-performing primary care.

Funding Acknowledgement: None

6B.3

The POISE study: Quantitative FINDINGS: from a mixed methods study investigating burnout in family physicians in low- and middle-income countries

Presenter: Tanya Wright

Co-Authors: Tanya Wright, Abdul Jalil Khan, Leigh Wagner, Liezel Rossouw, Christine Shamala Selvaraj, Aruni De Silva, Mpundu Makasa, Thomas Shepherd, Christian D Mallen, Toby Helliwell

Author institutions: Keele University, Khyber Medical University, Stellenbosch University, University of Malaya, University of Sri Jayewardenepura, University of Zambia

Abstract

PROBLEM: The World Health Organisation (WHO) has identified primary care as essential for the delivery of Universal Health Coverage (UHC) and a healthy workforce is crucial for this. While burnout is a significant issue for health workers globally, there is a dearth of data from low- and middle-income countries (LMICs) on burnout in family physicians. Therefore, the aim of this study was to estimate the prevalence of burnout among family physicians in LMICs and identify factors associated with burnout. Burnout is defined as exhaustion and disengagement from work and has significant consequences for physician health, patient safety and staffing levels. The aetiology of burnout is an imbalance in the demands and resources of a job, therefore, risks may be increased for healthcare workers in lower resource settings, where significant demands are combined with significant resource shortages.

APPROACH: An online survey containing the Oldenburg Burnout Inventory (OLBI), as well as demographic and workplace questions, was disseminated to family physicians in Pakistan, South Africa, Malaysia, Sri Lanka, and Zambia. Burnout was defined as a high mean item score of ≥ 2.25 on the exhaustion subscale and ≥ 2.1 on the disengagement subscale. Prevalence percentages were calculated, and tests of association were used to explore associations of 47 variables with burnout. Statistical significance was set at $p \leq .05$. Hierarchical Poisson regression was performed to identify risk and protective factors.

FINDINGS: The sample size was 451, of which 49.9% (n=225) were women, 45.2% (n=204) were in the 30-39 age-group, and 31.5% (n=142) in the 40-49 age-group. Overall burnout prevalence was 77.4%. Country breakdown as follows: Zambia 84.4%; South Africa 81.7%; Pakistan 75.9%; Sri Lanka 75.5%; and Malaysia 74.8%. Tests of association found 20 out of 47 variables had significant relationships with burnout with some variation between countries. The Poisson regression model found significant risk factors for burnout were working over 50 hours per week (IRR, 1.06; 95% CI, 1.01 – 1.11; p = .03) and experiencing conflict at work (IRR, 1.12; 95% CI, 1.00 – 1.27; p = .05). Significant protective factors were manager support (IRR, 0.82; 95% CI, 0.74 – 0.91; p = <.001), and a lack of conflict between work and home responsibilities (IRR, 0.82; 95% CI, 0.74 – 0.92; p = .001).

CONSEQUENCES: This high prevalence of burnout has implications for physician health and performance and the associated high turnover and migration has implications for staffing. The number of variables with a statistically significant relationship with burnout underlines the complexity of burnout syndrome. While these findings are essential to inform the development of interventions, additional data is needed from each country to confirm these results and further work required to develop interventions to prevent and mitigate burnout.

Funding Acknowledgement: Matched Wellcome Trust funded Keele University doctoral studentship

6B.4

The POISE Study: Qualitative FINDINGS: from a mixed methods study investigating burnout in family physicians in low-and middle-income countries

Presenter: Tanya Wright

Co-Authors: Tanya Wright, Abdul Jalil Khan, Leigh Wagner, Liezel Rossouw, Christine Shamala Selvaraj, Aruni De Silva, Mpundu Makasa, Thomas Shepherd, Christian D Mallen, Toby Helliwell

Author institutions: Keele University, Khyber Medical University, Stellenbosch University, University of Malaya, University of Sri Jayewardenepura, University of Zambia

Abstract

PROBLEM: Burnout is highly prevalent among physicians globally and has far-reaching consequences impacting on physician health, physician performance, and the workforce. The World Health Organisation has identified primary care as essential for achieving Universal Health Coverage. Therefore, it is imperative to investigate burnout syndrome in family physicians, especially those in LMICs where data is lacking. This study explores the stressors experienced by family physicians working in LMICs, their burnout experiences, and their coping strategies, adding richness, depth, and context to the quantitative FINDINGS: of the POISE study.

APPROACH: Online semi-structured interviews were conducted with 33 family physicians. Within the sample, there were four physicians from each of Pakistan, Malaysia, and Sri Lanka, eight from Zambia,

and 13 from South Africa. Participants were recruited from those who had completed the POISE burnout survey and had consented to further contact; burnout scores were known. Sampling was purposive. A mix of baseline demographic, employment, and workplace characteristics was also sought. Interviews were analysed using a thematic approach as described by Braun and Clarke where units of meaning are coded, and then codes are organised into themes. Recruitment continued until data saturation.

FINDINGS: Five themes were identified: 'demands', 'resources', 'experience of burnout', consequences of stress and burnout', and 'coping strategies'. Participants described demands including heavy workloads with long work hours and high numbers of patients; workplace conflict with both colleagues and patients; patient factors such as poverty, illiteracy and health beliefs; work-related travel; systems and regulation; and political and socioeconomic factors such as the wider economy. Within the theme of 'resources' participants discussed their training and career development opportunities; the availability of supplies, services, and staffing; the importance of support; rewards, both monetary and non-monetary; motivating factors and values; and their work-life balance. They also spoke about their personal burnout experiences mainly in terms of consequences to physical and mental health; relationships; and work performance. Many participants also spoke about the stigma of burnout in their settings, where the consequences of stress and burnout may be perceived as weakness. Coping strategies and solutions were also discussed In terms of personal strategies such as self-care and self-improvement; relational strategies such as socialising; and work-related strategies such as migration.

CONSEQUENCES: These personal perspectives add depth and context to widely recognised factors associated with burnout such as heavy workloads, conflict, and a lack of resources. They also highlight some unusual context-specific stressors such as work-related travel, poverty, and illiteracy. The stigma associated with acknowledging burnout, expressed more strongly by participants from certain countries, is an important finding as it will influence help-seeking behaviour. These perspectives will add insight to the development of context-specific burnout interventions and work-related policies going forward.

Funding Acknowledgement: Matched Wellcome Trust funded Keele University doctoral studentship

6B.5

"I clearly have some wiring that's not quite right" Are there personal predisposing factors to burnout we should be aware of?

Presenter: Orla Whitehead

Co-Authors:

Author institutions: Newcastle University

Abstract

PROBLEM: Burnout in UK General Practitioners (GPs) is at crisis levels. A recent survey reported one in five were at highest risk for burnout, and over half were emotionally exhausted. These figures are repeated across the world. Burnout leads to retirement and resignation which adds to the workforce crisis, as well as patient safety concerns. Previously, we identified that GPs with burnout can feel stigmatised by their colleagues, and the health service. However, with burnout so prevalent, it is important with an have discussions about predisposing factors, and warning signs of burnout, without prejudice or blame. While there are studies that quantify the issue of burnout, some exploring underlying factors, and many commentaries, there is a dearth of qualitative research that allows people with lived experience of burnout to share their stories. It

is important that we listen to those who have been burned out, without stigma, blame or prejudice, if we want to make the changes our profession needs.

APPROACH: Six male and nine female GPs, with personal, lived experience of burnout were interviewed via Zoom, by a GP peer researcher, between September 2021 and February 2022. A thematic analysis was undertaken of these frank interviews, using NVivo software. The dataset produced was large, and gave rich data regarding many issues around burnout and the GP experience. Here, we discuss personal predisposing factors for burnout.

FINDINGS: Participants disclosed themes of personal predisposing factors that made them feel they were vulnerable to burnout. These were perfectionism, neurodiversity-specifically likely autistic spectrum condition, past trauma, including childhood trauma (the 'wounded healer') and a sense of 'imposter syndrome'. Participants were very articulate and self-aware in the multifactorial causes of burnout. While participants could identify these predisposing factors that made them vulnerable to burnout, these factors had been true for their whole careers, and were not the sole cause of burnout. During the interviews participants shared their resilience, and commitment to general practice and patients, despite their personal challenges.

CONSEQUENCES: This study adds to our understanding of GP burnout, with in-depth insights into the personal factors that could predispose a GP to burnout. These factors could easily be argued to lead to better, empathetic GPs, and therefore we do not advocate for early career screening. However awareness of a personal GPs vulnerabilities, within a systems based intervention to destigmatise awareness of these challenges, and for GPs to seek prompt support needed when these personal factors turn from an asset to their career, to a challenge. Further research is needed into support for neurodiverse GPs, or those with early life trauma.

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6B.6

Either I'm going to kill someone or I'm going to end up killing myself." How does it feel to be burnt out as a practicing UK GP?

Presenter: Orla Whitehead

Co-Authors: Professor Barbara Hanratty, Dr Suzanne Moffatt

Author institutions: Newcastle University

Abstract

PROBLEM: Burnout in UK General Practitioners (GPs) is at crisis levels. A recent survey reported one in five were at highest risk for burnout, and over half were emotionally exhausted. These figures are repeated across the world. Burnout leads to retirement and resignation7 which adds to the workforce crisis, as well as patient safety concerns. While there are studies that quantify the issue of burnout, some exploring underlying factors, and many commentaries, there is a dearth of qualitative research that allows people with lived experience of burnout to share their stories.

APPROACH: Six male and nine female GPs, with personal, lived experience of burnout

were interviewed via Zoom, by a GP peer researcher, between September 2021 and February 2022. A thematic analysis was undertaken of these frank interviews, using NVivo software.

FINDINGS: Themes identified were exhaustion and depersonalisation, mental and physical illness, identity and existential crises, and finally tenacity and resilience. Participants were self-reflective and described distress, shame, stigma and guilt, including times of suicidal behaviour and isolation due to their burnout. Where participants had experienced past mental illness and burnout, they were articulate in the differences, and that burnout is an occupational phenomenon. Participants detailed the challenges to identity of being ill, away from work, and accessing medical care, including feeling stigmatised. Those that had used specialist services such as practitioner health stated how useful this was.

CONSEQUENCES: This study adds to our understanding of GP burnout, with in-depth insights into the holistic impact of a burnout episode. Participants did not lack resilience-many had been through the darkest experiences and survived to be reflective and articulate advocates primary care and appropriate support for GPs . The burden of improvement of the holistic health of the GP workforce needs to be moved from the highly motivated, self-reflective, and resilient individuals, to a systems based intervention to identify, reduce and manage distress in GPs.

Funding Acknowledgement: OW is funded by the National Institute for Health Research (NIHR) on an in practice fellowship (NIHR301074). https://fundingawards.nihr.ac.uk/award/NIHR301074 BH is funded by the NIHR Applied Research Collaboration North East and North Cumbria. https://arc-nenc.nihr.ac.uk/ The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

6B.7

Violence and Abuse towards Staff by Patients and the Public in General Practice: A Scoping Review

Presenter: Dr Shihning Chou

Co-Authors: Luke Sawyers, Dr Edward Tyrrell, Dr Paul Leighton, Prof Denise Kendrick

Author institutions: University of Nottingham

Abstract

PROBLEM: Violence and abuse in healthcare settings is a growing concern. Staff are more likely to experience violence initiated by patients and the public than by their own colleagues. General practice may be more exposed to such behaviours than hospitals. Such experiences can negatively impact staff wellbeing, job satisfaction and turnover intention. It is important to better understand the extent and the nature of these experiences as well as possible preventive and support strategies in order to reduce their occurrence and impact. Though evidence on workplace violence in healthcare settings has been synthesised, the majority of reviews focus on hospitals and rarely consider primary care, in particular, general practice. In addition, these reviews have not focused on specifically patient or public-initiated violence and abuse towards staff. This scoping review addresses these research gaps. The aim of the scoping review is to synthesise evidence on: 1. The extent, characteristics and impact of violence and abuse towards staff in general practice as initiated by patients and the public. 2. Practices in violence prevention and associated staff support in general practice

APPROACH: This review follows the Joanna Briggs Institute scoping review guidelines. The protocol was registered on Open Science Framework on 21st August 2023. Five

bibliographic databases, one grey literature source, Google, and Google Scholar were searched in September 2023. Primary studies in any language were included. Citation screening involved two reviewers working independently. Data have been charted.

FINDINGS: The search strategy yielded 35,823 citations, 16,303 of which were duplicates. Of the remaining 19,519 citations, 55 citations met the inclusion criteria and four were unobtainable. Preliminary findings are that 34 studies reported the rate of staff experience of violence and abuse by patients or the public. Eight studies include staff from various healthcare settings, not exclusive to general practice, or include staff-on-staff violence and abuse. Ten studies reported possible correlates, six studies explored possible causes, and 18 reported impacts of this type of violence. Only five studies explored participants' suggestions on future preventative or support strategies. Within the above-mentioned studies, nine were qualitative and two adopted mixed methods studies that explored staff perspectives in greater depth.

CONSEQUENCES: Current research primarily focuses on the extent of this issue. Impacts of this type of violence and abuse include staff stress / depression, injury, and turnover intention. Further research on risk factors, wider impacts and possible preventative and support strategies is needed. It will benefit from taking a systemic approach to understanding this issue and formulating strategies or responses.

Funding Acknowledgement:

6B.8

Violence and Abuse towards Staff by Patients and the Public in General Practice since COVID-19 in England

Presenter: Dr Shihning Chou

Co-Authors: Dr Edward Tyrrell, Dr Paul Leighton, Prof Denise Kendrick

Author institutions: University of Nottingham

Abstract

PROBLEM: In 2021, 37% of UK doctors reported experiencing direct verbal abuse from patients and/or the public in the preceding month. Of these 37%, 51% were general practitioners (GPs) and 30% were hospital doctors. Two-thirds of GPs said their experience of abuse, threatening behaviour or violence had become worse after the COVID lockdown. 67% of GPs reported witnessing abuse by patients towards colleagues, especially reception staff. However, there is limited research on the experiences of violence and abuse staff in general practice. Furthermore, there is no data suitable for direct comparisons between staff groups in general practice. Objectives To explore - the extent of experiences of violence and abuse by patients and/or the public towards general practice staff since the start of the COVID19 pandemic; - the impacts of such experience on staff wellbeing and - staff views on current and future practice or strategies to prevent and manage violence and abuse by patients and the public.

APPROACH: A mixed methods study was conducted. Data were collected between 11/7/23 and 20/12/23.

Part 1 was an online survey of general practice staff in England. It was distributed through clinical research networks, professional newsletters and distribution lists, employing snowball sampling. The survey asked about the level of physical abuse, threats, verbal abuse, harassment, and inappropriate sexual behaviours directly experienced and/or witnessed in the preceding three years. At the end of the survey, eligible participants were invited to an individual interview online

Part 2 findings Overall, 1,226 complete survey responses were received, of which, 74 did not

meet eligibility criteria and were excluded. The 1,152 participants (44% clinical, 56% non-clinical) were from all regions of England. 83.8% self-identified as a woman, 15.4% as a man, 0.2% as other and 0.6% preferred not to say. Overall, 48.7% of participants reported experiencing physical violence or threats of physical violence; 92.3% reported experiencing verbal abuse; 23.7% reported experiencing inappropriate sexual behaviours or remarks; 61.5% reported feeling harassed. It is worth noting that 4% of participants might be experiencing serious mental health symptoms at the time of survey completion. Twenty-three members of general practice staff shared their experiences and views in detail in interviews. Staff appeared to view violence and abuse as 'part of the job' and discussed its impacts on staff, the practice, and the wider patient population. Current practices in prevention and management appeared to vary across areas. Suggestions on future directions also emerged from the interview.

CONSEQUENCES: The extent of violence and abuse experienced by staff in general practice appears to be prevalent among the respondents. A multi-level systemic approach to understanding and responding to this issue is recommended.

Funding Acknowledgement:

6B.9

Challenges and Complexities in Managing Distress in Primary Care: A Qualitative Study of Practitioner Experiences

Presenter: Hannah Bowers

Co-Authors: : Hannah Bowers, Miriam Santer, Carolyn A Chew-Graham, Harm Van Marwijk, Berend Terluin, Tony Kendrick, Paul Little, Michael Moore, Manoj Mistry, Deb Smith, Al Richards, Bronwyn Evans, Nicola Lester, Adam Geraghty

Author institutions: University of Southampton, Keele University, Brighton and Sussex Medical School, Amsterdam University Medical Centre

Abstract

PROBLEM: People often present to primary care experiencing emotional distress. However distress c an be difficult to distinguish from psychological disorder (e.g. anxiety and depression). There may be important differences in the care provision needed for people where distress does not reflect psychopathology. Currently, the nature of assessment, and the care provided for people presenting with distress to primary care is unclear.

APPROACH: We are conducting remote online video interviews with up to 30 practitioners from a range of roles in primary care (including General Practitioners (GPs), Nurse Practitioners, Social Prescribers, and Mental Health Practitioners) about their experiences managing distress in primary care. The interview schedule explores practitioners' views of distress and other mental health problems (including how these might be distinguished from each other), experiences of consulting people who present with distress, and the support they provide for people with distress. Practices are being recruited via two Clinical Research Networks in England. Practitioners are being recruited through a digital poster circulated by their practice or through 'snowballing' methods. Participants are purposively sampled with regards to their role, their experience, if the practice is in an area of high multiple deprivation, and whether the participant has an interest or specialist training in mental health. Interviews are recorded and transcribed verbatim. Analysis follows an inductive thematic approach.

FINDINGS: We are conducting remote online video interviews with up to 30 practitioners from a range of roles in primary care (including General Practitioners (GPs), Nurse

Practitioners, Social Prescribers, and Mental Health Practitioners) about their experiences managing distress in primary care. The interview schedule explores practitioners' views of distress and other mental health problems (including how these might be distinguished from each other), experiences of consulting people who present with distress, and the support they provide for people with distress. Practices are being recruited via two Clinical Research Networks in England. Practitioners are being recruited through a digital poster circulated by their practice or through 'snowballing' methods. Participants are purposively sampled with regards to their role, their experience, if the practice is in an area of high multiple deprivation, and whether the participant has an interest or specialist training in mental health. Interviews are recorded and transcribed verbatim. Analysis follows an inductive thematic approach.

CONSEQUENCES: There is uncertainty from practitioners about the management of people experiencing distress in primary care, and practitioners face challenges in the management of distress. While patients are frequently referred or sign-posted to a range of other services, there is little communication with primary care about engagement or effectiveness for an individual patient. The

Findings will be used to inform the development of accessible care pathways for those experiencing distress as their primary concern.

Funding Acknowledgement: This study is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research.

6C.1

Exploring the delays to diagnosis of endometriosis in the United Kingdom: a qualitative study

Presenter: Babu Karavadra

Co-Authors: Dr Joanna Semylen, Dr Edward Morris, Dr Gabrielle Thorpe

Author institutions: University of East Anglia

Abstract

PROBLEM: In the United Kingdom, the average time to diagnosis of endometriosis, a common gynaecological condition, is 7.5 years. A delayed diagnosis of endometriosis has significant implications on the individual, including physical, emotional and future fertility. The aim of this qualitative doctoral study was to explore, in two phases, the reasons for the delay to diagnosis of endometriosis from the perspectives of both patients and healthcare professionals. This is the first known grounded theory study to explore the delays to diagnosis of endometriosis.

APPROACH: In phase 1, fifteen women with confirmed endometriosis participated in individual, semi-structured interviews, and a conceptual description was generated using constructivist grounded theory. The findings from phase 1 informed the design of phase 2, where focus groups with fifteen healthcare professionals were conducted to explore delays to diagnosis of endometriosis. The data were analysed using reflexive thematic analysis.

FINDINGS: The analysis resulted in a novel, substantive theory; this describes how the main concern of women with undiagnosed endometriosis is coping with a fracturing life, which they address through a process of making sense. The way in which a woman seeks to make sense depends upon the context of refusal, disbelief or belief arising from her interactions with others. Across each context, the grounded theory identifies how women's individual experiences influence health-seeking behaviours and the subsequent delays to diagnosis. In phase two, three main themes evolved: (1) endometriosis

is peppered with discrimination, (2) invisible women and the invisible line for referral, and (3) visibility in a context of belief: rendering the woman visible. A key finding that connected both phases was the way in which clinicians rendered women invisible and how women recognised and responded to this.

CONSEQUENCES: This study provides a unique understanding of the health-seeking behaviours of women with undiagnosed endometriosis and develops a multivariate theory to explain the delays to diagnosis. This original contribution can be used to alleviate structural discrimination and encourage collaboration within and among professional bodies and patient groups to facilitate referral and diagnosis. It is also hoped the FINDINGS: will be used to develop a non-invasive tool that can be used in primary care to facilitate diagnosis and referral.

Funding Acknowledgement: None

6C.2

The effect of hormone replacement therapy and the experience of chronic musculoskeletal pain in post-menopausal women: A systematic review

Presenter: Rachel Overton

Co-Authors: Dr Rachel Overton, Dr Payam Amini, Dr Opeyemi Babatunde, Dr Kayleigh Mason, Dr Sneha Rathod, Dr Victoria Welsh, Dr Claire Burton

Author institutions: Keele University, School of Medicine

Abstract

PROBLEM: Around 13 million people, equivalent to a third of the entire UK female population are currently peri or menopausal. Fluctuating oestrogen levels of the perimenopause and the subsequent oestrogen deficiency of the menopause result in a plethora of symptoms. These symptoms include the typical vasomotor symptoms of hot flushes and night sweats. However, women frequently report non-vasomotor symptoms such as mood changes, cognitive dysfunction, sleep disturbance, fatigue, loss of libido and musculoskeletal pain. Musculoskeletal pain, arthralgia and arthritis are all more common in women, and their prevalence increases with age and in some, appears to be associated with the menopause. For example, the prevalence of osteoarthritis rises exponentially in women over men at the age of menopause. It has been hypothesised that oestrogen has pain the pathogenesis of common MSK conditions. However, evidence is often conflicting. This living systematic review aims to summarise evidence of associations between hormone replacement therapy (HRT) and its effect on the experience of chronic musculoskeletal pain.

APPROACH: A comprehensive search of seven databases (e.g., Medline, Embase) from inception until May 2023 was conducted. The search, including terms for HRT and musculoskeletal pain was run in tandem with a search including terms for menopause and musculoskeletal pain. Inclusion criteria: studies reporting the effects of non-contraceptive hormone replacement on outcomes relating to chronic painful musculoskeletal conditions in women experiencing the peri / menopause. Title, abstract and full text screening were conducted independently by two reviewers. Data extraction and risk of bias assessment was by one reviewer with independent verification. Risk of bias was assessed using the JBI critical appraisal tool appropriate for the study type. Data is beings synthesised narratively, with meta-analysis to estimate the pooled-effect of HRT on specific painful musculoskeletal conditions, where appropriate. The protocol is registered on PROSPERO CRD42023467911.

FINDINGS: 28929 titles, published from database inception to May 2023, have been identified. 346 full texts have been screened

and 70 studies included. These papers examine the association between HRT and musculoskeletal conditions including osteoarthritis, rheumatoid arthritis, temporomandibular joint disorder, greater trochanteric pain syndrome, gout, carpel tunnel, fibromyalgia, back and neck pain and chronic upper extremity pain. At the conference we will present the results of this systematic review to help guide clinical practice and guidelines on the use of HRT, particularly for menopausal women whose predominant symptom is musculoskeletal pain.

CONSEQUENCES: To our knowledge, this is the most comprehensive systematic review examining the association between HRT and chronic musculoskeletal pain in menopausal women. It extends to conditions including osteoarthritis, rheumatoid arthritis, gout, carpel tunnel, fibromyalgia and generalised joint and muscle pain. This evidence will help guide clinical practice and guidelines on the use of HRT, particularly for menopausal patients whose predominant symptom is musculoskeletal pain, as well as future research into this area.

Funding Acknowledgement: SR had a West Midlands Deanery extension to her GP training CB and VW are funded by the NIHR RO is an Academic Foundation Doctor

6C.3

Menopause GAP: exploring inequalities in menopause care in GenerAl Practice using qualitative methodology

Presenter: Sarah Hillman

Co-Authors: Abi Eccles, Claire Mann, Sabrina Keating, Patricia Apenteng, Lyn Tatnall and Lisa Shah, Jeremy Dale

Author institutions: University of Warwick, Birmingham,Oxford and Nottingham

Abstract

PROBLEM: In the UK 11 million women are 45 or over. Decreasing oestrogen levels during the menopause lead to 85% of women experiencing symptoms. Women experiencing symptoms have significantly lower quality of life, higher work impairment and higher use of health care services. Many women do not receive the care needed; the Women's Health Strategy survey showed only 9% felt they had been offered sufficient information about the menopause. Hormone replacement therapy (HRT), is an effective treatment for menopause symptoms. However, women from lower socioeconomic status backgrounds, Black women and those from South Asian ethnicities, although more likely to experience severe symptoms, are much less likely to be prescribed HRT. There is a need for strategies to tackle the mismatch between women's needs and the care they receive.We explored how women from lesser heard communities' experience menopause, obtain information and access support. We also aimed to examine issues faced in primary care settings and the roles GPs can play in providing menopause care for all.

APPROACH: We are conducting in-depth narrative interviews and focus groups with an ethnically diverse group of approximately 40 women who have recent experience of menopausal symptoms, recruited through community organisations or general practices in deprived areas. We have purposively sampled to ensure that participants' demographics include women living in areas of deprivation and Black and South Asian women. We are conducting focus groups with approximately 15 GPs and practice nurses working in deprived areas. Results will be presented as part of a workshop with women to co-design an information resource for women.PPIEThe views of 114 women were used to design the research. PPI contributors changed research plans to be more inclusive, including using community leaders a modulators of focus groups. We have had ongoing collaborative iterative engagements

throughout this project which will continue into the dissemination phase.

FINDINGS: During early analysis we have identified key areas which may influence women's access to menopause care. The interview data shows how attitudes towards discussing menopause symptoms and menopause care can shape how women seek support. The study also compares women's experiences of consultations with GPs and GPs' views about how they can best support women going through menopause.

CONSEQUENCES: In the short term we will raise the profile of menopause care and women's unmet needs. We will also raise awareness of the challenges associated with improving menopause care provision in general practice, and through disseminating information to health service policymakers and managers we will aim to inform potential strategies for addressing these. We will use the FINDINGS: to co-produce a resource for women experiencing menopause symptoms.

Funding Acknowledgement: RfPB NIHR

6C.4

'The hinterland between symptoms and diagnosis': navigating diagnosis of possible endometriosis in general practice

Presenter: Sharon Dixon

Co-Authors: Emma Evans, Francine Toye, Abigail McNiven, Lisa Hinton

Author institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford (SD,AM,LH), Nuffield Department of Women's and Reproductive Health, University of Oxford (EE), Physiotherapy Research Unit, Nuffield Orthopaedic Centre, Oxford University Hospitals NHS Foundation Trust, Oxford. (FT)

Abstract

PROBLEM: Endometriosis affects up to approximately 10% of those assigned female at birth, and can be associated with symptoms including potential pelvic pain and subfertility. The average interval between symptoms and diagnosis is 8 years, which is unchanged over the last decade. Delays in diagnosis are pivotal in endometriosis discourse and identified as critical in health policy, including an All Party Parliamentary Group, and the Women's Health Strategy. Primary care is often characterised as pivotal in creating and maintaining delays in diagnostic care pathways, in a research field dominated by specialist care and research. Many conclude that lack of GP awareness drives this, however our qualitative interviews with GPs challenged the simplicity and reductive nature of this assumption.

APPROACH: Secondary analysis of 42 GP interviews about possible endometriosis, and 46 interviews with primary care clinicians about supporting women's health in primary care, conducted with comparable methods (semi-structured telephone interviews, transcribed verbatim, analysed thematically utilising Nvivo12) within the same research team. Our secondary analysis utilised sociological theories of diagnosis and ambivalence.

FINDINGS: Diagnosis is valued by clinicians as desirable in a biomedical model of care, for example in enabling longitudinal care in a context of punctuated episodes of specialist input, in enabling advocacy for patients and in accessing evidence-based medicine. Clinicians also valued having a diagnosis for themselves, as a tool to support their work and to afford some protection from risk. They also recognised and valued the importance and possible roles of diagnoses for their patients, including symptom validation. However, they hold these considerations alongside uncertainty about how, when, and whether diagnoses help in endometriosis and pelvic pain. This includes recognition that the diagnosis may not change the treatment

offered, especially if empirical trials of treatment are effective in relieving symptoms. They balance potential advantages with the knowledge that the tests themselves are associated with risks. They know (not don't know) that diagnosis may not inform prognostication about or influence outcomes, including those identified as important to patients such as future fertility or pain. They recognise the lack of primary care evidence or evidence to allow for personalised advice. Recognising that care remains with them, whatever the outcome of tests, they actively offer tests to ensure they enable ongoing care whether a diagnosis is identified – or not.

CONSEQUENCES: We develop thinking about meanings of diagnosis for clinicians, an area with scant previous consideration, where most literature focusses on societal and patient perspectives. We suggest that for primary care clinicians, seeing patients with undifferentiated symptoms that may suggest endometriosis, holding these perspectives in parallel creates potential ambivalence about diagnosis. The complexity of their considerations suggests that reductive educational messaging, pivoted predominantly around awareness raising, will not likely alone be sufficient to generate change.

Funding Acknowledgement: The endometriosis interview study was funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference 403). SD holds an NIHR Doctoral research fellowship (NIHR301787). The women's health in primary care study was funded by the National Institute for Health and Care Research (NIHR) Policy Research Programme (reference: NIHR202450). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

6C.7

How can primary and community care services work together to support women with Perinatal Anxiety (PNA)? A qualitative study

Presenter: Victoria Silverwood

Co-Authors: Tamsin Fisher, Janine Proctor, Tom Kingstone, Katrina Turner, Noureen Shivji, Carolyn Chew-Graham,

Author institutions: VS, TF, TK, NS, CCG - School of Medicine, Keele University, Staffordshire, ST5 5BG. JP - Just Family CIC, Goldenhill Community Centre, Drummond Street, Stoke-on-Trent, Staffordshire, ST6 5RF. TK, CCG - Midlands Partnership University Foundation Trust, Trust Headquarters, St George's Hospital, Corporation Street, Stafford, ST16 3SR. CCG - Applied Research Collaboration (ARC) West Midlands, Keele

Abstract

PROBLEM: Perinatal anxiety (PNA) occurs during pregnancy and up to 12 months post-partum. PNA affects more than 21% of women worldwide and can have a negative impact on mothers, children and their families. The National Institute for Health and Care Excellence (NICE) guidance recommends psychological and/or pharmacological therapy to manage PNA. NICE has identified evidence gaps around non-pharmacological interventions as a research priority.

APPROACH: In this presentation, I will discuss perspectives from PNA stakeholders about acceptability, accessibility and appropriateness of non-pharmacological PNA interventions. I will explore how healthcare and VCSE services can work together to support women with PNA in both primary and community settings and build local networks which creates stability for services. Ethical approval granted by Keele University Research Ethics Committee. A patient advisory group (PAG) was involved throughout. Semi-structured interviews were conducted with four groups: women with lived experience of

PNA, healthcare professionals (HCPs), voluntary, community and social enterprise (VCSE) Perinatal Mental Health (PMH) organisation representatives and commissioners of PMH services. Study recruitment via social media and PMH networks. Topic guide modified iteratively throughout data analysis. Interviews were digitally recorded, transcribed and anonymised. Analysis was conducted thematically using principles of constant comparison, with themes agreed through discussion within the research team and the PAG.

FINDINGS: : 30 interviews were conducted: 13 women with lived experience of PNA, 10 HCPs from a variety of professional backgrounds, 4 representatives from VCSE PMH organisations and 3 commissioners of PMH services. Experiences of PNA vary, therefore a personalised approach is needed to support women with PNA. Barriers to help-seeking include stigma and fear of negative repercussions after disclosure, along with challenges accessing healthcare-based services. Some women express a preference to access support from VCSE PMH organisations rather than healthcare services. Representatives from VCSE PMH organisations and commissioners reflected that VCSE organisations are often well integrated within local communities, and are able to offer flexible, tailored and accessible support for women in an informal setting. HCPs and representatives from VCSE PMH organisations agreed that effective collaboration between healthcare and VCSE services provides women with greater choice and reduces gaps in care.

CONSEQUENCES: Women choose to seek a variety of different support options; more than is currently recommended by NICE. Healthcare and local VCSE PMH services should work together to develop sustainable and effective working relationships to improve care for PNA. HCPs should be aware of local VCSE PMH organisations as management options for women with PNA. Despite supporting many women with PNA, funding streams for VCSE PMH services are often short term, resulting in instability. There is currently an evidence gap for the effectiveness of interventions delivered by VCSE PMH services, which could facilitate longer-term, more stable commissioning for these organisations.

Funding Acknowledgement: VS is a Wellcome Trust PhD Clinical Fellow at Keele University CCG is part funded by the West Midlands ARC

6D.1

Supporting GPs and people with hypertension to maximise medication use to control blood pressure: A pilot cluster RCT of the MIAMI intervention

Presenter: Andrew W. Murphy

Co-Authors: Gerard J Molloy1, Eimear C Morrissey, Louise O Grady, Patrick J Murphy, Gerard J Molloy

Author institutions: Discipline of Psychology and HRB Primary Care Clinical Trials Network Ireland, University of Galway

Abstract

PROBLEM: Hypertension is one of the most important risk factors for stroke and heart disease. A landmark study of twelve high income countries from 1976-2017 concluded that hypertension 'control rates have plateaued in the past decade, at levels lower than those in high quality hypertension programmes'. International comparisons suggests that in Ireland there are relatively low levels of awareness of hypertension and relatively poor levels of control and suboptimal treatment. The 'MaxImising Adherence, Minimising Inertia' (MIAMI) intervention, which has been developed using a systematic, theoretical, user-centred approach, aims to support GPs and people with hypertension to maximise medication use.

APPROACH: The MIAMI intervention is designed to support General Practitioners (GPs) and people living with hypertension to maximise medication use to control blood pressure. It contains GP targeted components (30 minute online training, booklet and consultation guide) and patient targeted components (Urine chemical adherence test, pre-consultation plan and informational videos). The aim of this study was to gather and analyse acceptability and feasibility data to allow (1) further refinement of the MIAMI intervention, and (2) determination of the feasibility of evaluating the MIAMI intervention in a future definitive RCT.

FINDINGS: Six general practices (Target 6) and 52 people (Target 60) living with hypertension were recruited. All 6 practices were retained. Four patient participants were lost to follow up (8%). Fidelity, as measured on a study delivery checklist, was good but there were three processes that were not delivered as intended. Two of these were minor processes, but the third was the delivery of the urine test results, which often did not occur due to delays in the delivery of results and some confusion around accuracy. The qualitative data demonstrated that the urine test component is not feasible in its current form but the other intervention components had good feasibility and acceptability.

CONSEQUENCES: Some modifications are required to the MIAMI intervention components and research processes but with these in place progression to a definitive RCT is considered feasible. Trial registration:ISRCTN85009436

Funding Acknowledgement: The Health Research Board [HRB-DIFA-2020-012].

6D.2

Is blood pressure self-monitoring for the management of pre-hypertension feasible and acceptable: the REVERSE study?

Presenter: Emma Bray

Co-Authors: Emma Bray, Valerio Benedetto, Lucy Hives, Nefyn Williams, Paul Rutter, Andrew Clegg, Calvin Heal, Julie Cook, Clare Thetford, Paul Heyworth, Caroline Watkins

Author institutions: University of Central Lancashire, University of Liverpool, University of Portsmouth, University of Manchester

Abstract

PROBLEM: Prehypertension (PHT) currently affects around 40% of UK adults and is directly associated with increased risk ofcardiovascular disease (CVD), as well as progression to hypertension itself. Lifestyle changes can reduce theserisks, but there is little evidence of what interventions are feasible, acceptable and effective. Previous research hasshown that self-monitoring of blood pressure (BP) is highly effective in managing hypertension. However, self-monitoring in PHT has not been systematically explored, nor do we know whether individuals in the PHT BP range, or healthcare professionals, would find self-monitoring BP feasible and acceptable for managing PHT.

APPROACH: A prospective, non-randomised , mixed-methods, feasibility study was conducted. Individuals with BP between 120-139/80-89mmHg identified from GP registers or pharmacy health checks were invited to participate. Participants home-monitored their BP for 6-months following a protocol. Outcome data were collected at baseline, 6- and 12-months. Semi-structured interviews were conducted with individuals and healthcare professionals (HCPs), and an evaluation survey sent to participants.
FINDINGS: 1501 people were invited to participate, 156 (10%) expressed an interest, 80 (80/156; 51%) were enrolled, and 75 (75/80; 94%) started self-monitoring. 66 (66/80; 83%) completed the 6-month follow-up. Although the overall recruitment target was not met, the GP target was exceeded. Despite acceptable levels of interest from

pharmacies, their recruitment was poor.The sample lacked ethnic diversity (99% White) and most were well educated (56.4% >=degree-level) and from a high SES group (41%).Interview and survey data showed that HCPs and participants thought self-monitoring for PHT was feasible and acceptable. Minor concerns regarded future implementation. Valuable suggestions for future development were provided.

CONSEQUENCES: REVERSE is feasible and acceptable in General Practice, but unlikely in pharmacy. Improvements to the diversity and inclusivity are vital. Useful information to inform a future effectiveness trial of self-monitoring of PHT was collected.

Funding Acknowledgement: This study is funded by the NIHR Research for Patent Benefit Programme (NIHR201028). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

6D.3

Understanding heart failure service innovations in Lincolnshire: a realist qualitative study.

Presenter: Dr Gupteswar Patel

Co-Authors: Prof Niro Siriwardena

Author institutions: Community and Health Research Unit, School of Health and Social Care, University of Lincoln

Abstract

PROBLEM: Increasing prevalence of heart failure creates healthcare demand and presents challenges to fragmented health systems. In response to these challenges, an innovative heart failure intervention was implemented in Lincolnshire. The intervention included integrated community cardiology, remote monitoring using a digital application, virtual ward, and same-day emergency care (SDEC) for intravenous (IV) diuretics. Services were expanded to seven-days a week. A multidisciplinary team (MDT) included health professionals from secondary care, primary care, the community heart failure team, and commissioners. The implementation and success of healthcare interventions depend on the contexts and mechanisms in which they are implemented. This study aimed to explore the contexts and mechanisms of these new heart failure services, focusing on identifying what worked for whom, how, and in what circumstances.

APPROACH: Using realist framework principles, we developed an initial programme theory and conducted 15 qualitative in-depth interviews with a cardiology consultant, nine primary care staff (General practitioners, Nurses, and Pharmacists), one service manager, and four patients. Thematic analysis facilitated the understanding of contexts and mechanisms leading to observed outcomes (CMO). The FINDINGS: contributed to the refinement of CMO configurations, revealing the contexts and mechanisms that explained why and how heart failure services worked and in these circumstances.

FINDINGS: CMO configurations were used to explain why and how heart failure services worked for patients. The context of expanded and up-skilled community nursing was an important facilitator of new heart failure services. Community nurses played an important role in remote monitoring, home visits, formulation of personalised care, and patient-centred care delivery. The integration of remote monitoring, virtual wards, and home visits ensured the continual provision of care beyond health facilities, and expanded access to care. The referral mechanism from community nurses to SDEC was effective in delivering IV diuretic services. However, remote monitoring was lacking for SDEC-discharged patients. Collaboration with a third-sector organisation further facilitated care provision for immobile patients and those needing emergency care. The expansion

to a seven-day a week service improved access to care. Interprofessional collaboration was a key mechanism influencing MDT functioning in identifying clinical and operational strategies for complex patient management. The community heart failure intervention improved care provision and patient experience by delivering specialised care closer to patients' homes and promoting patient recovery. The key CMO structure involved interprofessional collaboration, expansion and upskilling of nurses, digital applications, remote monitoring, and referral mechanisms.

CONSEQUENCES: The study identified key contextual factors and mechanisms contributing to the effectiveness of new heart failure services for patients, and highlighted challenges that require ongoing attention. Given the increasing demand for heart failure care and national interest in virtual service delivery, this study provides evidence for recognising and strategising future heart failure services in similar contexts.

Funding Acknowledgement: This study is funded by East Midlands Academic Health Sciences Network.

6D.4

Diffusion of community heart failure service innovation in Northamptonshire: a qualitative study

Presenter: Taliha Samar

Co-Authors: Gupteswar Patel, Niro Siriwardena

Author institutions: Lincoln Medical School, Community and Health Research Unit (CaHRU), University of Lincoln

Abstract

PROBLEM: Heart failure is a complex disorder leading to frequent hospitalisation and specialist care. Patients often experience challenges accessing care. In Northamptonshire, an innovative approach to heart failure services involving Community Cardiology Clinics in primary care, and Community Asset Groups at the community level was introduced to address these challenges. Diffusion, adoption, and implementation of the heart failure intervention remain understudied. Building on the Greenhalgh et al (2004) framework for diffusion of health service innovations, this study investigated the implementation of this new heart failure model. The aim was to explore and understand the diffusion dynamics of the new heart failure service model in Northamptonshire, with a focus on identifying the key determinants of adoption and implementation.

APPROACH: We conducted a secondary analysis of qualitative data from 11 in-depth interviews with four patients, two community carers, one general practitioner, one community heart failure nurse, one programme director, and two interviews with a community cardiologist. Inductive and deductive thematic analysis, guided by the diffusion of innovation conceptual framework, enabled the identification of themes and subthemes.

FINDINGS: : The successful implementation of community heart failure services, incorporating Community Cardiology Clinics and Community Asset Groups, was found to be both innovative and adoptable. Implementation of the innovation was characterised by competent leadership, positive managerial relationships between community cardiologist, general practitioners and third-sector professionals, a tension for change to reduce hospital admissions and expand access to care for heart failure, and dedicated funding ('slack resources'). Both service providers and patients identified the advantages of community heart failure services, highlighting improved access to specialist care closer to home and provision of rehabilitation, education, and nutrition within

the community ('relative advantage'). The heart failure innovation aligned with the organisational values of primary care and third-sector organisations, facilitating readiness for adoption and implementation. Despite an overall successful implementation, challenges emerged from limited management accountabilities, such as inadequate administrative and information technology support for community cardiologists leading the innovation and its implementation.

CONSEQUENCES: Heart failure innovation in Northamptonshire was perceived to improve access to care, navigating both facilitators and challenges. The application of the diffusion of innovation framework enabled identification of the governance and performance of community heart failure services within a complex intervention context. The FINDINGS: on diffusion dynamics and implementation factors identified in this study are significant for the future adoption of community heart failure models in similar contexts. Moreover, this study contributes to knowledge on the establishment, adoption, and involvement of health and social care professionals in heart failure innovations.

Funding Acknowledgement:

6D.5

Development of a patient-reported measure of treatment burden after stroke.

Presenter: Katie Gallacher

Co-Authors: Martin Taylor-Rowan, Terence J Quinn, David T Eton, Hamish McLeod, Lisa Kidd, Karen Wood, Aleema Sardar, Frances S Mair

Author institutions: School of Health and Wellbeing - University of Glasgow, School of Cardiovascular and Medical Sciences - University of Glasgow, Department of Nursing and Community Health - Glasgow Caledonian University

Abstract

PROBLEM: Treatment burden is the workload of healthcare and wellbeing impact for people with long-term conditions. Stroke rehabilitation engenders treatment burdens not captured in patient-reported measures (PRMs) developed for general or multimorbid populations with no index condition. We aimed to adapt a PRM of treatment burden in multimorbidity, the PETS (Patient Experience with Treatment and Self-Management v2.0), to create a stroke-specific measure, PETS-Stroke. We aimed to examine factor structure, content validity, construct validity, reliability and feasibility in a stroke survivor population.

APPROACH: First, we adapted the 60-item PETS into the PETS-Stroke (34-items) using a taxonomy of treatment burden developed in previous qualitative work. We then conducted content validity testing through cognitive interviews (n=15) to explore the importance, relevance, and clarity of each item. Evaluation of psychometric properties was conducted through analysis of data from stroke survivors recruited via postal survey (n=386). Demographic information was self-reported. Factor structure was tested with Confirmatory Factor Analysis and internal consistency were indexed with coefficient's alpha and omega. Construct validity was examined against: The Stroke Southampton Self-Management Questionnaire; The Satisfaction with Stroke Care Measure; and The Shortened Stroke Impact Scale. Test-retest reliability was examined through within-subject correlations of PETS-Stroke scores at two assessment points 3 weeks apart. Acceptability and feasibility was explored via missing data rates and telephone interviews with 30 participants.

FINDINGS: In total 386 stroke survivors completed the baseline survey and 300 completed the follow-up. Mean age was 68 (SD:11.2), 56% male, 98.4% white, 37% in the two most deprived socioeconomic quintiles

(SIMD), 20% had speech difficulties and 26% lived alone. CFA demonstrated the best fit was for a higher order model reflecting a global treatment burden score and nine sub-factors. Cronbach's alpha was >0.69 and McDonald's omega was >0.88, both suggesting good internal consistency. For test-retest reliability, the intra class correlation co-efficient (ICC) was >0.7 for all domains. Convergent validity demonstrated that all domains of the PETS-stroke were moderately correlated with higher stroke burden, lower readiness to self-manage and lower satisfaction with care (Spearman's ρ ranged 0.226-0.671). Missing data varied for each domain between 3% and 77%, with the majority of missingness being due participants choosing the 'not applicable' answer rather than omitting answers. Content validity testing suggested that items with content irrelevant to some participants e.g. obtaining walking aids, were still important to include. No major issues arose with feasibility in the interviews.

CONSEQUENCES: We have created a PRM of treatment burden after stroke (PETS-stroke) that shows promise as a population-specific measure for use in stroke rehabilitation clinical trials. This will be an important outcome measure alongside measures of efficacy, to ascertain if treatments are manageable and implementable into the lives of stroke survivors. The lack of diversity in ethnicity in the sample was a limitation.

Funding Acknowledgement: CSO grant HIPS_21_13, The Stroke Association TSA2017/01

6D.6

How to manage post-partum blood pressure sustainably?

Presenter: Cynthia A. Ochieng

Co-Authors: Marcus Green, Katherine Tucker, Lisa Hinton, Richard J. McManus, Lucy Yardley

Author institutions: University of Bristol, University of Oxford, Action on Pre-eclampsia

Abstract

PROBLEM: Hypertensive disorders of pregnancy (HDP) occur in 8-10% of patients and can result in mortality and morbidity for mother and foetus. Improved post-natal management of HDP results in better health short term (stable blood pressure (BP)), and longer-term improved cardiac re-modelling with predicted decreased risk of stroke and end-stage kidney disease. However, management of hypertension post-partum requires frequent monitoring (up to daily for several weeks) which can be challenging within health systems in the UK and internationally. The inability to meet these monitoring recommendations often results in patients missing opportunities to manage their BP optimally and reduce subsequent complications. These gaps in provision disproportionately affect underserved groups including patients from minoritized ethnic communities. This project aimed to develop an intervention to improve blood pressure self-management post-partum. For the intervention to be sustainable it needed to be feasible and practicable in different contexts and for a diverse range of patients. Sustainability was also sought by ensuring the intervention was compatible with current practice, enhanced efficiency by decreasing clinician burden while simultaneously empowering the patient.

APPROACH: Using the person based approach (PBA), an intervention was co-produced with members of a patient and public involvement panel (PPI) and other stakeholders including clinicians, academic researchers, community and policy experts. PPI members had personal experiences of HDP. PPI were recruited from groups with worse maternal outcomes including under-resourced areas, minoritised ethnic groups, lower levels of education and physical impairment. Between January 2023-February 2024 nine PPI group and one-to-one

meetings were held. Different elements of the intervention were discussed and the language, images, format and form carefully designed to enhance their comprehensibility, simplicity of use, practicability across different settings and patient safety. In terms of behaviour change support, the intervention drew on Bandura's Social Cognitive Theory. Think-aloud interviews with patients and clinicians were used to optimise the intervention.

FINDINGS: A digital intervention was co-produced which provides the basis for recording self-monitored BP and communicating it to clinicians (midwives and GPs). The intervention also records patient medication and prompts clinicians when medication changes may be needed. Accompanying the intervention is a motivating leaflet for patients to refer to while at home, as well as a clinician website offering all the latest NICE guidance on patient BP management post-partum. Conclusion: Using co-production with a varied group of stakeholders and PPI, this study developed an intervention that could be sustainably incorporated into usual care.

CONSEQUENCES: This intervention will shortly be trialled across around 25 areas in England. If successful, it could support better, more efficient and sustainable management of post-partum BP in primary care.

Funding Acknowledgement: The study is funded by the NIHR Programme Grants for Applied Health Research as part of a wider programme of work (NIHR203283)

6D.7

An evaluation of salon and primary care staff perspectives for CVD prevention in ethnically diverse women in hairdresser and beauty salons

Presenter: Ciana Dsouza

Co-Authors: Marjorie Lima de Vale Phd , Veline L'Esperance MSc, Sarah Armes, Clare Coultas Phd, Louise Goff Phd, Ashlyn Mernagh-iles HND, Alexis Karamanos PhD, Salma Ayis PhD, Vasa Ćurčin, PhD, Stevo Durbaba MSc, Mariam Molokhia, Phd and Seeromanie Harding PhD

Author institutions: Department of Population Health Sciences, King's College London

Abstract

PROBLEM: Cardiovascular disease (CVD) prevention shows health and gender disparities, particularly among the economically disadvantaged and some ethnic minority groups. Cardiovascular disease affects 3.6 million women in the UK and annual CVD-related health care costs the NHS in England about £9 billion. Beauty salons for health promotion have shown promising results in the United States as environments where women feel comfortable exchanging advice due to long-standing positive rapport and relationships. Integrating community structures into existing primary care pathways can provide a sustainable process to address inequalities in access to health care with significant patient and NHS benefits.

APPROACH: Four practices have been selected in South London using GIS and online directories mapped to neighbouring salons in socioeconomically deprived and ethnically diverse areas. Insights for focus group discussions were drawn from our qualitative evaluation of the salon and GP staff CVD health promotion training carried out previously. Two focus group discussions were held (2 practices for each discussion) made up of at least one nurse, one HCA, and one administration staff member from each Practice. In-depth interviews were carried out with one GP from each Practice (n=4) separately to avoid any hesitations from the other surgery staff to openly discuss issues. One focus group discussion was held with the salon staff. Thematic analysis will be used to

generate insights into their experiences of health promotion, why women are being under-diagnosed with cardiovascular diseases, and barriers and opportunities for better engaging these groups. Data from focus groups and individual interviews will be analysed using reflexive thematic analysis; a foundational analytic method in qualitative research that supports the identification, analysis and reporting of patterns (themes) within data with NVivo 12 software. We will identify concordant and discordant views from practice and salon staff and the reasons behind these.

FINDINGS: We aim to explore understandings from salon and primary care staff of why women are being under-diagnosed with cardiovascular diseases, and barriers and opportunities for better engaging these groups. Focus groups and interviews will inform a culturally adapted complex intervention to reduce cardiovascular risk and promote the uptake of NHS health checks amongst eligible women.

CONSEQUENCES: Our FINDINGS: will guide the co-development and signposting of a complex health intervention incorporating culturally tailored CVD health promotional materials in a culturally equitable and accessible manner.

Funding Acknowledgement: Funding: NIHR RfPB grant 202769

6D.8

Feasibility of a behavioural health pilot project in general practice for patients with high cardiovascular disease risk: A qualitative study.

Presenter: John Broughan

Co-Authors: Emils Sietins1, Jiaran Gao1, Geoff McCombe1, John Broughan2, JT Treanor3, Janis Morrissey3, Mary Casey4, Joe Gallagher1, Patricia Fitzpatrick5, Orla Doyle6, Timothy Frawley4, Gerald Mills7, Tim Collins3, Walter Cullen1

Author institutions: 1School of Medicine, University College Dublin, Dublin, Ireland. 2Clinical Research Centre, School of Medicine, University College Dublin, Dublin, Ireland. 3The Irish Heart Foundation, Dublin, Ireland 4School of Nursing, Midwifery and Health Systems, University College Dublin, Dublin, Ireland. 5School of Public Health, Physiotherapy and Sports Science, University College Dublin, Dublin, Ireland.

Abstract

PROBLEM: Cardiovascular disease (CVD) is the leading cause of death worldwide and disproportionately affects individuals from low socioeconomic (LSE) areas. Self-management interventions in general practice targeted towards people from LSE areas may positively impact patients' health. The High-Risk Prevention Programme (HRPP), developed by the Ireland's Health Service Executive (HSE), the Irish Heart Foundation and the University College Dublin School of Medicine is a behavioural self-management intervention promoting positive lifestyle changes for patients with high CVD risk. Six general practices from LSE areas in Ireland delivered the intervention. This study aimed to evaluate the acceptability and feasibility of the HRPP by employing qualitative methods to investigate the experiences of participating patients and healthcare staff.

APPROACH: The study's qualitative method was guided by the Standards for Reporting Qualitative Research (SRQR) guidelines. Twenty-eight participants (18 patients and 10 healthcare staff) were interviewed. The intervention's feasibility was assessed using Braun and Clarke's Reflexive Thematic Analysis approach.

FINDINGS: Four key themes were identified among patients:

(1) motivation to change health behaviours,
(2) practical benefits for patients,

(3) challenges experiences by patients, and

(4) lifestyle management and healthcare supports.

Four themes were also identified among healthcare staff:

(1) positive experience of the programme and its benefits,

(2) logistical challenges,

(3) patient engagement, and

(4) programme management.

These themes demonstrated that the HRPP showed high levels of acceptability and feasibility. Future studies should assess this intervention's likely effectiveness and consider scaling-up the intervention by including younger patients and by thinking of ways to better manage the workload of healthcare staff responsible for delivering the intervention. Incorporation of the HRPP into the HSE's nationwide 'Chronic Disease Management Programme' is advised.

CONSEQUENCES: The findings may inform future research, policy, and practice. Future clinical /policy initiatives and research may implement and / or evaluate the HRPP model for interventions in non-GP community settings, or for other chronic conditions requiring self-management support (e.g., Type 2 diabetes, asthma, chronic obstructive pulmonary disease).

Funding Acknowledgement: We are grateful to the Irish Heart Foundation and Ireland's Health Service Executive for supporting this project. We would also like to thank the Health Research Board, University College Dublin, and the Ireland East Hospital Group for their support.

6D.9

Patient pathways to diagnosis of atrial fibrillation: FINDINGS: from a qualitative interview study

Presenter: Patricia Apenteng

Co-Authors: Dr Veronica Nanton (1), Mrs Trudie Lobban (2), Professor Richard Lilford (3)

Author institutions: University of Warwick (1), Atrial Fibrillation Association (2), University of Birmingham (3)

Abstract

PROBLEM: Atrial Fibrillation (AF) is a common heart rhythm disorder. AF increases the risk of stroke five-fold and doubles the risk of death. These risks can be reduced by anticoagulation therapy. However, AF can be difficult to detect because it is often intermittent and not always symptomatic, and where symptoms are present, they can be non-specific. Currently at least one-third of people with AF in the UK remain undiagnosed; this equates to an estimated 500,000 people. We aimed to explore the patient path to diagnosis of AF and identify ways to improve the detection of AF.

APPROACH: We recruited a diverse sample of 12 GP practices in the West Midlands, and invited patients with a recent diagnosis of AF (≤ 6 months) to participate in an in-depth interview. Participants were asked to narrate their journey from first awareness of symptoms that led to the diagnosis of AF. The interviews were conducted face-to-face, audio-recorded and transcribed. The data were analysed using framework analysis, with two researchers developing a coding framework from a sample of the interviews. Two patient contributors were involved in the development of themes and interpretation of the data.

FINDINGS: Thirty patients were interviewed; the median age was 77 years (range 60 – 90 years) and 57% were male (n=17). Most patients (24/30) were diagnosed on the basis of symptoms experienced rather than by

incidental detection. Patients with acute symptoms (n = 3) had a linear pathway characterised by ambulance transfer and subsequent diagnosis in A&E. Patients with non-specific symptoms (n=21) such as breathlessness, reduced fitness, or palpitations rationalised symptoms due to their medical history and therefore delayed seeing a doctor. These patients consulted their GP when symptoms became bothersome, following notification from a smartwatch, or randomly mentioned them when attending the surgery for something else. There was variation in time to diagnosis following first presentation to primary care, ranging from the GP immediately suspecting AF to instances where GPs initially attributed symptoms to co-morbid conditions. The pathway for patients with paroxysmal AF was particularly complex; patient narratives describe a churning in the search for a diagnosis with several experiencing additional delays due to inequalities in access to diagnostic tests such as the 24-hour ECG.

CONSEQUENCES: These FINDINGS: indicate two approaches that can directly improve detection of AF. (1) Improving public awareness of AF and its symptoms will aid earlier presentation of patients to primary care. (2) Quality improvement in the health system to ensure equitable access to diagnostic tests will improve time to diagnosis.

Funding Acknowledgement: This project is funded by the National Institute for Health and Care Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number NIHR203099.). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

6E.1

Assessing the frailty index in trials of glucose-lowering therapy for type 2 diabetes

Presenter: Peter Hanlon

Co-Authors: Heather Wightman, Elaine Butterly, Lili Wei, Kenneth Rockwood, Andy Clegg, Miles Witham, Sofia Dias, Nicky Welton, David Phillippo, David McAllister, Peter Hanlon

Author institutions: University of Glasgow, Dalhousie University, University of Leeds, University of Newcastle, University of York, University of Bristol

Abstract

PROBLEM: Frailty is an age-related state of reduced physiological reserve associated with increased risk of adverse clinical outcomes. Frailty is common among people with type 2 diabetes. However, representation of frailty within diabetes trials is unclear as trials do not routinely measure or report frailty in trial participants. As a result, the applicability of trial FINDINGS: to people living with frailty is uncertain. This study aims to use individual participant data (IPD) from randomised controlled trials (RCTs) of glucose-lowering therapies for type 2 diabetes to quantify frailty and assess the association between frailty and adverse events, hypoglycaemia and trial attrition.

APPROACH: We analysed IPD from 28 RCTs of SGLT2 inhibitors, GLP1 receptor agonists and DDP4 inhibitors. Frailty was quantified using a frailty index based on Rockwood's cumulative deficit model of frailty: a count of health deficits identified from medical history, laboratory data, and patient-reported measures from baseline questionnaires. For each trial, we quantified the distribution of the frailty index. We then assessed the association between frailty and trial attrition using logistic regression, and between frailty and total adverse events, total serious adverse events, and number of hypoglycaemic episodes using negative binomial regression. All models were adjusted for age and sex.

FINDINGS: Across the 28 RCTs, the total number of trial participants analysed was 24,744. Mean age ranged from 53.8 to 74.2. Mean frailty index ranged from 0.04 to 0.26. Using a conservative cut-point of 0.2 (mild frailty), median frailty prevalence was 5% (interquartile range 1.5% to 8.2%). Four trials had frailty prevalence ≥25%, and focused either on older people or those with renal impairment. In all but one trial, <5% of participants had a frailty index >0.3. Across all trials, frailty was associated with increased odds of trial attrition (pooled odds ratio 1.41 per 0.1-point increase in the frailty index, 95% confidence interval 1.26 to 1.58), and with an increased incidence of adverse events (incident rate ratio [IRR] 1.44, 95% confidence interval 1.34 to 1.55), serious adverse events (IRR 2.08, 95% confidence interval 1.79 to 2.41) and of hypoglycaemic events (IRR 1.24, 95% confidence interval 1.03 to 1.50).

CONSEQUENCES: Frailty was rare in most trials, but was more common in trials focused on higher-risk populations such as older people or those with renal impairment. However, even in trials assessing higher-risk populations, severe frailty was uncommon. Frailty was associated with clinically important adverse events and trial attrition. Clinicians should be cautious when applying trial FINDINGS: to people living with severe frailty, who are largely excluded from many trials. However, it is also clear that trials focusing on higher-risk groups can and do successfully recruit people living with frailty. Future analysis will assess whether treatment efficacy varies by frailty.

Funding Acknowledgement: Tenovus Scotland, Medical Research Council

6E.2

What do healthcare professionals think about healthcare delivery for older housebound patients? Survey FINDINGS: (CHiP study).

Presenter: Polly Duncan

Co-Authors: Polly Duncan[1], Nathan Yung[1], Beth Winn[1], Madeleine Kissane[1], Samuel WD Merriel[2], Thomas Brain[1], Victoria A Silverwood[3], Ishbel Orla Whitehead[4], Laura Howe[1], Chris Salisbury[1], Rupert Payne[5] on behalf of the Primary Care Academic Colla

Author institutions: [1] University of Bristol, [2] University of Manchester, [3] Keele University, [4] Newcastle University [5] University of Exeter

Abstract

PROBLEM: Older housebound patients are an under-researched group, with high rates of physical and mental health problems and social deprivation (~340,000 older housebound in the UK). From 2007-2014, GP consultations increased by 14%, but home visits decreased by 6.5%; and in 2019, GP representatives voted to remove home visits from the GP contract, citing lack of capacity and calling for a separate urgent visiting service. Implicitly, this casts the housebound as having predominately acute needs, and risks a failure of proactive, anticipatory care. COVID-19 further changed primary healthcare delivery. We aimed to explore HCP views on healthcare for older housebound patients and impact of COVID-19.

APPROACH: This study was delivered by the 'Primary care Academic CollaboraTive' (PACT) – an initiative that aims to build academic primary care capacity through engaging trainees and healthcare professionals (HCPs) in research, hereafter referred to as PACT members. Data were collected during April-October 2023 in England. PACT members completed a survey about organisation of healthcare for older housebound patients in their practice and recruited a further 2-4 HCPs from their practice to complete a separate survey exploring HCP's views about healthcare for older housebound patients. HCPs were asked to what extent they agreed or disagreed

with eleven statements (5-point Likert scale from strongly agree to strongly disagree).

FINDINGS: Seventy-eight practices participated, with 261 HCP surveys completed (response rate 84%; 58% female; 65% GPs, 12% paramedics, 11% nurses, 12% other). In half the practices, GPs completed the most home visits; in 30% paramedics completed the most. Most HCPs (88%) agreed their practice offered home visits for urgent problems but only 68% for non-urgent problems; 72% had protected time for home visits. Seventy percent agreed their practice offered proactive anticipatory care for older housebound patients and 31% agreed phone calls/home visits were frequently initiated by the practice. Almost a third agreed COVID-19 negatively impacted healthcare for older housebound patients; number of home visits decreased, and they had less time for home visits. Thirty-six percent agreed a significant proportion of home visits had been replaced by phone/video calls and 89% agreed older housebound patients had more problems with technology.

CONSEQUENCES: Recruitment targets were exceeded, with a high response rate and a good range of HCPs. Paramedics completed most home visits in almost a third of practices, reflecting workforce diversification. Importantly, many HCPs did not have protected time for home visits and in many practices home visits were not offered for non-urgent problems. A third of HCPs reported that COVID-19 had a negative impact on housebound patients – home visits fell and a significant proportion were replaced by phone/video calls. This study provides evidence to policymakers that healthcare for older housebound patients is suboptimal. Further research is planned to redesign healthcare for this important group.

Funding Acknowledgement: Care of Housebound patients in Primary care (CHiP study) was funded by the Royal College of General Practitioners (RCGP) Scientific Foundation Board (SFB 2019-14) and Dr Duncan's NIHR Doctoral Research Fellowship (NIHR301824). The views expressed are those of the authors and not necessarily those of the NIHR, the Department of Health and Social Care or the RCGP.

6E.3

Mild cognitive impairment: how does it influence the outcomes of people participating in a behaviour change intervention? Secondary data analysis from a randomised controlled trial (HomeHealth)

Presenter: Tasmin Rookes

Co-Authors: Louise Marston, Rachael Frost, Yolanda Barrado-Martin, Megan Armstrong, Benjamin Gardner, Claudia Cooper, Kate Walters

Author institutions: University College London, Liverpool John Moores University, Queen Mary University of London, University of Surrey

Abstract

PROBLEM: Interventions to help people age well and manage health problems are delivered to older adults (aged over 65) in primary care and community services. Despite the prevalence of mild cognitive impairment in people over 65 (estimated between 5-20%), these interventions are commonly delivered to all older adults in the same way. Previous reviews have found that improvements in outcomes following health promotion interventions, such as falls prevention services, are lesser in those with mild cognitive impairment, in comparison to those with healthy cognition for their age. Here we aim to compare how the effectiveness of a health promotion intervention for people with mild frailty varies according to the presence and absence of mild cognitive impairment for functioning, unplanned admissions, and wellbeing outcomes.

APPROACH: Secondary data analysis on the HomeHealth trial data was conducted, using data from the intervention group only. HomeHealth trial intervention participants (n=195) received up to 6 sessions of a tailored, person-centred behaviour change intervention to help them maintain their independence by setting goals around mobility, nutrition, psychological wellbeing and/or socialising. Using linear regression, the relationship between the Montreal Cognitive Assessment (MoCA) and functioning (Nottingham Extended Activities of Daily Living index (NEADL)); unplanned admissions; and wellbeing (Warwick-Edinburgh Mental Wellbeing Scale and/or General Health Questionnaire) at 6-months (post-intervention) and 12-months (maintenance) was explored. Public contributors were involved throughout the trial to assist with intervention development, outcome measure choice, and dissemination. Two additional public contributors with lived experience of mild cognitive impairment have been involved throughout the project, helping to identify the research questions and outcomes of interest and with interpretation of findings.

FINDINGS: In line with the trial FINDINGS: , where no improvements in functioning outcomes were found, a non-significant relationship between improved NEADL score with a higher/better MoCA score was identified at 6-months (β=0.450 [-0.110 to 1.010]) and 12-months (β=0.290 [-0.342 to 0.920]). Analyses of unplanned admissions and wellbeing data are ongoing, with the main trial analysis finding improvements in the intervention group over 6- and/or 12-months for both outcomes.

CONSEQUENCES: If the improvements seen from the intervention group for unplanned admissions and wellbeing are related to participants' MoCA score and therefore cognitive impairment, these FINDINGS: will add to the growing evidence base that health promotion interventions for older adults are not as beneficial for people with mild cognitive impairment. Therefore, interventions will need to be adapted and further support provided for those with cognitive impairment, to ensure they have the same beneficial outcomes as those with healthy cognition for their age. If no relationship is found, we will explore which components of the HomeHealth intervention may explain this finding, with differing results from other health promotion interventions, to improve outcomes in other health promotion interventions for those with cognitive impairment.

Funding Acknowledgement: National Institute for Health and Care Research (NIHR) School for Primary Care Research (C052). National Institute for Health Research (NIHR) Health Technology Assessment (NIHR128334).

6E.4

Barriers and Facilitators in Recruiting to a Complex Rehabilitation Intervention: A Qualitative Process Evaluation of FEMuR III

Presenter: Dr Kathryn Harvey

Co-Authors: Dr Penelope Ralph, Professor Nefyn Williams on behalf of FEMuR III Team

Author institutions: University of Liverpool

Abstract

PROBLEM: Randomised controlled trials (RCTs) often struggle with recruitment and may need extensions. Poor recruitment can result in an underpowered study and lead to delayed implementation of effective interventions (1). Research has shown that many recruitment issues can be anticipated. The aim of this study is to look at facilitators and barriers to recruitment from the recruiter's perspective.

APPROACH: FEMuR III was an RCT of a complex intervention post-surgery for hip fracture in patients over 65 years of age. Recruitment took place in secondary care for an intervention delivered in the community. A

process evaluation was undertaken and semi-structured interviews were conducted with seven recruiters between November 2022 and March 2023 to identify barriers and facilitators to recruitment. A thematic analysis was undertaken in NVIVO using a critical realist perspective.

FINDINGS: Barriers to approaching potential participants included difficulties in access, concerns around patient capacity, ethical dilemmas and family influence. There were instances where recruiters felt uncomfortable approaching patients who they felt would not benefit from the trial due to other factors (eg. comorbidities or complex living situations). Barriers for patient involvement from the recruiter's perspective included fear or reluctance, information overload and negative perceptions of research. The barriers to recruitment of carers included access, reluctance to take part and difficulty identifying carers. Recruiters found that carers did not always relate to the label of 'carer'. Facilitators of recruitment included approaching patients with colleagues, reducing stress through limiting initial information or recruiting at home and having more time to develop relationships with patients. Three factors encouraged patients to take part: research knowledge, contact with others and motivation/interest. Recruiters made several suggestions: increased involvement of clinical staff in recruitment, additional recruitment guidance, shorter patient information leaflets, increased teamwork between sites, increased teamwork between secondary care and community services, improved access to wards and clinical notes, and more recognition of the time taken to conduct research activities.

CONSEQUENCES: It is important to evaluate recruitment during the trial to identify issues early and there are tools that can assist with this. This study examined the perspective of recruiters, however it is important to consider other perspectives (patients, carers, clinical staff) in future studies. For future RCTs, alternative terms to 'carer' should be considered that may resonate with family members more as the identity development of 'carer' is complex and multifaceted. It is important to consider the unease felt by recruiters in approaching certain patients and how this may lead to selection bias. It is likely that further training on RCTs and support for recruiters is needed.

(1) Treweek S, Lockhart P, Pitkethly M, Cook JA, Kjeldstrøm M, Johansen M, et al. Methods to improve recruitment to randomised controlled trials: Cochrane systematic review and meta-analysis. BMJ open. 2013;3(2).

Funding Acknowledgement: FEMuR III and the process evaluation was funded by National Institute for Health Research's Health Technology Assessment Programme (16/167/09).

6E.5

Changes is frailty and depression among stroke survivors and their spouses: A longitudinal analysis of three ageing research cohorts

Presenter: Niamh Rennie

Co-Authors: Niamh Rennie, Frances Mair, Terry Quinn, Jenni Burton, Katie Gallacher, Peter Hanlon

Author institutions: University of Glasgow

Abstract

PROBLEM: Stroke often substantially impacts a person's physical and psychological wellbeing. The impact on carers and family can also be considerable but is less often quantified. This project aims to measure changes in physical and psychological health status (assessed using frailty and depression) before and after a stroke for both the stroke survivor and their spouses and compare these to people who had not experienced a stroke themselves or within their household.

APPROACH: We used data from 3 population longitudinal ageing surveys (Health and Retirement Survey [HRS], USA; Survey for Health, Ageing and Retirement in Europe [SHARE]; and the English Longitudinal Study of Ageing [ELSA]). Participants aged ≥50 were surveyed at 2-yearly intervals along with their household. We identified people who had survived a stroke occurring after their initial visit (and so had data collected both pre- and post-stroke). We also identified spouses of stroke survivors, and a comparator group for whom neither they nor their spouse had reported a stroke. We assessed frailty using the Rockwood frailty index (composed of 46 age-related health deficits including comorbidities, symptoms and functional limitations), and depression using the CES-D (Centre for Epidemiological Studies Depression Scale) or the Euro-Depression Scale. These were assessed at 2 time-points 2 years apart (pre- and post-stroke for stroke survivors and their spouses and between 2012/13 and 2014/15 for comparators, corresponding to the mid-point of follow-up). We assessed change in frailty and depression scores using a linear mixed regression models adjusted for age and sex.

FINDINGS: There were 97,578 participants (5705 stroke survivors, 4304 spouses of stroke survivors, and 87573 comparators). Compared to people who had not experienced a stroke, the average change in frailty index values was greater for stroke survivors (0.083, 95% confidence interval 0.077-0.088) and also for their spouses (0.013, 0.007 to 0.02). These increases correspond to 4 additional deficits in stroke survivors and 1 additional deficit in their spouses. Stroke survivors and their spouses, on average, also saw increases in depression scores which were greater than those of the comparator group (0.41-point greater increase [0.34 to 0.48] for stroke survivors and 0.23-point greater increase [0.14 to 0.32] for their spouses).

CONSEQUENCES: Both stroke survivors and their spouses experience more rapid progression of frailty and a greater worsening in depression symptoms over time than the general population. Support for stroke survivors should be responsive to the physical and psychological impact of the condition. In addition, there is also a need to support carers and family members, who may also experience impacts in physical and mental health which should be actively identified. Primary care is well positioned to respond to this need. However, this is likely to require time, awareness and relational continuity, which should be prioritised.

Funding Acknowledgement:

6E.6

How can we implement clinical prediction tools for dementia in care pathways particularly in communities experiencing socioeconomic deprivation?

Presenter: Rebecca Morris

Co-Authors: Wendy Joseph, Nicola Schmidt-Renfree, Rebecca Morris, Sarah Sowden, Elizabeth Ford, Harm van Marwijk, Blossom Stephan, David Reeves, Catharine Morgan, Lindsey Brown.

Author institutions: Newcastle University, Brighton and Sussex Medical School, Manchester University, University of Nottingham

Abstract

PROBLEM: Dementia is in increasingly common condition owed to population ageing. To reduce the health service, societal and personal impact of dementia there are calls to find ways to reduce one's risk and delay the onset of dementia through the management of certain risk factors associated with a future dementia illness. Specifically, people living in areas of socioeconomic deprivation are at higher risk of cognitive problems yet often have less access to specialist diagnosis for dementia. Risk factors

have been incorporated into dementia risk prediction tools which have been developed to identify those at the greatest risk to aid earlier diagnosis and stratification to interventions. However, none are currently being used with very few studies have incorporated stakeholder views in this area and to our knowledge this is the first study that aims to clarify any specific needs of underserved communities. The aim of this study was to identify with key stakeholders the barriers and facilitators in using a dementia risk prediction tool in primary care to guide care decisions and onward management and how this may differ in areas of social deprivation compared to areas of affluence.

APPROACH: Patients and primary healthcare professionals were recruited from three areas of England (Greater Manchester, Kent Sussex and Surrey and the North East and North Cumbria (NENC)) with a focus to involve practices and patients from areas of social deprivation. We involved practices from the Deep End Network in NENC. Patients were aged between 60 – 79. Semi-structured interviews were conducted, audio-recorded, anonymised and transcribed verbatim. Analysis used a middle-range implementation theory and an analytical framework, Normalization Process Theory.

FINDINGS: Recruitment is ongoing and at present we have completed 35 interviews (24 staff and 11 patients) with several practices from areas of deprivation represented. Emerging themes include 1) Fear, 2) Trust, 3) Knowledge and 4) Attitudes to risk prediction and behaviour change. There is strong support for the implementation of dementia risk prediction in general practice. Amongst staff and patients there was support for healthier ageing resources, including brain health and modifiable risk factors for dementia and other conditions related to dementia. There is strong trust in primary care to implement such a tool. However, interviewees strongly believe patients have the right to refuse a prediction assessment. For people experiencing the greatest health inequities, there is strong support for these communities to be prioritised in the implementation of a dementia risk prediction tool.
CONSEQUENCES: There is some positivity towards dementia risk identification. Although naturally barriers in implementation do exist, this could be attenuated through key stakeholder involvement, health prevention resources and support. Future studies looking to implement risk prediction tools need to co-produce care pathways with stakeholders particularly groups experiencing the greatest health inequities, to understand and develop implementation best practices and resources.

Funding Acknowledgement: This study was funded by a NIHR Three Schools Dementia Research Programme research grant

6E.7

The behavioural mechanisms of a primary care intervention to proactively identify oropharyngeal dysphagia in older adults and provide advice: A focus group study

Presenter: Caroline Smith

Co-Authors: Professor Debi Bhattacharya, Dr Sion Scott

Author institutions: University of Leicester (School of Healthcare)

Abstract

PROBLEM: 30-70% of older adults have swallowing difficulties known as oropharyngeal dysphagia (OD), but it is not identified and managed until it has caused harm, e.g., aspiration pneumonia. A behavioural science realist review, undertaken alongside stakeholders and patient and public involvement advisors, developed five programme theories (PTs) to describe how interventions support primary care healthcare professionals (HCPs) to proactively identify OD and provide advice: 1) OD education and

training, 2) OD identification tools, 3) incorporating OD into existing workflow, 4) making HCPs aware of older adults and carers expectations to address OD in primary care and 5) raising awareness of OD's adverse outcomes. Evidence from the realist review originated from different countries, healthcare settings and clinical populations. To inform the development of a future intervention, the aim of this focus group study was to contextualise the existing PTs derived from the realist review to the NHS primary care context and develop any new PTs.

APPROACH: Three 90-minute focus groups were convened with 19 primary care HCPs (general practitioners, pharmacists, nurses and pharmacy technicians). Analysis was underpinned by the Theoretical Domains Framework and followed three stages; inductive thematic analysis to identify barriers and enablers to OD identification and management, deductive mapping of barriers and enablers to existing PTs and generation of new PTs from remaining barriers and enablers.
FINDINGS: : Inductive thematic analysis generated five themes: i) Status quo (OD is not currently proactively identified), ii) Sinister pathology (HCPs are conditioned to view OD exclusively as a red flag for cancer), iii) Roles (HCPs and patients need to know their role in proactive OD identification), iv) Education and training (to increase awareness of OD and its impact to patients) and v) Conducive work environment (to embed OD into routine practice for minimum impact to HCP workload). Participant feedback on these

FINDINGS: supported all five themes. Healthcare professionals across all three focus groups emphasised the importance of addressing Theme 2, Sinister pathology, in order to change HCP perceptions and ensure patients are not referred down the wrong care pathway and consequently lost to follow-up. Deductive analysis supported all five PTs from the realist review. Three new PTs were also generated, mapped to three TDF domains; Changing HCP perceptions that OD is a red flag for cancer (Beliefs about consequences), practical support to provide advice (Social/professional role and identity) and providing incentive to identify OD and provide advice (Reinforcement).

CONSEQUENCES: Interventions to support identification and management of OD in primary care should be underpinned by these eight PTs. Co-design workshops with healthcare professionals, people with OD and commissioners will develop these programme theories into a behaviour change intervention, tailored to the NHS primary care context.

Funding Acknowledgement: Funding was provided by Desitin Pharma Ltd and the University of Leicester (under a PhD Scholarship programme).

6E.8

Primary care based approaches to reduce readmissions: Older patients' perspectives on the transition of care from secondary care to primary care

Presenter: Geoff McCombe

Co-Authors: Luke Sheeran-Purcell1, Geoff McCombe1, John Brougham1, Emils Sietins1, Ronan Fawsitt1,2, Martina Queally3, Timothy Lynch2, Walter Cullen1

Author institutions: 1School of Medicine, University College Dublin, Dublin, Ireland. 2 Ireland East Hospital Group, Dublin, Ireland. 3 Health Services Executive, Wicklow, Ireland.

Abstract

PROBLEM: Readmissions to hospital are expensive and can have negative health consequences for patients. Older adults are at greater risk of readmission. Patient perspectives are valuable in identifying areas for improvement in the transition of care. The aim of this qualitative study is to increase our understanding of patients' perspectives on the

transition of care from hospital to primary care.

APPROACH: This study used a qualitative methodology to conduct semi-structured interviews with patients who had been discharged from hospitals in the Ireland East Hospital Group (IEHG) region. Patients who had been discharged from hospital (n=82) were invited via ten general practices in the Ireland East region to participate in telephone interviews about their experience of care transition of care between primary and secondary care. Twenty-eight patients consented to participate in an interview. Interview transcripts were analysed using the 'Braun and Clarke' approach to thematic analysis.

FINDINGS: Data saturation was reached after 18 interviews with no new themes emerging. Three main themes were identified:

a) communication,

b) outpatient supports and

c) patient education.

Participants reported both positive and negative experiences of communication between the hospital and their GP and the hospital and pharmacies in relation to post-discharge prescriptions.

Participants reported benefiting from a wide variety of outpatient supports including general practice, family, carers, allied health professionals and voluntary organisations. Access and cost were barriers to these supports. Participants were generally positive towards proposed primary care-based interventions such as follow up appointments with general practitioners and education sessions.

CONSEQUENCES: This study highlights a number of areas for improvement in transition of care for current practice including communication between services and access to outpatient care and suggests directions for further research, such as explorations of healthcare provider perspectives and interventions to reduce hospital readmissions.

Funding Acknowledgement: We are grateful to Ireland East Hospital Group, the UCD School of Medicine, and the UCD College of Health and Agricultural Sciences for supporting this project.

6E.9

Barriers and facilitators to engagement with a digital self-management toolkit for people with Parkinson's – Qualitative interviews from a process evaluation embedded within a randomised controlled trial (PD-Care: Live Well with Parkinson's)

Presenter: Tasmin Rookes

Co-Authors: Tasmin Rookes, Anette Schrag, Kumud Kantilal, Akaterini Kassavou, Nicola Kime, Mayenna Younossi, Wing Nga Tsang, Patricia Schartau, Benjamin Gardner, Nathan Davies, Kate Walters

Author institutions: University College London, Bradford Teaching Hospital Foundation Trust, University of Surrey

Abstract

PROBLEM: Parkinson's is a progressive neurodegenerative disorder causing disabling and distressing motor and non-motor symptoms. Parkinson's affects one in 50 people over 65 in the UK and is associated with complex health and social care needs and potentially preventable complications. Through co-design, we have developed a digital self-management toolkit for people with Parkinson's and their carers to access personalised information, advice, and support on symptom management and action-planning to bridge gaps in existing NHS services to enable people to "Live Well with Parkinson's". We are exploring intervention engagement barriers and facilitators for people with Parkinson's, embedded within the

process evaluation of a randomised controlled trial.

APPROACH: We are conducting semi-structured interviews with 30-35 people with Parkinson's, 5-10 carers, and three trained "Live Well" supporters who facilitated toolkit use. Purposive sampling was used to ensure maximum representation, including age, gender, ethnicity, cognitive function, and socioeconomic status. Interviews explored participant and carer barriers and facilitators to using the digital toolkit during and between sessions and once sessions ended. The toolkit was developed using the COM-B model, which states that behaviour change requires capability, opportunity, and motivation. Data will be analysed in line with the COM-B model using codebook thematic analysis. Public contributors assisted with topic guide and coding framework development, data interpretation and theme generation.

FINDINGS: Thirty-nine people have been interviewed: 31 people with Parkinson's, five carers, three supporters. Interviews will be completed in February 2024. Ongoing analysis will finish in May 2024. Preliminary results show capability barriers linked to Parkinson's motor symptoms, such as tremor, make operating the digital toolkit using a keyboard and mouse difficult. Suggestions for improvement include making the toolkit available as a phone app and using voice activation to complete toolkit sections. Having a trained supporter input information on behalf of the participant improved engagement during sessions, but maintaining engagement once the sessions ended was challenging. Opportunity barriers relate to a lack of services in local areas and limited support from Parkinson's healthcare services. However, some such gaps were filled with information from the toolkit, through signposting. Finally, issues with motivation arose because participants felt healthcare professionals were not going to use the data to make decisions about their care. Many received the toolkit several years post-diagnosis and had collected information over the years, so felt the toolkit offered little novelty. Many reported that having the 'Live Well' supporter to talk to was encouraging.

CONSEQUENCES: If the intervention is found to be effective, information about barriers and facilitators to engagement will feed into the implementation into clinical practice to ensure maximum user experience and outcome improvements. If not effective, this information will nonetheless be useful for designing future digital intervention for people with Parkinson's.

Funding Acknowledgement: National Institute for Health and Care Research (NIHR) programme grant (RP-PG-1016-20001).

6F.1

Are continuity and locum use for acute consultations associated with differing subsequent practice and hospital workload?

Presenter: Kate Sidaway-Lee

Co-Authors: Harshita Kajaria-Montag, Stefan Scholtes, Denis Pereira Gray, Michael Freeman, Philip Evans

Author institutions: St Leonard's Practice, University of Exeter, Judge Business School-University of Cambridge, INSEAD

Abstract

PROBLEM: Workload is probably the biggest challenge facing general practice, but little is known about modifiable factors influencing it. Some practices believe that locums increase practice workload and repeat appointments. Locums provide around 3% of consultations but the outcomes of their care are relatively poorly documented. If patients see a GP they know well, they are likely to benefit from continuity of care including greater satisfaction, mutual trust, adherence to treatments and reduced mortality. Continuity helps doctors tailor advice/ treatments and

feel more responsible. We aimed to determine whether practice and hospital workload differed following consultations with locums compared with practice GPs with or without continuity.

APPROACH: This was an observational/cross-sectional analysis of consultation-level data from English general practices from the Clinical Practice Research Datalink (CPRD) from 2015 to 2017. We used antibiotic prescription as a marker for acute consultations. The GP with continuity (regular GP) was defined as the GP with whom the patient had the greatest number of face-to-face consultations during the two years preceding the index consultation. Regression models were used to calculate adjusted relative risks for emergency department consultations and admissions, outpatient referrals and test-ordering as well as the patients' GP re-consultation interval following consultations with the three types of GP. Within the analysis, we controlled for deprivation, gender, age, comorbidities, total practice demand, patient consultation frequency, practice factors, year, seasonality and day of the week.

FINDINGS: After exclusions, the sample comprised 508,652 consultations from 222 practices, with 2,854 GPs. Of these, 198,102 (38.95%) consultations were with the patient's regular (continuity) GP, 252,550 (49.65%) a non-regular practice GP, and 58,000 (11.4%) a locum. Regular GPs were more likely to see patients who were older (61 years versus 55 years for locums and 57 years for non-regular practice GPs, P<0.01) and had more co-morbidities.After adjustment, consultations with GPs with continuity were associated with fewer subsequent hospital admissions and lower A&E use but higher outpatient referrals relative to locums and non-regular GPs. Locums ordered tests less (Relative Risk (RR) -24.3%, 95% CI: -27.3% to -21.2%) than regular GPs while non-regular GPs ordered tests more often (RR 19.1%, 95% CI: 16.4% to 21.8%). Patients seeing their regular GP for acute consultations, had on average a 9% longer (95% CI: 8-10%) re-consultation interval than if they saw any other GP.

CONSEQUENCES: The differences in outcomes were associated more with having continuity than GP locum status. Continuity of care was associated with reduced practice workload, fewer hospital admissions and less use of A&E. Our analysis, adjusted for a range of confounding factors, showed that if the populations seen by different GP types were the same, patients without continuity would have more appointments. These are key FINDINGS: considering the current GP and hospital workload burden.

Funding Acknowledgement: There is no funding to acknowledge for this study

6F.2

What makes a good GP surgery? Understanding the differences between higher and lower performing practices as rated by the Care Quality Commission (CQC) in Leeds and Bradford

Presenter: Rebecca Lackey

Co-Authors: Molly Allan, Rebecca Lackey, Dr Bruno Rushforth

Author institutions: University of Leeds, Foundry Lane Surgery, NHSE (formerly HEE Yorkshire and the Humber), NHS England - North (Yorkshire and the Humber)

Abstract

PROBLEM: This study aimed to identify key quality indicators in Primary Care and factors that are associated with better and worse performance of Leeds practices as graded by the Care Quality Commission (CQC). Many practices are rated as 'good', but it is unclear as to what this means, and what the differentiating features are between a practice that is rated as 'outstanding', compared to one that is rated as 'good'. By qualitatively

analysing CQC reports, this study can be applied as an effective quality improvement tool to help practices strive for improvement and understand the CQC gradings.

APPROACH: A qualitative analysis of nine CQC reports was conducted. Practices for inclusion were identified as members of the Leeds GP Confederation and Bradford District and Craven Health and Care Partnership. Surgeries rated as 'inadequate' were excluded from the study. Reports and practice information including overall gradings, domain gradings, year of inspection, deprivation scores and practice size were collated from practices across Leeds and Bradford. Three reports from each category 'requires improvement', 'good' and 'outstanding' were selected at random. The reports selected for analysis were analysed by two researchers following the process of framework analysis, a subtype of thematic analysis selected due to the structured nature of the reports. An iterative process was used to ensure the points identified were relevant and the main themes were identified and mapped appropriately.

FINDINGS: 141 complete data sets were included in the study. No 'inadequate' reports were found, four 'requires improvement', 132 'good' and five 'outstanding' overall ratings were achieved. The 'requires improvement' reports were all published in 2021 and 2022 and the 'outstanding' reports in 2016. The 'requires improvement' practices were rated poorly in the safe, effective, and well-lead, while 'Outstanding' practices obtained higher gradings in the well led, responsive, and effective domains. The qualitative analysis focused on organisational, patient, and clinical factors, with patient factors identified as the least common theme in the reports in all three rating categories. 'Requires improvement' practices were found to have easy to identify failings regarding record keeping and safety. Whereas the factors making practices 'outstanding' were much more nuanced, such as practice culture and innovative practice.

CONSEQUENCES: Primary Care has a vital role in public health through the prevention of disease, prolonging health and promoting health. Patient's experience of GP impacts greatly on their perception of healthcare. A bad experience or poor care can impact future interactions with services including urgent and emergency care services. By increasing awareness of quality indicators and acting as a quality improvement tool for practices to identify how they can prevent 'requires improvement' gradings and strive for 'outstanding' status, this project aims to improve both patient experiences, practice recruitment and the culture within the practice.

Funding Acknowledgement:

6F.3

The Dynamics of Doctor-Patient Communication in Remote Consultations. A qualitative Study among Norwegian Contract GPs

Presenter: Børge Norberg

Co-Authors: Linn Getz, Eli Kristiansen, Bjarne Austad, Paolo Zanaboni

Author institutions: NTNU (Norwegian University for Science and Technology), NSE (National Centre for e-health research)

Abstract

PROBLEM: Background: Patient consultations in general practice are undergoing a digital transformation, embracing diverse modalities such as video, text-based, and telephone consultations. The quality of communication in medical consultations is pivotal for successful outcomes, necessitating a comprehensive assessment of the impact on the doctor-patient communication and interaction following this transformation. Objective: To explore how communication between Norwegian contract GPs and patients has become affected by large-scale

implementation of remote consultations, after resolution of the pandemic APPROACH: Methods: In 2022, five focus

groups were convened, comprising 18 GPs strategically recruited from diverse geographical regions in Norway. Thematic analysis, guided by the framework proposed by Braun and Clarke, was inductively applied to the collected data. Deductive application of the trust theory proposed by philosopher Harald Grimen were employed in theme development.

FINDINGS: Results: Six themes resulted from the analysis. First, suitability regarding remote communication is context dependent: Knowing the characteristics of the patient as a person and the clinical relationship is more important than the reason for contact or type of health problem - even more so than during ordinary physical consultations. Second, remote consultations favour a demarcated communication style, "keeping simple things simple," that can increase work effectiveness. Third, opposite, a downside of such effective minimalism is that uncritical use of remote consultations may undermine quality of care. Communication becomes too transactional, limiting the chances of addressing more implicit and complex issues, with the risk of missing vital information. Fourth, remote consultations can facilitate establishment of alliances with patients who find it easier to open sensitive topics by distance than in a physical encounter. Fifth, GPs make communicative compromises to be able to maintain relationships with patients they see as vulnerable or fugitive. Finally, text consultations offer benefits such as multimedia-enabled patient expression and the sharing of digital information. Nevertheless, concerns include risk of information loss through triage errors, managing informal language, and ending chat-like interactions between patients and doctors.

CONSEQUENCES: Implications: Implementation of remote consultations introduces a spectrum of effects on clinical interaction and communication. While these modalities can enhance efficiency, there exists a discernible risk of compromised retrieval of essential information and unvoiced problems, potentially resulting in unintended consequences. The preservation of continuity of care emerges as a pivotal strategy to mitigate some of these challenges.

Funding Acknowledgement: Research Council of Norway

6F.4

Can better continuity improve access to GP appointments? FINDINGS: from two Deep End practices in Bristol.

Presenter: Hyunkee Kim

Co-Authors: Beth Winn, Molly Dineen, Alice Harper, Mavin Kashyap, Nick Hassey, Andrea Priestley, Shoba Dawson, Polly Duncan.

Author institutions: University of Bristol, BNSSG ICB

Abstract

PROBLEM: Good continuity (seeing a clinician you know) is associated with reduced mortality and unplanned hospital admissions, and increased patient and clinician satisfaction. In England, despite providing more appointments, continuity has decreased in recent decades with only 16% of patients reporting seeing their preferred GP 'always or almost always' (GP Patient Survey, 2023). Practices serving more deprived populations generally provide less continuity. 'GPs at the Deep End' is a network of 17 practices serving the most deprived populations in Bristol. In 2020, during the merger of two Deep End practices (Practice A), the lead author (a grassroots GP partner) enrolled on the Health Foundation's 'Increasing Continuity of Care in General Practice Programme'. A second Deep

End practice (Practice B) embarked on their own project, modelling their strategy on the same programme. We aimed to evaluate what impact this had on continuity and number/proportion of appointments for frequent attenders.

APPROACH: The two practices, serving 33,000 patients used different approaches to improve continuity. Practice A implemented personal lists for all patients and Practice B for frequent attenders (≥9 appointments/year) only. In both practices, GPs were grouped into 'microteams' with a small number of clinicians covering each other. Care navigation, training, digital prompts and continuity champions (GPs leading the initiative) helped enable patients to see their named GP, and progress was tracked using routinely collected summary data via a dashboard. Continuity was measured using the Usual Provider of Care index (UPC; proportion of appointments a patient has with their most-seen GP over 12 months).

FINDINGS: Between 2019/2020 and 2022/2023, UPC for Practice A increased from 0.31 to 0.48; average number of appointments/frequent attender fell from 13.8/year to 10.3/year; proportion of appointments used by frequent attenders fell from 40% to 21%; and the top 5% attenders used 2500 fewer appointments/year. For Practice B, between 2021/2022 and 2022/2023, the proportion of appointments used by frequent attenders fell from 40% to 15% (analysis ongoing). Over the same period, the lead author noted improved recruitment of GPs, who actively valued and sought out continuity, and a reduction in workforce turnover. Knowing his (often complex) patients has created a greater sense of responsibility and enabled him to focus more on preventative healthcare.

CONSEQUENCES: Preliminary findings from these two Deep End practices suggest that improving continuity may reduce the number of appointments for frequent attenders, improving access for all patients, and may improve clinician recruitment and retention. These benefits were realised within a short time, signifying fast and tangible impacts are possible. This is a small-scale project, however, and other factors may have influenced the fall in appointments (e.g. in practice B, GP triage of appointments was also introduced). Research is planned to further examine these data and to work-up a larger project.

Funding Acknowledgement: We have applied for Bristol North Somerset and South Gloucestershire NIHR Research Capability Funding (outcome awaited)

6F.5

The Telesafe study: Collecting a research data archive of telephone consultations

Presenter: Barbara Caddick

Co-Authors: Peter Edwards, Christopher Salisbury

Author institutions: Centre for Academic Primary Care, Univeristy of Bristol

Abstract

PROBLEM: About a quarter of consultations in primary care are conducted by telephone and this seems likely to continue. The Telesafe study aims to collect a dataset of linked recorded telephone consultations with GPs and other primary care clinicians, patient questionnaires and medical records data. This will provide an archive of telephone consultations in primary care for further use in research and training. This builds on and adds to our established research dataset of in person consultations. The 'One in a Million' (OiaM) archive contains 300 video or audio recordings of GP consultations, along with linked medical record entries and patient surveys. Data collection for this archive took place in 2014-2015 and in 2017 it was opened as a resource to inform research. More than

71% of eligible patients agreed to have their consultations recorded.

APPROACH: Practices in the Bristol area who routinely record their telephone consultations were invited to participate. From these, 18 healthcare professionals who agreed for recordings of their telephone consultations to be retained and stored as a research data set were recruited. Patients with a recent telephone consultation were invited to consent for their recorded consultations to be used for research. In addition, they were asked to consent on a clause-by-clause basis for their data to be retained to form a research dataset, consultation recording, transcription of the consultation, extract from the medical records 1 month prior and 3 months post index consultation, survey responses. Participants completed a short survey about their experience of and satisfaction with the index telephone consultation, their preference for mode of consultation and demographic details.

FINDINGS: Data collection is ongoing from 6 practices in the Bristol area. Median list size is 17764 (7155 – 38723 range), with median practice deprivation decile of 4 (range 1 (more deprived) to 9). 18 HCPs have been recruited, 17% non-GPs. 83 patients have been recruited and 96% have given permission for the recording of their telephone consultation to be retained as part of a research dataset. 62% of participants stated that they preferred face to face consultations, of these 73% were happy with their telephone consultation on that occasion. 95% of participants reported that they were satisfied or very satisfied with their telephone consultation. 45% of participants reported that they did not know the healthcare professional that they consulted with, yet 97% reported that they trusted the clinician that they spoke to. (80% 'yes-definitely', 20% 'yes to some extent').

CONSEQUENCES: It is feasible to recruit patients to consent for recordings of their telephone consultations (and linked data) to be retained in a research dataset for use by other researchers. Creating a research archive of recordings of telephone consultations and linked data will facilitate and streamline future research.

Funding Acknowledgement: This has been funded by Professor Salisbury's NIHR Senior Investigator award.

6F.6

MEDications in Acute Low back pain: the MEDAL trial

Presenter: Toby Helliwell

Co-Authors: Adrian Gardner, Sarah Tearne, Lucy Doos, Sheila Greenfield, Simon Gates, Nazish Kahn, Jon Bishop, Jesse Kigozi, James Brown, Hanna Summers, David Shukla, West Midlands CRN ROST, Aanalgesic Ladder Development Group

Author institutions: Royal Orthopaedic Hospital Birmingham, Keele University, Birmingham University,

Abstract

PROBLEM: Background: Acute low back pain (LBP) is a common presentation in general practice and evidence surrounding analgesic approaches is uncertain nor have escalation strategies been robustly investigated through trials. The MEDAL trial (HTA 21/540 themed call) was developed and funded to trial analgesic escalation approaches. General practice is however under unprecedented levels of stress to and so innovative approaches are needed to allow trials to be delivered in this setting without impacting on care delivery.

APPROACH: Trial Design: The MEDAL trial is a pragmatic, multi-centre, open label, individually randomised, controlled, adaptive platform trial of 6 analgesic ladders for acute LBP, acute LBP with referred somatic leg pain, and sciatica (sample size of 3960). The trial

programme comprises, analgesic ladder development, pilot study, main trial, health economic evaluation and qualitative study to gain in-depth understanding of the experiences of patients and clinicians taking part in the trial. This design may also allow the opportunity for additional ladders to be trialled. PPIE and EDI: PPIE has been integral to the MEDAL trial at all stages from funding application to final development of participant facing documents. We have worked with 3 primary care networks that serve the most underserved and diverse communities in the West Midlands who will be supported to deliver the MEDAL trial through their member practices. Setting: The MEDAL trial will be delivered in general practices but has been developed through a cross setting and multiple stakeholder collaboration, including spinal orthopaedics, general practitioners, pharmacists, pharmacologists, pain clinicians, community members, patients with lived experience and the clinical research network. Analgesic ladder development: A four stage consensus exercise involving GPs, pharmacists, pharmacologists and prescribing health care professionals was used to develop the 6 analgesic ladders to be tested in the MEDAL trial. Statistical considerations: A Bayesian adaptive design will be used. The use of hierarchical modelling for the trial's analysis will also be explored.

FINDINGS: Innovation: This, as far as we are aware, the first adaptive platform trial to investigate analgesic escalation approaches in primary care taking a multi-setting and collaborative approach. As such the trial design and statistical modelling represent innovation in itself. We have also developed digital solutions allowing automatic pre-screening and safety checking through the electronic health record systems, remote consent, electronic data collection and follow up, and analgesic escalation processes.

CONSEQUENCES: Implications: given the current pressures on general practice to deliver care innovative approaches exploiting digital solutions and new methodologies need to be developed to allow robust trials to be delivered in primary care settings where the majority of patient care occurs. The MEDAL trial has been developed with that aim to execute a large trial to answer an important research question whilst limiting impact on general practice.

Funding Acknowledgement: We acknowledge our Funders for funding this trial: the NIHR HTA 21/540 themed call

6F.7

Innovative Family History Strategy: A Multi-Method Study

Presenter: Frank Sullivan

Co-Authors: Sakina Walji,Erin Bearss,Sahana Kukan ,Michelle Greiver, Rahim Moineddin, Babak Aliarzadeh, Sumeet Kalia; Judith Allanson, Eva Grunfeld, Karuna Gupta, Ruth Heisey, Noah Ivers, Doug Kavanagh,Raymond Kim,Michelle Levy,Tutsirai Makuwaza,Mary Ann O'Brien, Joa

Author institutions: Universities of Toronto, Memorial, St Andrews

Abstract

PROBLEM: A complete, up-to-date family history (FH) is imperative in primary care (PC). Identification of high-risk individuals may enable appropriate follow-up including personalized screening and management and possibly genetic testing. Complete FH is rarely documented in the electronic medical record (EMR). Our study aim was to evaluate an innovative strategy to collect FH, explore patients' and family physicians' (FP) views of this strategy and its potential implementation in Canadian family Practice . APPROACH: Mixed-methods study within a matched-paired randomized controlled trial in family practices affiliated with the University of Toronto Practice-Based Research Network (UTOPIAN). Intervention group: FPs from

randomly selected practices using OCEAN emailing platform with PSS EMR, randomly selected patients aged 30-69y (4/week/FP) seen in clinic over 6 months. Matched control physicians (1:1) and patients (5:1) from UTOPIAN database. Intervention consisted of patient and FP education, emailed patient invitation to complete validated FH questionnaire, automatic FH EMR upload, FP notification of completed FH and links to clinical support tools. Intervention patients were emailed follow-up questionnaires 3 days following their clinic visit. Participating FPs were invited for telephone interviews. Outcome measures: New documentation of FH in EMR within 30 days of clinic visit using mixed effects logistic regression; descriptive statistics for patient attitudes and FP follow-up actions; descriptive thematic analysis of FP interviews.

FINDINGS: 15 FPs and 576 patients recruited from 3 practices to intervention group, matched to 15 FPs and 2203 patients in the control group. Within 30 days of clinic visit, new FH was documented in EMR for 16.1% (93/576) of intervention patients compared to 0.2% (5/2203) control patients (OR=94.2; 95% CI 36.8, 240.8). New documentation of cancer FH was higher in the intervention group (7.8% vs 0.1%, OR=85.3, 95% CI 20.5, 354.4). Of patients who discussed FH at the visit (n=296), 25% reported screening test recommended, 8% referral to non-genetics specialist and 2% referral to genetics. Most patients (61%) found this FH strategy helpful. Six major themes were identified in FP interviews:

1) Clinical value of FH;

2) A new way to opportunistically collect FH by leveraging technology;

3) Facilitated rich FH discussions;

4) Increased awareness, knowledge and confidence regarding management of positive FH;

5) Led to clinically relevant management;

6) Implementation needs to be tailored to practice context.

CONSEQUENCES: This study demonstrated significant improvement in collection/documentation of FH. Patients welcomed the opportunity to provide FH information prior to appointments. FPs expressed the importance of routine FH collection and its implications for clinical management. Factors contributing to the intervention's success included being patient-completed and seamless EMR integration with a reminder. The intervention needs tailoring to different contexts.

Funding Acknowledgement: Funded by:

6F.8

Commissioned vs. researcher-led research: a retrospective cohort evaluation of NIHR funded randomised controlled trials

Presenter: Ashley Hammond

Co-Authors: Danny McAuley, John Norrie, Alastair Hay

Author institutions: University of Bristol, Queens University Belfast, University of Edinburgh

Abstract

PROBLEM: The NIHR was established in 2006 to promote and support high quality health related research focused on the needs of patients and the public. There are several "pathways" to research funding, with the two over-arching schemes referred to as "researcher-led" and "commissioned" streams. The latter is used to stimulate research groups to address topics considered NHS priorities. Within the NIHR Health Technology Assessment (HTA) programme projects are commonly selected for commissioned research by inviting experts and the public to submit topics, which are then prioritised and summarised into defined

"commissioning briefs". Research groups are expected to adhere closely to the brief. There is uncertainty regarding which stream provides the highest quality, and best-value for money research. We aimed to assess the impact of commissioned, compared with research-led projects, using research metrics.

APPROACH: The NIHR Funded Portfolio database was searched for randomised controlled trials (RCTs) funded by any programme offering both commissioned and researcher-led funding opportunities, ending in 2018, giving at least 5 years to publish results, with the following data extracted: total and per participant funding, study progressed beyond the initial pilot, final monograph published, and journal impact factor where main results published. Summary statistics were used to compare commissioned and researcher-led RCTs.

FINDINGS: 108 eligible RCTs were identified, of which 44 were commissioned and 64 researcher-led. Of these, 90.9% and 93.8% of commissioned and researcher-led projects respectively progressed beyond the pilot phase (X2 (N=108) =0.31, p=0.58). Commissioned study funding was lower than researcher led (mean £671,427 vs. £883,295; p=0.08). The final monograph was published in 90.9% of commissioned projects, versus 98.4% of researcher-led projects (X2 (N=108) =3.33, p=0.05). No difference was found between commissioned and researcher-led projects with main study results published in a non-NIHR journal (X2 (N=108) =0.51, p=0.48), but we did find the main study results from commissioned research were published in lower impact factor journals than researcher-led projects with mean impact factors of 38.56 (SD=16.92) and 111.20 (SD 15.57), p-value < 0.001.

CONSEQUENCES: Final monographs are more likely to be published, and results published in higher impact factor journals, if the original research was researcher-led vs. commissioned. Further research is needed to establish if this is because researcher-led projects are of higher quality, or commissioned research addresses harder-to-do questions.

Funding Acknowledgement:

6F.9

Automatic auditing of out-of-hours consultation records for safety-netting advice using natural language processing techniques

Presenter: Peter Edwards

Co-Authors: Samuel Finnikin, Fay Wilson, Tom Gaunt, Andrew Carson-Stevens, Rupert Payne

Author institutions: University of Bristol, University of Birmingham, Badger Group, Cardiff University, University of Exeter

Abstract

PROBLEM: It is recommended that 'safety-netting advice', (defined as, "information shared with a patient or their carer, designed to help them identify the need to seek further medical help if their condition fails to improve, changes, or if they have concerns about their health"), is provided to patients consulting during out-of-hours primary care consultations. As such, the documentation of safety-netting advice is an auditable standard in the Royal College of General Practitioners endorsed 'Urgent and Emergency Care Clinical Audit Toolkit'. However, clinical audits are often time-consuming, conducted sporadically, and frequently require highly trained clinicians to conduct them instead of utilising their clinical skills seeing patients. Additionally, safety-netting advice is often spoken in the format of "if X symptom(s) happen then seek medical help at Y", but medical notes frequently contain unexplained abbreviations (for example, "tcb inb" = to come back if not better).

APPROACH: As part of a previous project, 1886 out-of-hours consultation notes from the

Birmingham Out-of-hours general practice Research Database (BORD) from July 2013 to February 2020 with adult (≥18 years) patients have been manually coded for the presence and type of safety-netting advice. 1472 (78.0%) of records contained documented safety-netting advice. This manual coding will be used to train multiple machine learning models using natural language processing techniques to automatically predict which consultations contain documented safety-netting advice. In addition, a 'rules-based' model will also be generated searching for common safety-netting phrases, and abbreviations, allowing for spelling errors.

FINDINGS: The four key metrics for assessing natural language processing classification models will be reported for each model including: accuracy, recall (sensitivity), precision (positive predicted value) and F1 score (a combination of recall and precision).

CONSEQUENCES: If the models can automatically detect safety-netting advice with sufficient accuracy, this could save a lot of clinician time auditing records manually and allow for enhanced monitoring and governance of clinical practice. Furthermore, the models could be used to generate real-time in-consultation feedback to clinicians, promoting them to record their safety-netting advice, or if this has been omitted, communicate this information post-consultation, for example using SMS text messaging systems.

Funding Acknowledgement: Dr Edwards' time was funded by a National Institute for Health and Care Research (NIHR) In-Practice Fellowship (NIHR302692). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

6G.1

What's Water got to do with it?: Exploring Water, Sustainability and Health through creative enquiry.

Presenter: Catherine Lamont

Co-Authors: Trevor Thompson, Alan Kellas (Learning Disabilities Consultant (Retired)) Catherine Lamont

Author institutions: University of Bristol

Abstract

• Understand the origins, context and trajectory of the 'Turning the Tide' exhibition
• Link Sustainable Healthcare to Water, Waste, Nature and Marine Recovery, and the role of Blue Social Prescribing.

• Learn about Healthcare Ocean, and the research component of the Blue Health modules in the Bristol Medical curriculum.

• Have an engaging, fun shared, multi-sensory/ embodied experience of what arts-based participatory enquiry and research feels like.

• Contribute to and help shape future educational resources on water, sustainability and medical research and education. Brief introductory presentations with online, and in person specialists, Bristol academic/clinical staff and students. A participatory, hands-on, workshop facilitated by artist-researcher. Group discussion.

Of interest to: Medical researchers, clinicians, sustainability advocates and educators wishing to link Water and Health in their clinical or academic work. Those curious about the role of arts-based enquiry methodologies in the Academy.

Funding Acknowledgement:

7A.1

Fracture risk assessment in men with prostate cancer requiring androgen deprivation therapy: a systematic scoping

review using the i-PARIHS implementation framework

Presenter: Rebecca Mawson

Co-Authors: Caroline Mitchell, Elisavet Theodoulou, Andrew Lee, Janet Brown, Qizhi Huang

Author institutions: The University of Sheffield

Abstract

PROBLEM: Androgen deprivation therapy (ADT) is a mainstay of treatment of prostate cancer (PCa) and often administered in primary care. ADT is associated with reduced bone mineral density and increased risk of fractures. Despite international guidelines to mitigate fracture risk, osteoporosis is under-diagnosed and under-treated in this population due to poor implementation. The aim of the study is to synthesize knowledge surrounding the implementation of guidelines and strategies to inform health service interventions to reduce fracture risk in men with PCa taking ADT.

APPROACH: Four databases and additional literature were searched. Inclusion criteria: studies that reported measures to improve fracture risk assessment for men with PCa-ADT in all healthcare settings were included worldwide. The population was defined as patients with PCa taking long-term ADT. The intervention criteria were studies designed to improve fracture risks assessment. Outcomes included: improvement in BMD measurement or fracture risk assessment, and/or changes in prescription of BPA. The i-PARIHS (Promoting Action on Research Implementation in Health Services) framework was used to inform the narrative synthesis.

FINDINGS: Of the 1229 studies identified, 9 studies met the inclusion criteria. Overall, an improvement in fracture risk assessment was observed across heterogeneous study designs and outcome measures. Six studies were from a Canadian research group. Two studies involved family physicians or a community healthcare programme. Two studies incorporated patient or specialist surveys. One utilized an implementation framework. Intervention strategies included education, novel care pathways using a multidisciplinary approach and incorporating existing services, point-of-care interventions, and bespoke clinics. Barriers included lack of knowledge for both patients and clinicians, time constraints and unsupportive organisational structures.

CONSEQUENCES: Guideline implementation requires contextualisation and innovation to address barriers and enablers. Future studies should incorporate patient and clinician perspectives and test interventions in primary care.

Funding Acknowledgement: We would like to thank the National Institute for Heath and Care Research for funding the clinical lectureship for Dr Qizhi Huang to carry out this study.

7A.2

What advice do patients want after urgent suspected cancer referral when cancer is not found?

Presenter: Suzanne Scott

Co-Authors: Ruth Evans, Harriet Watson, Jo Waller, Brian Nicholson, Thomas Round, Carolynn Gildea, Debs Smith, Suzanne Scott

Author institutions: Queen Mary University of London, King's College London, Guy's and St Thomas' NHS Foundation Trust, University of Oxford, NHS England

Abstract

PROBLEM: No standardised approach exists to provide advice after urgent suspected cancer referral when cancer is not found and at present we do not know patients' views concerning advice linked to urgent suspected cancer referral pathways. This study aimed to

assess patient preferences and acceptability of receiving advice after urgent suspected cancer referral related to: 1) managing ongoing symptoms, 2) responding to early symptoms of other cancers, 3) cancer screening, 4) reducing the risk of future cancer. The study also aimed to investigate if acceptability differs between socio-demographic groups.

APPROACH: Patients from two UK NHS Trusts were mailed a survey 1-3 months after having no cancer found following urgent suspected gastrointestinal or head and neck cancer referral. Participants were asked about: willingness to receive advice; prospective acceptability of receiving advice; preferences related to mode, timing and who should provide advice; and previous advice receipt.

FINDINGS: 406 patients responded (16.0% response rate) with n=397 in the final analyses. Few participants had previously received advice, yet most were willing to. Willingness varied by type of advice: fewer were willing to receive advice about early symptoms of other cancers (88.9%) than advice related to ongoing symptoms (94.3%). Acceptability was relatively high for all advice types. Reducing the risk of future cancer advice was reported as more acceptable. Acceptability was lower in those from ethnic minority groups, and with lower levels of education. Most participants preferred to receive advice from a doctor; with results or soon after; either face to face or via the telephone.

CONSEQUENCES: There is a potential unmet need for advice after urgent suspected cancer referral when no cancer is found. Equitable intervention design should focus on increasing acceptability for people from ethnic minority groups and those with lower levels of education.

Funding Acknowledgement: Cancer Research UK

7A.3

Should the bowel cancer screening age be lowered for people with a learning disability?

Presenter: Christina Roberts

Co-Authors: Adam White, Jonathon Ding, Patricia Roa, Rory Sheehan, Umesh Chauhan, Andre Strydom

Author institutions: University of Central Lancashire, King's College London

Abstract

PROBLEM: The LeDeR 2021 report (White et al., 2022) demonstrated that cancer of the colon and rectum (bowel cancer) accounted for 13.6% of cancer deaths reported to LeDeR in 2021. Bowel cancer screening is currently offered every two years to people between the ages of 60 and 74. The average age of death for the people reported to LeDeR that died of bowel cancer between 2018 and 2021 was 61.7 years. This statistic might indicate that lowering the age threshold for bowel cancer screening in people with a learning disability could prevent people dying earlier. This work aims to investigate whether the bowel cancer screening age should be lowered further than the current proposed age for the general population and, determine what age would be appropriate to initiate screening for people who have a learning disability.

APPROACH: Using date from reviews of deaths notified to the LeDeR programme, we will investigate deaths of people with a learning disability who died from bowel cancer. Quantitative descriptive statistics will provide insight into the demographic profile of those who die from bowel cancer and comparative statistics will analyse the profile of people who died from bowel cancer with a learning disability compared to those who died from bowel cancer from the general population using ONS data, including age at diagnosis and long-term conditions. Information about how many people who died from bowel cancer had

the condition diagnosed through accessing the national screening programme will be reported.

FINDINGS: This work is in progress (due to be completed in the summer).

CONSEQUENCES: We hope this work will provide evidence that supports the lowering of the age of bowel cancer screening for people with a learning disability and indicate at what age screening would be appropriate in this population.

Funding Acknowledgement: This work is funded by NHS England as part of the 'Learning from lives and deaths - People with a learning disability and autistic people' programme.

7A.4

Improving the Diagnostic accuracy of referrals for Papilloedema (The DIPP study) from primary care: A qualitative study of GP perspectives.

Presenter: Jonathan Chin

Co-Authors: Jonathan Chin , Olivia Skrobot, Sam Merrill, Mary Ann Stewart, Beth Stuart, Marcia Lucraft (PPI member) , Christina Stokes (PPI member), Denize Atan, Alyson Huntley

Author institutions: University of Bristol, University of Manchester, University of the West of England, Queen Marys London

Abstract

PROBLEM: Papilloedema refers to optic nerve swelling from raised intracranial pressure and could signify life-threatening disease, e.g., brain tumours. There is little research that examines how GPs manage direct and indirect referral (via community optometry services) for suspected papilledema or benign variants (pseudopapilloedema). Inaccurate referrals can have a negative effect on service delivery and NHS funding as well as patient experience. As part of a programme of work to improve this referral pathway, we used a questionnaire and semi-structured interviews to understand how GPs in England manage people with suspected papilloedema.

APPROACH: GPs completed an online questionnaire in REDCap via the NIHR Clinical Research Network (June-October 2023). The questionnaire was based on 2 case vignettes with colour fundal photos: one case consulted their GP with headaches and pseudopapilloedema; the second had asymptomatic papilloedema picked up by their optometrist during a routine sight test. In their consent form, GPs could volunteer to be interviewed via zoom. GP interviews were audio-recorded, the transcripts were transcribed then coded by three independent researchers.

FINDINGS: Forty-five GPs completed the questionnaire. For case 1, 21/45 (47%) mistook pseudopapilloedema for papilloedema, but only 11/21 (52%) were confident with their diagnosis and their management varied: 8/21 (38%) suggested a sight test at an optician practice; 8/21 (38%) suggested immediate referral to a hospital service. For case 2, most 26/45 (57.7%) said they would consult the patient, 8/45 (17.8%) would urgently forward the letter to the hospital eye service; 7/45 (15.5%) would refer immediately to hospital. GPs' suggestions to improve current referral pathways, included: clearer guidelines and referral forms; direct access from community optometrists to specialist services. Some GPs commented that papilloedema rarely presents to them and their environment (room lighting) and available equipment (lack of cycloplegic eyedrops) contribute to their diagnostic uncertainty. Interviews were conducted with five GPs regarding their management of patients with suspected papilloedema; five main themes emerged: (i) Competence and Capabilities (practitioners described their experience, knowledge or lack thereof and relevant training), (ii) History, Examination and Diagnosis (important signs and symptoms,

misdiagnoses and prevalence), (iii) Barriers and Limitations (available facilities, time to assess and diagnose, systems setbacks), (iv) Health Professional Opinions (confidence levels, practitioner satisfaction and suggestions), (v) Decision Making and Patient Follow-Up (referral process, current protocol and team discussions).

CONSEQUENCES: GP perspectives will help us develop clinical guidelines and educational materials to improve the diagnostic accuracy of community referrals for suspected papilloedema. It will reduce hospital waiting times so that patients with serious health problems, like brain tumours, are treated more quickly and with better outcomes.

Funding Acknowledgement: NIHR SPCR FR-3-IV grant number 581

7A.5

Inequality and cancer recurrence: a scoping review

Presenter: Shaumya Kularajan, Dipesh P. Gopal

Co-Authors: Stephanie J. C. Taylor, Fiona Walter, Garth Funston

Author institutions: University of Glasgow, Queen Mary University of London

Abstract

PROBLEM: Background: Cancer recurrence is the second clinical episode of cancer after initial cancer cure and causes 67% of all cancer-related deaths. Existing research on cancer recurrence focuses on two broad areas: (i) tumour characteristics and treatment such as radiotherapy; and (ii) behavioural factors such as diet. Despite this, there is a limited understanding about the impact of broader sociological and economic factors on the risk of cancer recurrence. Understanding who is at risk of cancer recurrence and why they have an elevated risk can improve understanding on how to detect and prevent cancer recurrence.This scoping review aims to identify the association between inequalities, such as low socioeconomic status and disability, and cancer recurrence. It will answer the following research questions:

1. How is recurrence defined in studies looking at the association between inequalities and cancer recurrence?

2. Is cancer recurrence associated with exposure to different inequalities or marginalised backgrounds?

3. What are the views of people exposed to inequalities or from marginalised backgrounds with a diagnosis of cancer, on cancer recurrence?

APPROACH: A scoping review (Joanna Briggs Institute, 2020) was conducted to identify the relationship between inequality and cancer recurrence by searching MEDLINE, EMBASE, PsychINFO, Web of Science and CINAHL from 2000 to January 2024. The search strategy involved a modified PROGRESS-Plus framework to cover several definitions of inequality such as place and social capital. A greater focus was placed on intersectionality, multiple and cumulative disadvantages, since PROGRESS-Plus has been criticised for its omission.The population is people who are subject to health inequalities including marginalised people in terms of place of residence, race/ethnicity, cultures, non-English language, occupations, sex and gender minorities, intellectual disabilities, religion, education, lower socioeconomic status, social capital, school exclusion, being a carer, being homeless, sex workers, asylum seekers, refugees as well as intersectionality The concept is cancer recurrence. The context is English language primary and secondary quantitative research.

FINDINGS: Full study results will be available prior to the conference.

CONSEQUENCES: This study will review the current evidence on the association between inequality and cancer recurrence. This could inform cancer recurrence detection and prevention approaches in primary care in the future.

Funding Acknowledgement: Shaumya Kularajan is a medical student. Dipesh Gopal is an early career researcher and is a funded by the NIHR SPCR Primary Care Clinicians Career Progression Fellowship.

7B.1

How is the curriculum designed in primary care training schemes to support the delivery of palliative care training for primary care trainees? – A systematic literature review

Presenter: Jack Mowatt

Co-Authors: Dr Carole Paley, Dr Sarah Mitchell

Author institutions: University of Leeds, Academic Unit of Primary Care

Abstract

PROBLEM: The demand for palliative care is set to increase worldwide. Most people with palliative and end of life care needs around the world prefer to be at home in the last days of their life, however palliative care in the community is least accessible for patients. Primary care physicians (General Practitioners/GPs) as community providers of care, must have the skills to provide and meet the increased demand for palliative care. Many GPs do not feel confident in providing good quality palliative care. Training is essential to give GPs these skills; currently there is no established, consistent way to train primary care physicians in palliative care, leading to variations in care. This review seeks to find current evidence to support how curricula are designed to provide palliative care teaching for primary care trainees.The following questions will be addressed:

1. How is training in palliative care for primary care trainees currently provided?

2. What has been trialled to teach palliative care to primary care trainees and were they successful?

3. What is the evidence to support effective ways to deliver palliative care training to primary care trainees?

4. What further research needs to be undertaken to develop high quality palliative care training to primary care trainees?

APPROACH: The PerSPECTiF strategy was used to devise the research question and inform the search strategy. Electronic searches were carried out using MEDLINE, CINAHL, PsycInfo, CENTRAL, EMBASE and Global Health from 01/01/2000 until present. Characteristics of studies are recorded in tabular form using an Excel spreadsheet and assessed by two authors (JM, CP) with another (SM) acting as an arbiter. A data extraction table will allow comparison with other studies and a systematic narrative synthesis will be performed, identifying pervasive themes. Each paper will be critically appraised using the Joanna Briggs Institute qualitative research checklist. Risk of bias assessment will be performed using ROBINS-I, EPOC or RoB2 depending on study design. This will be carried out by two authors (JM, CP) with verification by SM. Quality of evidence will be assessed using GRADE-CERQual.

FINDINGS: This study is currently in progress. The data collection is currently underway, and this should be completed by end of March 2024. Data analysis and discussion should be complete by end of May 2024.

CONSEQUENCES: This study will inform primary care education governing bodies on the most up to date ways that palliative care can be taught to primary care trainees worldwide. This should inform future

curriculum development. These FINDINGS: could form part of policy on expectations for primary care physicians. It will inform qualitative and quantitative feasibility studies on proposed curricula changes and further studies on how to practically implement recommendations.

Funding Acknowledgement:

7B.2

Virtual Patients for remote learning in General Practice

Presenter: Mr Harpreet Chohan

Co-Authors: Dr Adrian Brown

Author institutions: St George's University of London

Abstract

PROBLEM: The COVID-19 aftermath triggered a shift towards hybrid learning in medical education, with a significant portion now in e-learning environments. Increased medical school admissions intensified competition for patient interactions, making patient consultation skills vital for student development. This chatbot addresses evolving educational needs.

APPROACH: To bridge this gap, we created a Virtual Patient (VP) web app prototype (accessible at https://patientinterview.pythonanywhere.com/). Students interact via text inputs, and responses are displayed conversationally. The system underwent training by the project lead and students, with additional input from a generic AI model for unforeseen queries.

FINDINGS: The VP's standout feature is its "training" mechanism, enabling the app to learn and provide accurate responses based on user input. Users can train the system with new responses when needed. Users engaged with up to 20 consecutive questions, all met with pertinent replies. This engagement is attributed to the app's immersive narrative construction. Conversational data has been extracted which allows route analysis providing in depth information on the structure and flow of students' interactions with the virtual patient, this data will be analysed and presented More case scenarios are in development. This educational tool is built entirely on free software, enhancing accessibility and sustainability.

CONSEQUENCES: Developing and implementing a Virtual Patient (VP) with free software demonstrates the potential for remote learning This innovation introduces an interactive dimension, bridging didactic methods and real-world clinical experiences. It also enables the integration of existing teaching resources like OSCE simulated patient scripts. Future prospects include VP validation for assessments, offering versatile tools for evaluating students' clinical competencies.

Funding Acknowledgement: St George's University of London Staff and student partnership grant

7B.3

Leadership and Management in Primary Care: Student selected component pilot study

Presenter: Judith Ibison & Adrian Brown

Co-Authors: Adrian Brown

Author institutions: Institute of Medical and Biomedical Education, St George's University of London, London, UK

Abstract

PROBLEM: Recruitment to a career in primary care is a National priority. Leadership and management are important components of medical undergraduate curricula but clinical

attachments rarely present, or make transparent, the myriad of leadership and a management opportunities within primary care, to medical undergraduates. This pilot study was an attempt to address this.

APPROACH: A hybrid five week student selected component opportunity was devised for Final Year students, combining university led tutorials with an immersive experience within practices, focusing on all aspects of leadership denoted in the Faculty of Medical Leadership and Management curriculum for Medical Undergraduates. Students worked on a project important to and timely for the participating practices, as well as undertaking 'mini-task' work on other domains of leadership and management. Practices involved students with all internal and external meetings, and supported students through contact with Managers and Managing Partners. Assessment was through an essay requiring students to suggest a strategic approach for the practice over the following year. Evaluation was obtained for students and the participating practices. The attachment was funder by NHSE primary care tariff.

FINDINGS: The pilot was popular with students and practices, with more requesting participation than could be accommodated. Placements were restricted to August to December. Six students were recruited, with one dropping out due to illness, and five practices. All students rated the experience as excellent (4) or good (1), and the same rated the placement as excellent (4) or good (1). All students were more likely to choose general practice as a career and all were more likely to undertake a leadership role in future. Students suggested some clinical work would enhance their understanding of the operational processes, a suggestion was made to experience more than one practice, and they requested tutorial material prior to sessions. All practices were highly positive about the student engagement, and the placement, and thought the student participation in projects was key to the value of the placement. Practices would have liked more detail of the tutorials.

CONSEQUENCES: A student selected component attachment in leadership and management in primary care was deemed excellent learning value by the participating practices and most students. The attachment increased the motivation of students participating to undertake further leadership activities and a career in primary career. The pilot will be expanded next year, with inclusion of further activities within practices, and forward communication of tutorial content to the supervisors in practice.

Funding Acknowledgement:

7B.4

Perceptions and experiences of general practice trainers and trainees of workplace-based assessment in the United Kingdom: cross sectional survey

Presenter: Aloysius Siriwardena

Co-Authors: Viet-Hai Phung, Kim Emerson, Tom Anstey

Author institutions: University of Lincoln, Royal College of General Practitioners

Abstract

PROBLEM: Workplace based assessment (WPBA) forms a major component, with the Applied Knowledge Test and Recorded Consultation Assessment, of UK general practitioner (GP) licensing. WPBA comprises formative elements including Case based Discussion, Consultation Observation Tool, Mini-Consultation Exercise, Multisource Feedback, Patient satisfaction Questionnaire, Clinical Examination and Procedural Skills, Clinical Supervisors Report, and Educational Supervisor Review together with other requirements which combine to form a summative Annual Review of Competence Progression during each year of training.

While the WPBA has been long-established, there has been little previous study on its validity in GP specialty training.

APPROACH: We used a national cross-sectional survey, including Likert scaled and free text responses, to a convenience sample of GP trainees and trainers to investigate their experiences and perceptions of WPBA. We aimed to investigate GP trainees and educators' perceptions and experiences of WPBA in relation to validity and fairness of individual assessments and WPBA as a whole. In doing so, we aimed to understand fairness of WPBA for different groups of trainees, particularly those in protected characteristic groups. Quantitative analysis included descriptive statistics, scale development measuring positivity towards WPBA and regression analyses of responder characteristics associated with positivity towards WPBA. We also undertook qualitative analysis of free text responses supported by NVivo and integrated quantitative and qualitative responses.

FINDINGS: There were 2,088 responses from 1,176 trainees and 912 trainers. The two groups were similar in sex, but responders who were trainers were significantly more likely to be White British and Irish and less likely to be Asian and Black, compared with GP trainees. They were also significantly more likely to be to be UK trained rather than trained outside the EEA, to be from an urban practice, a devolved UK nation and less than full time. Both trainers and trainees were generally positive towards WPBA, with trainers more positive or similar to trainees towards the individual assessments. In a multivariable regression model accounting for sex, ethnicity and country of primary medical qualification, trainees were significantly less positive than trainers (B -0.48, 95% confidence interval [CI] -0.54, -0.42, $p<0.001$) while international medical graduates (IMGs) were significantly more positive than UK graduates (B 0.29, 95%CI 0.20, 0.37, p><0.001) towards WPBA. Qualitative analysis revealed varying concerns about validity and relevance, assessment burden, potential for bias from assessors and patients, fairness to those with protected characteristics, gaps in assessment, and perceptions of individual assessments.

CONSEQUENCES: Perspectives of trainers and trainees towards WPBA were generally positive overall, although trainees were less positive and expressed greater concerns than trainers. Trainers' greater positivity compared with trainees towards most elements of WPBA accords with their greater experience as assessors. Despite concerns among stakeholders about bias, IMGs were significantly more positive towards WPBA.

Funding Acknowledgement: This abstract presents independent research commissioned by RCGP. The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the RCGP.

7B.5

How to improve communication from GPs to hospital specialists at the point of referrals? A systematic review via critical interpretive synthesis of qualitative data alongside quantitative data

Presenter: Shan He

Co-Authors: Olivia Knutson, Professor Graham Martin, Dr Juliet Usher Smith

Author institutions: THIS Institute and Primary Care Unit, University of Cambridge

Abstract

PROBLEM: The professional relationship between GPs and hospital consultants is important in a healthcare system where the GPs are the gate-keepers for hospital services. However, There are well-documented problems in the UK with mutual understanding and communication between GPs and hospital specialists. Effective

communication across the primary-secondary care interface may be lacking in practice, with each party focusing on its own tasks and resources rather than on the system as a whole and a lack of clarity of division of responsibilities. Most research exploring the communication processes across the primary-secondary care interface has concentrated on the discharge processes from the hospital to the community. There is less research on the communication processes from the GPs to the hospital, i.e., GP referrals. Yet some studies have found that these issues are a major source of operational failures during GPs' day-to-day work, with referrals returned to GPs without any clinical action being taken, resulting in further work for GPs.

APPROACH: In order to address the gap in existing literature, this systematic review evaluates the impact of more direct means of communication between primary care and secondary care during referrals (e.g. email messaging or teleconferencing), as opposed to conventional means of communication (mainly via letters), on the relationship between GPs and hospital specialists. MEDLINE, Embase, CINAHL and the Cochrane Library were searched from inception until March, 2022. Additional grey literature searching was undertaken on the NIHR clinical trials gateway, and NICE Local Practice Case Studies website. There are no restrictions on the types of study design or publication date. Quantitative evidence was incorporated alongside a review of qualitative data. A checklist based on the Quality Assessment for Diverse Studies 195 (QuADS) tool was used to assess quality.

FINDINGS: Twenty-nine primary studies published from 1969 to 2021 were included, covering a wide range of specialties. The interventions in these studies included specialist outreach clinics where case discussion with GPs were facilitated (14/29), joint teleconsultations between hospital specialists and GPs and patients (6/29), and direct email messaging (3/29), among others. These interventions were often multi-faceted involving specialist collaboration with primary care, education or other services and appeared to be associated with improved satisfaction for doctors and patients, streamlined patient pathways, reduced outpatient referral rates and less use of inpatient services. However, the benefits to patients and clinicians are certain, and the cost-effectiveness of these interventions requires further assessment.

CONSEQUENCES: This is the first systematic review on interventions to improve communication between GPs and hospital specialists during referrals in the UK. This review supports the hypothesis that interventions that allowing enhanced communication and relationship-building between GPs and hospital specialists at the referral stage may have some benefits. However, there is not consensus about what approaches to improving communication are most acceptable.

Funding Acknowledgement: National Institute for Health and Care Research (Grant reference number - NIHR302808)

7C.1

Evaluating inventiveness in GP prescribing practice

Presenter: Christina Biggs

Co-Authors:

Author institutions: Swansea University

Abstract

PROBLEM: At present, the Quality Outcomes Framework evaluates GP practices against a plethlora of criteria that requires substantial documentation to evidence, and can be thought of as adding to the administrative burden. The QOF criteria are also heavily dependent on the type of medical condition being treated. Is there a simpler way to

characterise GP prescribing practice that uses prescription data alone, and that is independent of the type of medical condition being treated?

APPROACH: For this study, an open-source database of GP prescriptions in Wales (The General Practice Prescribing Data Extract) was analysed to extract two variables that were independent of the medical nature of the conditions prescribed for and that could therefore be applied to any prescription records: the number of different medications prescribed over a given period (described here as the "range"), plotted against the number of prescriptions issued per month (described here as the "rate"), for each GP surgery in the database. This approach was also applied to specific groups of medication taken over all surgeries.

FINDINGS: Plotting the number of distinct prescriptions (the "range") against the number of prescriptions per month (the "rate") for each GP surgery in Wales gave a positive correlation, so that the higher the prescription rate, the higher the range of prescriptions offered. This can be understood in terms of the higher number of medical conditions being presented in the more busy surgeries. However, the slope of the curve decreased at the higher prescription rates: this could be thought of as "prescription fatigue", where the busier GPs lack the capacity for considering a change in medication, or suggesting several alternatives. When the data was fitted with a logarithmic curve, the points above the curve were colour-coded as "inventive", and the points below the curve were colour-coded as "cautious", and when this was plotted on a map of Wales, it could be seen that valley surgeries were more cautious than coastal surgeries. When plotted for different groups of medication, immunological medications could be seen to have a particularly low range for the rates prescribed, suggesting that this should be a priority area for research.

CONSEQUENCES: This study suggests a way to measure GP prescribing practice that is independent of both the size of the practice and the nature of the medical conditions, and therefore can be applied outside the QOF framework and perhaps more generally. By plotting the range of medications prescribed against the rate of prescription per month, a key attribute of "inventiveness" (or the opposite, "caution") can be measured to help characterise the culture of a GP practice.

Funding Acknowledgement: This work was carried out during a PGCert in Health Data Science, with the coding submitted to the first assignment and a poster created for the second assignment. The funding was provided by the Daphne Jackson Trust, as the author was a Daphne Jackson Fellow.

7C.2

Is it feasible to recruit to a cluster randomised-controlled trial to evaluate a practice pharmacist-led intervention to reduce opioid overprescribing in primary care?

Presenter: Clare Jinks

Co-Authors: Julie Ashworth, Nicola Cornwall, Sarah A Harrisson, Charlotte Woodcock, Elaine Nicholls, Emma Marshall, Toby Helliwell, Roger Knaggs, Anthony Avery, Sue Jowett, Christian D Mallen, Clare Jinks on behalf of the PROMPPT team.

Author institutions: School of Medicine Keele University, Midlands Partnership University NHS Foundation Trust, Keele Clinical Trials Unit, Keele University, School of Pharmacy and Pain Centre Versus Arthritis University of Nottingham, Primary Integrated Community Services, Nottingham, Centre for Academic Primary Care, School of Medicine, University of Nottingham, Institute of Applied Research University of Birmingham

Abstract

PROBLEM: New primary care interventions to address opioid overprescribing for persistent non-cancer pain ('persistent pain') are needed. This trial, funded by the National Institute for Health and Care Research, aims to evaluate a practice pharmacist-led primary care intervention (PROMPPT review and pharmacist training) for patients prescribed long-term opioids for persistent pain, which aims to reduce opioid use, where appropriate, without increasing pain/pain-related interference. The intervention was co-designed with stakeholders (patients and healthcare professionals), using a person-based approach combined with best practice guidance and theory, and refined following a feasibility study.

APPROACH: This pragmatic multicentre cluster randomised controlled trial aimed to recruit 896 patients from GP practices across England. Eligible patients were identified from electronic healthcare records, screened according to inclusion/ exclusion criteria, and invited to participate in the Management of Opioids and Persistent Pain (MOPP) questionnaire study. Inclusions: Adults prescribed any opioid continuously for ≥6 months. Exclusions: acute pain, cancer pain, terminal illness, vulnerable patients, current substance misuse treatment. GP practices were randomised into two groups: the intervention group invited MOPP participants for a practice-pharmacist-led review (personalised, holistic 30-minute assessment with signposting and follow-up according to clinical need/patient preference), and the control group continued usual primary care for patients prescribed opioids for persistent pain. Two co-primary outcomes: (1) reduction in opioid use (≥25% reduction in daily morphine equivalent dose (MED) from baseline) and (2) Brief Pain Inventory (BPI) total score, tested for superiority and non-inferiority respectively. Secondary outcomes: pain severity, pain interference, opioid/ non-opioid pain-related medicines use, opioid-related side-effects, depression, anxiety, pain self-efficacy, health-related quality of life and practice-level prescribing (opioids, non-opioid analgesics, gabapentinoids, antidepressants, benzodiazepines, Z drugs). Participant follow-up was at 3,6 and 12-months, with a primary endpoint of 12 months. A mixed-methods process evaluation will examine fidelity of delivery, investigate experiences of the review and explore contextual factors in both groups. An economic evaluation will be undertaken to calculate cost per quality-adjusted life year from an NHS/personal social services perspective. Full ethical approval (Ref: 22/NE/0044).

FINDINGS: An internal pilot (May-Dec 2022) recruited n=388 participants. Progression criteria were met for GP practice recruitment (n=14 recruited; target n=12), participant recruitment (mean ≥50/month), and fidelity of intervention delivery (89%; target ≥ 80% delivered consistent with training). Pain review uptake was slightly lower than anticipated; with 62% (target 70%) of those invited attending. Four further waves of recruitment yielded a total of 38 participating practices (19 in each group). As of 02/01/2024, 901 eligible participants had been recruited and 68% of participants invited for a PROMPPT review had attended.

CONSEQUENCES: The PROMPPT Trial has recruited to target. Pain review uptake has improved with batching of invitations according to pharmacist availability. Follow-up data collection will be completed by 07/02/2025.

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authors and not necessarily those of the NIHR or the Department of Health and Social Care.

7C.3

Understanding the Challenges of Medicine Optimisation among Older People from Ethnic Minority Communities (aged 60 years and above) with Polypharmacy in Primary Care: a Realist Review

Presenter: Nesrein Hamed

Co-Authors: Clare Bates2, Muhammed Uamir Khan1. Ian Maidment1

Author institutions: 1 Aston University: 160004825@aston.ac.uk, m.khan59@aston.ac.uk i.maidment@aston.ac.uk. 2 National Institute for Health and Care Research: clare.bates@nihr.ac.uk

Abstract

PROBLEM: The number of older adults from ethnic minority communities (EMCs) in England and Wales particularly those aged 60 and above is increasing. The 2021 Census report shows a 6.4% rise in the older adults from EMCs aged 60 years and above, an increase from the 4.5% recorded in the 2011 report. This demographic change, coupled with the prevalence of polypharmacy among these populations. which presents unique challenges in the context of medicine optimisation. Failure in this context can lead to exacerbated health disparities, non-adherence, and inappropriate prescribing (whether over or under).This review builds on MEMORABLE study. With aims to understand the complexities of medicine optimisation, does it work/does not work under what circumstances for older adults from EMCs. Acknowledging the diverse cultural backgrounds, traditional beliefs, and systemic barriers that may influence health-seeking behaviours and medication management.

APPROACH: This review follows the five-step approach that is recommended by RAMSES guidelines. Initially, we will establish initial program theories to highlight the expected context, mechanisms, and outcomes. Following this, a formal search for evidence will be conducted through academic databases and grey literature. The third step involves the selection and appraisal of studies, studies will be screened by title, abstract/keywords and full text against inclusion and exclusion criteria. In the fourth stage, data from these studies will be extracted, recorded, and coded. The final step will synthesis this information, refining our initial theories to understand how medicine optimisation work/ does not in these populations.

FINDINGS: We anticipate formulating the context-mechanism-outcome (CMO) configurations that underpin how medicine optimisation works for older adults from EMCs with polypharmacy. We expect to identify key contextual factors (e.g., cultural beliefs, healthcare system barriers) and mechanisms (e.g., patient-provider communication, community support) that either facilitate or hinder medicine optimisation.

CONSEQUENCES: This realist review will provide meaningful FINDINGS: to understand how medicine optimisation work/ do not for older adults from EMCs with polypharmacy in primary care. This method will give deeper understanding of what work, for whom, and under which circumstances. Furthermore, the

FINDINGS: of this review will be refined, tested in the next stage “realist evaluation” focusing on the real-life applicability of MO strategies for older people from EMCs.

Funding Acknowledgement:

7C.4

What are the views of the key stakeholders in deprescribing preventive medication in dementia?

Presenter: Clare Bates

Co-Authors: Ian Maidment, Nikolaos Efstathiou, Claire Sutton, Nesrein Hamed

Author institutions: Aston University, University of Birmingham

Abstract

PROBLEM: As a care home nurse, I administer preventive medication (such as anti-coagulants, beta-blockers, and statins) to people with dementia, who mostly do not have the mental capacity to consent to taking these medications. I do not know if my residents want to take these medications, and this poses an ethical dilemma with two issues. Firstly, there is increasing evidence that many preventive medications can do more harm than good in older populations. Secondly, whether people with dementia want to take preventive medication to prolong this period of their lives needs to be considered. Everyone has the legal right to refuse treatment, even life-sustaining medication such as insulin, but when someone does not have mental capacity, they are no longer able to make these decisions. Deprescribing is a complex subject even when the person has full mental capacity, but when someone lacks mental capacity, the decision-making is left to general practitioners, nurses, pharmacists, and the person's family or advocate. This will be the first systematic review to look at these stakeholders' views on deprescribing in this very sensitive situation.

APPROACH: The systematic review will explore qualitative evidence from Embase, HMIC, MEDLINE, PsycINFO, CINAHL, PubMed, Cochrane Library, ProQuest, Scopus and the Web of Science. Covidence will be used to assist in the review of the selected articles, and this will be reported on a PRISMA flowchart. Cochrane guidance for qualitative evidence synthesis will be followed and the Critical Appraisal Skills Programme and Mixed Methods Appraisal Tool will be used to assess the quality of the studies. Thomas and Harden's thematic synthesis approach will be used to identify themes, and this will be managed using NVivo.

FINDINGS: This work is ongoing, but the study will be completed soon and the FINDINGS: ready to present, by poster, for the conference. To maintain an unbiased stance, as best as possible, I do not want to try to predict what these FINDINGS: may be.

CONSEQUENCES: This work will underpin my PhD, which aims to look at whether the general population would wish to have their preventive medication deprescribed if they were to get dementia in the future and if so whether they can clearly state at what stage of dementia they would want to deprescribe their medication. This has clear implications for sustainability: with a growing population of people with dementia, we do not want to be enforcing treatment on people who would have considered their quality of life too poor to keep prolonging.

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7C.5

Evaluating the National rollout of a pharmacist-led information technology intervention (PINCER) in English general practice, using a Clinical Practice Data link 'non standard linkage'

Presenter: Amelia Taylor

Co-Authors: Amelia Taylor, Thomas Allen, Darren Ashcroft, Rachel A. Elliott, Barbara Iyen, Steve Roberts, Gabriel Rogers, Anthony J. Avery

Author institutions: University of Nottingham, University of Manchester

Abstract

PROBLEM: PINCER is a pharmacist-led information technology intervention targeting hazardous prescribing in general practice. We previously reported the effectiveness and cost-effectiveness of PINCER at reducing hazardous prescribing in the East Midlands by 18%, 23% and 22% at 6-, -12 and 24-months post-intervention. The PINCER intervention searches GP clinical systems to identify patients at risk of hazardous prescribing, identified by prescribing safety indicators, and with pharmacist support the practice acts to correct the prescribing to minimise future risk.Between 1st July 2018 and 30 June 2021, PINCER was implemented in over 2,800 (41%) GP practices practices across England. An updated set of indicators were used including both prescribing and monitoring indicators were used. This new study aimed to evaluate the effectiveness of the national roll out of PINCER at reducing patient exposure to hazardous prescribing and suboptimal monitoring, and investigated whether PINCER also reduces the incidence of serious harm in patients at risk of hazardous prescribing using secondary care data.

APPROACH: The intervention was implemented over a 3 year period, therefore to evaluate the effectiveness of the intervention, we needed to link retrospective general practice data, death data, deprivation data and secondary care data to separately held practice level implementation dates. We worked with the Clinical Practice Data Link (CPRD) to use a non-standard linkage to pseudonymously link to GP practice implementation dates.

FINDINGS: This process has enabled data from 715 practices to be linked and extracted. These include the practices who implemented PINCER as part of the national roll out and who were included in CPRD with HES linkage. Using the PINCER indicators we identified patients with potentially hazardous prescribing and associated serious harm outcomes, collecting data over a maximum of 26 quarterly time periods between Jun 2015 and Dec 2021.A CPRD non-standard linkage is a valuable tool to enable the effectiveness of interventions, where the intervention is not recorded within the routinely collected clinical data, to be evaluated.We hypothesise that the intervention when rolled out within England will support our previous FINDINGS: that PINCER is effective at reducing patient exposure to hazardous prescribing. This study will provide further evidence to support whether PINCER also reduces the incidence of serious avoidable harm.

CONSEQUENCES: The results from this study will further support the use of PINCER in England to improve prescribing safety and patient outcomes, via their inclusion in clinical decision support tools and in national policy.

Funding Acknowledgement: PRoTeCT is funded by the NIHRProgramme Grants for Applied Research Programme.

7D.1

Stakeholders views of the new simulated consultation assessment for GP licensing in the United Kingdom: cross sectional survey

Presenter: Aloysius Siriwardena

Co-Authors: Joseph Akanuwe, Susan Bodgener, Bryn Wilkes, Stuart Copus, Rich Withnall

Author institutions: University of Lincoln, Royal College of General Practitioners

Abstract

PROBLEM: The new Simulated Consultation Assessment (SCA) has been approved by the General Medical Council for implementation in 2024 to replace the Recorded Consultation Assessment (RCA). The SCA will assess GP trainees' ability to integrate and apply clinical, professional and communication skills for UK licensing. Taking place online in a local surgery, the SCA will consist of 12 visual or audio consultations with trained role players each lasting 12 minutes. We aimed to gather views on the new assessment from a wide range of stakeholders prior to its introduction.

APPROACH: A cross-sectional mixed methods survey was developed to elicit stakeholders views on the proposed SCA. GP trainees who had not yet sat the RCA, trainees and newly qualified GPs who had completed the RCA and other stakeholders including educators, examiners, other public and professional groups were invited to complete the survey in 2023. The survey included Likert scaled responses and free text options to questions on the setting, case selection, marking, preparation, and fairness together with responders demographic information. Quantitative analysis included descriptive statistics, scale development measuring positivity towards SCA, and qualitative analysis of free text responses supported by NVivo.

FINDINGS: There were 3174 responses from 1533 pre-RCA trainees, 920 post-RCA trainees or GPs, and 721 other stakeholders of different gender, ethnicity and country of primary medical qualification. Overall, responders were positive to the new assessment, particular in terms of setting, validity, preparation and fairness. Multivariable analysis showed that International Medical Graduates (IMGs) were significantly more positive compared to UK graduates (B 0.19, 95% confidence interval 0.12-0.25, P<0.001) with no differences by stakeholder group, age or ethnicity. Qualitative analysis of free text options were analysed and organised into four identified themes related to 1.Practice requirements and contingency planning: having the assessment in a general practice setting was perceived positively, ideally using a large or regional GP surgery, ensuring contingency planning for any disruption or emergency situations, invigilation to minimise a perceived risk of cheating, and ensuring security and privacy for candidates. 2. Acceptability and fairness to candidates: refers to the need to ensure the assessment is acceptable and fair to candidates from all ethnic, socioeconomic and language backgrounds with constructive feedback. 3. Ability to assess consultation skills: fairly, reliably and validly. 4. Need for further evidence: on the reliability and validity of the assessment is needed.

CONSEQUENCES: Stakeholders overall were positive to the SCA with views expressed on implementation, fairness, reliability, validity and need for further evaluation. Implementation of the SCA was supported with provision for contingency plans against disruptions, security and privacy measures, fairness for all candidates and realistic costs. Further research is needed to provide evidence to support fairness, reliability and validity of the new assessment.

Funding Acknowledgement: This abstract presents independent research commissioned by RCGP. The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the RCGP.

7D.3

Coping with General Practice: A mixed methods study

Presenter: Catherine Neden

Co-Authors: Kate Hamilton West, Patricia Wilson

Author institutions: Centre for Health Services Studies, University of Kent, Canterbury, Kent, CT2 7NF

Abstract

PROBLEM: The expert generalist role is required to help meet the breadth of clinical challenges posed, whilst health policy is changing the shape and direction of primary care. Simultaneously, the NHS is struggling to recruit and retain General Practitioners (GPs) for patient facing work This study focussed upon understanding the perceived pressures that GPs working in the National Health Service in England face, and the strategies which individuals use to cope with and manage these.

APPROACH: A sequential mixed methods design, underpinned by critical realism allowed in-depth exploration of GPs perceptions of their working life. Qualitative interviews considered doctors' interpretations of their working lives. Theory generated in the first phase was refined using analysis of data collected in a questionnaire from a broader range of GPs. In the third and final phase, theory gleaned in the initial phases was consolidated in stakeholder interviews. Retroduction was used to identify possible underpinning mechanisms for GP workplace stress.

FINDINGS: The initial phase identified themes relating to GPs perceptions and management of their working lives. Exploration in the questionnaire demonstrated significant distress in the GP workforce (using standard instruments). The nature and degree of this was related to personal characteristics and professional workplace factors. At an individual level, constraints on moral agency and the work of emotional labour engender internal conflict. These constructs were examined, considering links to underpinning models of stress (such as allostatic load). The

Findings are consistent with Karasek's (1979) Demand-Control model of job stress.The stakeholder interview phase confirmed the earlier FINDINGS: . The critical realist approach enabled consideration of the generative mechanisms which offer plausible explanations for the empirical FINDINGS: . These include wider social structures as well as the specific structures of the NHS and the medical profession. The complex intersection of these impacts upon the agency of the individual GP.

CONSEQUENCES: This study has corroborated the FINDINGS: of multiple studies demonstrating deterioration in GP wellbeing. Additionally, it has recognised possible courses of action to improve workforce wellbeing. At a local level, this could include review of practice support structures, review of administrative workload, and reduction in the allostatic burden resulting from multiple interruptions and decision density. At a wider system level is a mismatch in understanding the expectations of the GP role between GPs and other stakeholders. Where there is policy change impacting upon GPs, there needs to be clear and direct communication of this, allowing adequate time for implementation and evaluation of change. There are significant structural inequalities in medicine which must be addressed.

Funding Acknowledgement: No external funding

7D.4

Trends in full-time working in general practice: repeated cross-sectional study

Presenter: Joseph Hutchinson

Co-Authors: Jon Gibson, Evangelos, Kontopantelis, Kath Checkland, Sharon Spooner, Rosa Parisi, Matt Sutton

Author institutions: University of Manchester

Abstract

PROBLEM: There is little evidence and no agreement on what constitutes full-time working for general practitioners (GPs). This is essential for workforce planning, resource allocation and accurately describing GP activity.AimTo clarify the definition of full-time working for general practitioners, how this has changed over time and whether these changes are explained by GP demographics.

APPROACH: Design and SettingRepeated cross-sectional national surveys between 2010 and 2021.MethodComparison of three measures of working time commitments (hours and sessions per week and hours per session) plus a measure of workload intensity across survey years. Multiple regression to adjust the changes over time for age, sex, ethnicity, contract type, area deprivation, and rurality. Unadjusted hours and sessions per week were compared to definitions of full-time working.

FINDINGS: ResultsAverage hours and sessions per week reduced from 40.5 (95% CI: 38.5, 42.5) to 38.0 (36.3, 39.6) and 7.3 (7.2, 7.3) to 6.2 (6.2, 6.3) respectively between 2010 and 2021. In 2021, 54.6% of GPs worked at least 37.5 hours per week and 9.5% worked at least 9 sessions. Hours per session increased from 5.7 (5.7, 5.7) to 6.2 (6.2, 6.3) between 2010 and 2021. Partners worked more hours, sessions and hours per session. Adjustments increased the increase in hours per session from 0.54 to 0.61.

CONSEQUENCES: Conclusion At the current average duration of sessions, six sessions per week aligns with the NHS definition of full-time hours. However, hours per week is a more consistent way to define full-time work for GPs.

Funding Acknowledgement: This paper reports the findings from independent research commissioned by the Department of Health and Social Care and carried out by the Policy Research Unit in Health and Social Care Systems and Commissioning (PRUComm). PRUComm is funded by the National Institute for Health and Care Research Policy Research Programme (Ref: PR-PRU-1217-20801). Dr Hutchinson is funded by the National Institute of Health and Care Research School for Primary Care Research. In addition, Professor Matt Sutton is an NIHR Senior Investigator. The views expressed are those of the authors and not necessarily those of the Policy Research Programme, NIHR or the Department of Health and Social Care NOTE: Author accepted manuscrip from 31/1/24 DOI: 10.2299/BJGP.2023.0432

7D.5

Experiences of GP trainees undertaking workplace-based assessments for general practice licensing

Presenter: Joseph Akanuwe

Co-Authors: Julie Pattinson, Sureyya Sonmez Efe, Kim Emerson, Andrew Wright, Shahid Merali, Bryony Sales, Tom Anstey, A. Niroshan Siriwardena

Author institutions: 1. Community and Health Research Unit, School of Health and Social Care, University of Lincoln, 2. School of Social and Political Sciences, University of Lincoln, 3. Royal College of General Practitioners

Abstract

PROBLEM: Workplace Based Assessment (WPBA) is a component of the Membership of the Royal College of General Practitioners licensing examination for UK general practice. It provides evidence of learning and professional development recorded in the Trainee Portfolio assessed at an Annual Review of Competence Progression (ARCP) panel. Following the ARCP Panel, trainees are awarded an ARCP Outcome. Outcomes 1 and 6 “reflect satisfactory progress in achieving the required capabilities for the stage of training as defined in the curriculum”. Over the past four years there has been an increase

in the number of Outcome 2s and 3s (reflecting “that development of capabilities is required”) awarded. Outcome 2 “is used where development is required without additional training time”. Outcome 3 “is used where development and additional training time are required”. We explored experiences of General Practice Speciality Trainee (GPSTs) undertaking WPBA to understand their perceptions of why they felt they had been awarded an Outcome 2 or 3.

APPROACH: We conducted a qualitative interview study with GPSTs using purposive sampling focussing on those in any stage of UK general practice training with previously recorded outcome 2 or 3 at ARCP. After ethics approval, the study was advertised through the Trainee Portfolio. Following this, participants contacted researchers to express interest and to arrange an appointment for individual interviews. This was enhanced by a snowballing technique, with participants already identified serving as key informants to recruit further eligible participants to the study. Data were collected using semi-structured interviews lasting 40 – 60 minutes. Interviews were recorded, transcribed verbatim and analysed using a grounded theory approach facilitated by NVivo 14 software. Data collection and analysis stopped when data saturation was reached.

FINDINGS: We identified eight themes covering perceived problems: 1. Early intervention and responding to GPSTs’ learning needs as earlier opportunities to support learning were being missed. 2. More guidance on how to avoid achieving an outcome 2 or 3 as GPSTs experienced difficulties and lacked information navigating the e-portfolio. 3. Perceptions of how WPBA reflected trainees’ performance: GPSTs felt their performance was not accurately reflected in the Trainee so far Portfolio which some participants felt was not user friendly, so they lacked trust in the process and felt powerless. 4. Communication difficulties: included lack of support from supervisors and peers. 5. Challenges of the hospital setting: it was felt that hospitals were less than an ideal setting for GP training. 6. Insufficient time completing assessments: GPSTs felt undervalued, while clinical supervisors were too busy to provide time for assessments. 7.Cultural and communication barriers: International Medical Graduates (IMGs) were unfamiliar with UK healthcare systems because of previous study abroad. 8. Deficiencies in clinical supervision: GPSTs felt inadequately supervised and felt the descriptions and explanation of assessments and competencies were not clear.

CONSEQUENCES: Suggested solutions are aimed at supporting and overcoming potential challenges to undertaking WPBA during GP speciality training.

Funding Acknowledgement: This abstract presents independent research commissioned by RCGP. The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the RCGP.

7E.1

Assessing the Cardiovascular Effects of Levothyroxine Use in an Ageing United Kingdom population (ACEL-UK)

Presenter: Mia Holley

Co-Authors: Salman Razvi, Ian Maxwell, Rosie Dew, Scott Wilkes

Author institutions: University of Sunderland, Newcastle University

Abstract

PROBLEM: Subclinical hypothyroidism, characterised by slightly elevated thyroid-stimulating hormone (TSH) with normal free thyroxine (fT4) levels, is prevalent in individuals aged over 50 years and is associated with adverse health outcomes. However, the impact of levothyroxine (LT4)

therapy on cardiovascular and bone health in this population remains uncertain. We aimed to investigate the cardiovascular and bone health outcomes among individuals aged over 50 years with normal fT4 levels and slightly elevated TSH, comparing those prescribed LT4 versus those not prescribed.

APPROACH: We conducted a retrospective cohort study and an emulated target trial using healthcare records from The Health Improvement Network. Our study conducts an emulated trial to offer insights into an area where randomised controlled trials are impractical due to expense and design constraints. We included 59,579 individuals in the cohort study and 23,516 participants in the emulated target trial for cardiovascular outcomes. For bone health outcomes, our study included 62,710 individuals in the cohort study and 25,532 participants in the emulated target trial. Time-varying hazard ratios were estimated for cardiovascular and bone health outcomes among individuals prescribed LT4 compared to those not. Cardiovascular outcomes included angina, myocardial infarction, peripheral vascular disease, stroke, and stent procedure; bone health outcomes compromised of fragility fractures and osteoporosis.

FINDINGS: In the cohort study with a 16-year follow-up, the time-varying hazard ratio for cardiovascular events among individuals prescribed LT4 was 0.78 (95% CI: 0.75-0.82, $p < 0.001$), suggesting a protective effect. However, for bone health outcomes, the hazard ratio was 1.07 (95% CI: 1.01-1.12, $p = 0.013$), indicating a slight increase in risk among LT4-prescribed individuals. In the emulated target trial with a 5-year follow-up, the hazard ratio for cardiovascular events was 1.28 (95% CI: 1.14-1.44, $p < 0.001$), indicating an elevated risk associated with LT4 prescription. Similarly, the hazard ratio for bone health outcomes was 2.10 (95% CI: 1.84-2.39, $p < 0.001$), reflecting a substantial increase in risk among individuals prescribed LT4 compared to those not prescribed.

CONSEQUENCES: Our findings highlight varying effects of LT4 therapy on cardiovascular and bone health outcomes in individuals aged over 50 years with normal fT4 levels and slightly elevated TSH levels. The cohort study suggests a potential protective effect against cardiovascular events; the emulated target trial indicates increased cardiovascular risk and adverse bone health outcomes associated with LT4 prescription. This difference may be attributed to factors such as immortal time bias and misclassification bias in the cohort study or the shorter follow-up duration of the emulated target trial.

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7E.2

"We don't need to check it, but we do check it": Views of Primary Care Healthcare professionals on blood test monitoring in three long-term conditions

Presenter: Rachel O'Donnell

Co-Authors: Alice Malpass, Clare Thomas, Martha Elwenspoek, Jess Watson, Penny Whiting, Jonathan Banks

Author institutions: University of Bristol

Abstract

PROBLEM: Blood testing has increased significantly in primary care, with over half attributed to long-term conditions (LTCs). In the UK, current efforts to optimise have focused on reducing testing. The aim of this study was to understand the views of Health Care Professionals (HCPs) on blood test

monitoring for three LTCs (type 2 diabetes, hypertension, and kidney disease) and identify barriers and facilitators to optimising blood testing in LTC monitoring.

APPROACH: This study was part of the larger Optimal Testing project. 21 HCPs were recruited from 4 primary care practices with varying patient list sizes and diverse patient demographics in the Southwest of England. Qualitative interviews were recorded, transcribed verbatim and analysed in NVivo software using a reflexive thematic approach.

FINDINGS: We identified variation in views of current blood test monitoring across HCPs and practices. HCPs described the workload generated by tests as unnecessary. There was a consensus that current blood test monitoring for LTCs can and should be improved, but no consensus on how this should be approached. Many of the barriers to optimising testing were systemic, including barriers from IT systems, secondary care pressures, and lack of consistent guidelines for practices.

CONSEQUENCES: Whilst there is a recognition in primary care that blood testing could be optimised, there is a lack of consensus on how to approach this and so practices have moved towards different methods of optimising testing. This has important implications for effective intervention implementation to optimise or update current testing practices and may impact patient care.

Funding Acknowledgement: National Institute for Health (NIHR) Programme Grants for Applied Research (PGfAR) Ref. NIHR201616

7E.3

Implementing a clinical prediction model in primary care data to identify individuals with misclassified diabetes and increased hypoglycaemia and DKA risk

Presenter: Katherine Young

Co-Authors: Rhian Hopkins, John M Dennis, Nadeem Qureshi, Angus G Jones, Beverley M Shields

Author institutions: University of Exeter, University of Nottingham

Abstract

PROBLEM: Correct classification of type 1 (T1D) and type 2 diabetes (T2D) is essential to ensure correct treatment. However, distinguishing between them can be challenging, leading to misclassification and inappropriate treatment which may increase the risk of poor patient outcomes. Clinical prediction models are available to aid clinicians where there is uncertainty around diabetes type; in this study we assess their feasibility in identifying misclassified diabetes in primary care record data and whether misclassified individuals are at higher risk of hypoglycaemia and DKA.

APPROACH: We adapted a validated T1D prediction model based on clinical features (age, BMI, lipids) to run in primary care data (CPRD Aurum: n=97,476 adults currently registered with adult-onset, insulin-treated diabetes; 21% diagnosed as T1D). Misclassified individuals were defined as those with a T2D diagnosis and T1D probability ≥70% (misclassified as T2D), or T1D diagnosis with T1D probability ≤5% (misclassified as T1D). Hypoglycaemia and DKA outcomes were compared to controls without evidence of misclassification (T2D controls: T2D with T1D probability <70%; T1D control: T1D with T1D probability >5%).

FINDINGS: 94% of patients had all features required for the T1D prediction model. 794 (1.1%) of those diagnosed with T2D had high T1D probability indicating potential misclassification. Compared to T2D controls, these individuals had higher rates of hospitalisation due to hypoglycaemia (8.4% vs 4.1%) and DKA (13% vs 3.2%) and were more likely to commence insulin within 1 year of diagnosis (32% vs 12%, all p<0.001). 3,721

(19.4%) of those diagnosed with T1D had low T1D probability, and had lower rates of hospitalisation for hypoglycaemia (5.9 vs 8.9%) and DKA (19% vs 25%, all p<0.001) than T1D controls. However, those misclassified as T1D had the highest rates of DKA at diagnosis (8.5% vs 5.3% for T1D controls, vs 0.9% for misclassified as T2D, vs 0.5% for T2D controls, all p<0.001). All four groups had similar median HbA1c (67-68 mmol/mol).

CONSEQUENCES: Individuals with misclassified diabetes can be identified in primary care data using an adapted T1D prediction model, and those misclassified as T2D have significantly poorer hypoglycaemia and DKA outcomes than those without evidence of misclassification. Those misclassified as T1D have a high rate of DKA at diagnosis which may contribute to misclassification by clinicians. We are currently assessing the feasibility of implementing the clinical prediction model as an automated search in GP practice records.

Funding Acknowledgement: This project is funded by the NIHR School for Primary Care Research.

7E.4

The effect of GLP-1 receptor agonists on liver health in participants living with overweight/obesity: a systematic review and meta-analysis.

Presenter: Bipasha Deuri

Co-Authors: Mariam Molohkia and Laurence J Dobbie

Author institutions: King's College London, School of Population Health and Environmental Sciences

Abstract

PROBLEM: Overweight and obesity are associated with various metabolic disturbances, including non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steatohepatitis (NASH), which pose significant health risks. Glucagon-like peptide-1 receptor agonists (GLP-1RA), known for their effects on glucose metabolism, are novel anti-obesity medications, but their efficacy in treating NAFLD is unclear. This study aims to systematically review and conduct a meta-analysis to evaluate the impact of GLP-1RA on hepatic health in participants living with overweight or obesity.

APPROACH: A comprehensive search of electronic databases (Medline, Embase, Scopus, Cochrane, ClinicalTrials.gov) was performed to identify relevant studies published up to November 2023. Randomized controlled trials (RCTs) comparing GLP-1RA to placebo or standard care in adults living with overweight/obesity without type 2 diabetes and that reported on liver parameters were included. Data were extracted, and quality assessment was conducted using RoB2 and GRADE. Pooled mean differences (MD) or Estimated Treatment Ratio (ETR) with 95% CI were calculated using random-effects models.

FINDINGS: The final review incorporated a total of 16 studies with 8296 participants, each investigating one of six distinct glucagon-like peptide-1 receptor agonists (GLP-1 RAs): Liraglutide (n=6), Semaglutide (n=5), Tirzepatide (n=2), Retatrutide (n=1), Dulaglutide (n=1), and Orforglipron (n=1). Out of these, 11 unique studies were selected for inclusion in the meta-analysis. Duration of intervention ranged from 16 weeks to 72 weeks.Compared to control, GLP-1RA significantly reduced Alanine Transaminase (ALT) (MD = -18.55IU/L; 95%CI [-21.01, -16.10]), Aspartate Aminotransferase (AST) (MD = -7.38IU/L; [-8.61, -6.15]), Body Mass Index (BMI) (MD = -3.43kg/m2; [-5.48, -1.37]) and Waist Circumference (WC) (MD = -5.68cm; [-8.09, -3.27]). The subgroup meta-analysis showed differences in efficacy between specific GLP-1RA - Semaglutide appeared more effective than Liraglutide in treating overweight/obesity, with more

significant reductions in liver enzymes ALT and AST, BMI, and WC.

CONSEQUENCES: A significant reduction in ALT levels compared to AST levels is observed in participants treated with GLP-1RA. Sensitivity analysis on GLP-1RA dosages showed Semaglutide has more potent effects than Liraglutide in similar settings, but dose response relations remain unclear due to limited data. Tirzepatide and Retatrutide, dual and triple receptor agonists, show greater efficacy than single GLP-1RAs, but it is unclear if liver benefits are solely due to GLP-1 receptor activation or other mechanisms.This meta-analysis demonstrates that GLP-1RAs significantly improve key liver health parameters (ALT, AST) in participants living with overweight/obesity. These agents may represent a new pharmacotherapy for NAFLD. However, additional large randomized controlled trials in diverse populations are warranted to confirm the efficacy of different GLP-1RAs for treating obesity-associated liver disease.

Funding Acknowledgement: No funding.

7E.5

Preventing steroid harms in people with polymyalgia rheumatica in English primary care – assessing the effect of prophylactic medications on fragility fractures and gastro-intestinal adverse events

Presenter: David Jenkinson

Co-Authors: James Bailey, David Jenkinson, Samantha Hider, Ian Scott, Sara Muller

Author institutions: Keele University

Abstract

PROBLEM: Polymyalgia rheumatica (PMR) causes pain, stiffness and disability in older adults. It usually has a sub-acute onset and responds rapidly to treatment with steroids, although the initial improvement is typically followed by longer periods of lower-level symptoms and episodes of relapse. Steroid use is associated with increased risk of fractures and gastrointestinal (GI) bleeding. Mitigating steroid adverse effects is a key clinical and patient research priority. Pharmacological strategies to reduce the risk of adverse events exist, but research suggests the prescription of prophylactic medication is low. We do not know what factors affect this, nor the implications on incidence of fractures or GI adverse effects. We describe how medicines other than steroids are used in the management of people with PMR in England primary care and the impact of this on fractures and GI adverse events.

APPROACH: Using data from Clinical Practice Research Datalink we identified a population of people aged ≥50, diagnosed with PMR between January 2010 and March 2022, and prescribed prednisolone within 21 days of their first PMR consultation. Stage 1: Medications were characterised as prevalent (before PMR diagnosis), incident (at the time of diagnosis), or late (after diagnosis, but whilst still on steroids) use. We considered age, gender, and deprivation; and stratified by risk factors associated with fractures and GI bleeds. Stage 2: We used a target trial approach to assess the effect of bisphosphonates and gastro-protective medications on fractures and GI bleeds.

FINDINGS: Stage 1: 43,091 people were included. Users of oral bisphosphonates were 5.9% prevalent, 35.8% incident, and 25.5% late. Users of gastroprotection were 34.7% prevalent, 29.9% incident, and 14.0% late. Users of analgesia were 26.5% prevalent, 14.3% incident, and 15.4% late. 32.5% of people who had other risk factors for fracture were not prescribed bisphosphonates and 19% of people with additional risk factors for GI adverse events were not prescribed gastroprotection once treated with steroids. 45% were prescribed opioids either before diagnosis or during their disease course. There was variation in prescribing by gender and

socioeconomic group. Stage 2: Results will be available by the time of the meeting. CONSEQUENCES: Many people with PMR who are at higher risk of adverse events from their steroid treatment do not receive prophylactic medication. There is variation in prescribing of analgesia and prophylactic medication by gender and levels of socioeconomic deprivation. This suggests that practice could be improved. The target trial analysis will produce estimates of the change in risk associated with prophylactic medication in this population, which will inform better shared decision making.

Funding Acknowledgement: This work is funded by NIHR SPCR

8A.1

Glucose Lowering through Weight management (GLoW): An RCT of the cost-effectiveness of a diabetes education and behavioural weight management programme versus a diabetes education programme in adults with recently diagnosed type 2 diabetes

Presenter: Simon Griffin

Co-Authors: J Mueller, P Breeze, F Fusco, SJ Sharp, K Pidd, A Brennan, AJ Hill, S Morris, CA Hughes, S Bates, D Pollard, J Woolston, E Lachassseigne, M Stubbings, F Whittle, RA Jones, C Boothby, R Duschinsky, J Bostock, N Islam, AL Ahern

Author institutions: University of Cambridge, University of Sheffield, University of Leeds, Patient and Public Involvement representative, University of Southampton, Broadstreet Health Economics & Outcomes Research Vancouver Canada

Abstract

PROBLEM: People with type 2 diabetes (T2D) who lose weight can reduce their use of medication and risk of cardiovascular disease and can even achieve remission. Structured diabetes education is standard care after diagnosis of T2D, but previous trials showed no effect on HbA1c and a small, unsustained impact on weight. We evaluated whether a tailored diabetes education and behavioural weight management programme (DEW) is more effective and cost-effective than a diabetes education (DE) programme in helping people with overweight or obesity and a recent diagnosis of T2D to lower their blood glucose, lose weight and improve other markers of cardiovascular risk.

APPROACH: A pragmatic, randomised, single-blind, parallel two-group trial in 159 general practices in England. Adults (≥18 years) with overweight or obesity and recently diagnosed T2D (≤ 3 years) were randomised to a tailored diabetes education and behavioural weight management programme (DEW; delivered by Weight Watchers) or to current standard care diabetes education (DE; DESMOND programme). DEW involved 2 telephone calls with a registered dietitian and 6 months access to Weight Watchers. DE was delivered in a 6-hour workshop by a registered dietitian. Participants completed assessments at 0, 6, and 12 months. The primary outcome was 12-month change from baseline HbA1c. We also assessed bodyweight, blood pressure, total cholesterol, HDL and LDL cholesterol, glucose-lowering medication, behavioural measures (physical activity, food intake), psychosocial measures (eating behaviour, diabetes-related quality of life, wellbeing) and within-trial and modelled lifetime cost-effectiveness.

FINDINGS: We randomised 577 participants (DEW: 289, DE: 288); 398 (69%) completed 12-month follow-up. We found no evidence for an intervention effect on change in HbA1c from baseline to 12 months (difference: -0.84 [95% CI: -2.99; 1.31] mmol/mol, p=0.44) or 6 months (-1.83 [-4.05; 0.40] mmol/mol). We found an intervention effect on weight at 6 (-1.77 [-2.86; -0.67;] kg) and 12 months (-1.38 [-2.56; -0.19] kg). Participants in DEW had a higher likelihood of achieving diabetes remission than participants in DE (6 months:

RR=2.10 [1.03; 4.47]; 12 months: RR=2.53 [1.30; 5.16]). DEW was cost-effective compared with DE in within-trial and lifetime analyses, in the latter generating an incremental cost-effectiveness ratio of £2,058 per quality-adjusted life year gained.

CONSEQUENCES: A commercial behavioural weight management programme combined with remote dietary counselling after diagnosis of T2D did not improve HbA1c up to 12 months post-intervention, but could help more patients with overweight/obesity to achieve weight loss and remission and be more cost-effective compared with current standard NHS care.

Funding Acknowledgement: This work was supported by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research Programme (RP-PG-0216-20010), the Medical Research Council (grant number MC_UU_00006/6) and the NIHR Cambridge Biomedical Research Centre (NIHR203312).

8A.2

Remotely-delivered weight management for people living with long COVID and overweight (ReDIRECT): a wait-list controlled randomised trial.

Presenter: David Nicholas Blane

Co-Authors: Emilie Combet, Laura Haag, Janice Richardson, Caroline E Haig, Yvonne Cunningham, Heather L Fraser, Naomi Brosnahan, Tracy Ibbotson, Jane Ormerod, Chris White, Emma McIntosh, Catherine A O'Donnell, Naveed Sattar, Alex McConnachie, Michael Lean, David N Bl

Author institutions: University of Glasgow, Counterweight Ltd, Long Covid Scotland

Abstract

PROBLEM: Long COVID is a complex multi-symptom condition that can affect people following COVID-19 infection. Risk factors for long COVID include female sex, socioeconomic disadvantage, and raised body mass index (BMI). There are no established treatments for long COVID and some of the dominant symptoms (e.g. fatigue, breathlessness, brain fog) may make engagement in research difficult. The study aimed to assess whether home-delivered weight management could improve long COVID symptoms in people living with excess weight.

APPROACH: ReDIRECT was a randomised, wait-list-controlled trial (ISRCTN:12595520) in participants with long COVID and body-mass index >27kg/m2 (>25 kg/m2 for South Asians) recruited across the UK. The intervention comprised remotely-delivered structured weight management (formula total diet replacement (850 kcal/d), or an alternative if not tolerated) and behaviour change guidance for 12 weeks, followed by food reintroduction and weight loss maintenance support for one year. Trained dietitians provided personalised phone/video or text support, in-app weekly monitoring and nudges, and peer-group support.We pre-specified a personalised primary outcome: participants selected the major long COVID symptom they most wanted improved, from Fatigue, Breathlessness, Pain, Anxiety/Depression, and Other, assessed using validated questionnaires and VAS scales at baseline and 6 months.Secondary outcomes included changes in weight, blood pressure, health-related quality of life (EQ5D), and specific major long COVID symptoms at 3 and 6 months. The study was funded by the National Institute for Health and Care Research (NIHR). Trial registration no. ISRCTN:12595520Patient and Public Involvement: People living with long COVID were involved throughout, including a PPI lead and PPI co-investigator. The novel personalised primary endpoint was also informed by our PPI collaborators.

FINDINGS: Between 23 December 2021 and 04 July 2023, 234 participants were randomly assigned to intervention (n=116) or waitlist

control (n=118) groups. The groups were well matched for sex (84% women), ethnicity (90% white), age (mean 46 years), BMI (median 35 (32-40) kg/m2) medications and symptom distribution. The intervention improved the primary outcome (patient-selected long COVID symptom) with a mean between-group difference of -0.34 [95% CI -0.67, -0.01, p=0.047] at 6 months. Mean weight change in the intervention group was -10.3 (SD 7.5) kg at 6 months, compared to -0.7 (SD 5.2) kg in the control group. The intervention improved Fatigue (treatment effect of -3.46 [95%CI -5.42, -1.86], p<0.0001), Breathlessness (-0.27 [95%CI -0.48, -0.06], p=0.0124), Anxiety/Depression (-1.94 [95%CI -3.64, -0.25], p=0.0249) and Other symptoms (-1.13 [95%CI -1.82, -0.44], p=0.0016) vs. control group at 6 months, but not Pain. The intervention improved blood pressure and health-related quality of life, with no excess of adverse events.

CONSEQUENCES: Entirely remotely delivered weight management was safe and effective at reducing long COVID symptoms that matter most to people living with long COVID and excess weight.

Funding Acknowledgement: The study was funded by the National Institute for Health and Care Research (NIHR) (COV-LT2-0059).

8A.3

Are behavioural text messages with and without endowment incentives effective and cost-effective for men with obesity? The Game of Stones randomised controlled trial.

Presenter: Pat Hoddinott

Co-Authors: Catriona O'Dolan, Lisa Macaulay, Stephan Dombrowski, James Swingler, Seonaidh Cotton, Abraham Getanah, Kate Hunt, Michelle McKinley, Katrina Turner, Kate Hunt, Marjon Van der Pol, Graeme Maclennan, on behalf of the Game of Stones research team

Author institutions: University of Stirling, University of Aberdeen, Queens University Belfast, University of Bristol

Abstract

PROBLEM: Men with obesity are an underserved population as they engage less frequently with weight management interventions than women. Effective, scalable, low-cost interventions with wide reach are needed. Aims: to estimate the difference in percentage weight change after 12 months for men with obesity who receive texts with financial incentives, texts only or waiting list for texts and to ascertain cost-effectiveness.

APPROACH: In this three-group assessor blind randomised controlled trial men with body mass index > 30 kg/m2 were invited through general practice, community information and social media targeting disadvantaged areas in Belfast, Bristol and Glasgow. Participants received daily automated behavioural texts for 12 months: the texts alongside incentives where money was deducted for not meeting verified weight loss targets (5% at 3 months; 10% at 6 months; 10% at 12 months) from an initial endowment of £400; or a 12-month waiting list for texts. Intervention groups received localised web-based information, signposting to services and self-monitoring pages. All groups received baseline weight management information and a pedometer. The primary outcome was % weight change from baseline at 12 months (minimum clinically important difference: 3%).A cost-effectiveness analysis from a health service perspective over 12 months and lifetime horizon, compared incremental cost per QALY for each intervention group with the waiting list control. An existing PRIMEtime Cost-Effectiveness obesity model was used to capture relevant costs and benefits beyond the trial period.

FINDINGS: Participants' mean (Standard Deviation, SD) age was 50.7 (13.3) years; 227 (39%) lived in disadvantaged areas; 426 (73%) provided weight at 12 months. Mean

percentage weight change from baseline (SD) was -4.8% (6.1) for texts with incentives, -2.7% (6.3) for texts only, and -1.3% (5.5) for waiting list. Texts with incentives were superior to waiting list, mean difference -3.2% (97.5 % Confidence Interval (CI), -4.6, -1.9, p <0.001); texts only were not -1.4% (97.5 % CI -2.9, 0.0, p =0.053). Mean weight changes were -5.7kg (SD 7.4), -3.0kg (SD 7.5), and -1.5kg (SD 6.6). For texts with incentives the number needed to treat (97.5% CI) for ≥5% and ≥10% weight loss at 12 months is 4 (3,7) and 5 (4,9). Local service engagement and weight-loss drug use were low and did not differ across groups.The average incentive paid was £128/participant. Texts with incentives and texts only are cost-effective compared to the waiting list when modelled over a lifetime. The optimal strategy varies depending on assumptions around weight regain after 12 months.

CONSEQUENCES: Texts with incentives are effective and cost effective for weight loss and can potentially be delivered at scale. Texts only are not effective but were cost effective. With wide reach and only four in person weight assessments over 12 months, both interventions offer an alternative to intensive programmes.

Funding Acknowledgement: This trial is was funded by the National Institute for Health and Care Research (NIHR), UK (Ref: NIHR 129703). using UK aid from the UK Government to support global health research. The views expressed in this publication are those of the authors and not necessarily those of the NIHR or the UK government. This project was supported by NHS Bristol, North Somerset and South Gloucestershire Integrated Care Board; NHS Greater Glasgow and Clyde and The Public Health Agency, Northern Ireland.

8A.5

Does mental health and wellbeing influence the outcomes and experiences of men during a text message delivered weight management programme with or without financial incentive (Game of Stones)?

Presenter: Katrina Turner

Co-Authors: Torrens CE, Turner K, Dombrowksi S, O'Dolan C, MacLean A, Swingler J, McKinley M, Hoddinott P (on behalf of the Game of Stones Team)

Author institutions: University of Stirling, University of Bristol, University of Aberdeen, Queens University Belfast

Abstract

PROBLEM: Behavioural weight management interventions (BWMI) can improve physical and mental health. However, an individual's mental state may affect engagement and some interventions, including those with financial incentives, may negatively affect mental health. Pre-specified aims were to understand whether mental health conditions moderate weight change outcomes and integrate qualitative data to better understand FINDINGS: .

APPROACH: Participants (n=585) were randomly allocated to daily automated texts (SMS); texts with endowment financial incentives (SMS+I); or waiting list control (WLC). Secondary exploratory mental health and wellbeing outcomes were: Patient Health Questionnaire (PHQ-4), Warwick and Edinburgh Mental Wellbeing Scale (WEMWBS), EQ-5D-5L Anxiety and Depression (AD) sub-scale and Weight Self-Stigma Questionnaire (WSSQ). Sub-groups included: the secondary outcome measures (high and low scores); doctor diagnosed mental health condition (MHC) and possible latent mental health condition (LMHC- defined as men with no self-reported MHC but either a WEMWBS low score or high score on other secondary outcomes). Moderating effects were explored using linear regression models that included treatment-by-subgroup interactions, using 99.5% confidence intervals (CI). Interviews

were conducted at 12 months with 54 men (SMS+I (n=30); SMS (n=24)), including men with: self-reported MHC (n=16); LMHC (based on PHQ-4 >3) (n=13), no reported MH difficulties (n=12). Data were analysed using Framework method.

FINDINGS: At baseline, 146 (25%) men reported a MHC; 142 (24%) a possible LMHC. Mean percentage weight change from baseline (SD) was -4.8% (6.1) for SMS+I, -2.7% (6.3) for SMS, and -1.3% (5.5) for WLC. Results showed no significant differences in secondary outcomes for men in the SMS+I or SMS compared to WLC. For SMS+I compared to WLC, the mean difference in percentage weight at 12 months from baseline for men with MHC was 1.0 (99.5% CI 0.77 (-3.93, 5.47); p=0.64). The mean difference in percentage weight for SMS compared to WLC was -3.08 (99.5% CI -3.22 (-8.06, 1.63); p=0.06).Men's views of the texts were similar across trial groups and mental health status. There was limited information to suggest that texts, with or without incentives, had an adverse effect on mental health. Some men in SMS+I with MHC or LMHC did suggest having poorer mental health e.g. depression or seasonal affective disorder, was a barrier to behaviour change. Men from both trial groups, with MHC or LMHC discussed being unmotivated by money or the incentive was not motivating enough to drive change, compared to those with no MHC.

CONSEQUENCES: Texts with or without incentives did not adversely affect mental health and wellbeing outcomes for men living with obesity. Neither did mental health or wellbeing status at baseline moderate weight loss. Qualitative data provides insights into varying experiences among men. There was some limited evidence that mental health status might affect an individual's ability or willingness to make weight loss changes.

Funding Acknowledgement: NIHR PHR 129703.

8A.6

Do weight loss outcomes and experiences differ for men with obesity and multiple long-term conditions or disability in the Games of Stones text message with or without financial incentive randomised controlled trial?

Presenter: Pat Hoddinott

Co-Authors: Claire Torrens, Lisa Macaulay, Catriona O'Dolan, James Swingler, Stephan Dombrowski, Kate Hunt, Alice Maclean, Michelle McKinley, Katrina Turner, Graeme Maclennan, on behalf of the Game of Stones Team

Author institutions: University of Stirling, University of Aberdeen, Queens University Belfast, University of Bristol

Abstract

PROBLEM: The prevalence of obesity and consequent morbidities are rising. Men engage less frequently with weight loss interventions than women and there is an evidence gap for those living with multiple long-term conditions (MLTC) or disability. Our pre-specified aims were to: undertake sub-group analyses to understand whether living with MLTC, a single co-morbidity or a disability moderates weight change outcomes; and triangulate results with qualitative interview data to understand experiences of men relevant to implementation.

APPROACH: Participants were 585 men with body mass index (BMI) > 30 kg/m2 recruited through General Practice and community strategies during the Covid-19 pandemic. Participants were randomly allocated to daily automated behavioural text messages; text messages with endowment financial incentives linked to 5% and 10% weight loss targets; or a year long waiting list control group. MLTC was defined as two or more self-reported obesity-related conditions; the Office for National Statistics standardised disability question was used. Secondary analysis

compared percentage weight change at 12 months from baseline for each intervention group to the waiting list. The four baseline sub-groups were: MLTC; disability; single, no co-morbidity. Moderating effects were explored using linear regression models that included treatment-by-subgroup interactions, using 99.5% confidence intervals. Purposive and diversity sampling resulted in 54 qualitative interviews with men (texts with incentives n=30; texts only n=24) at 12 months: MLTC (n=18) and included men with disabilities (n=25). Analysis used the Framework method to compare data across trial groups and sub-groups.

FINDINGS: At baseline, 235 (40%) reported MLTC; 140 (24%) no co-morbidities and 233 (40%) a physical or mental health disability. Mean percentage weight change from baseline (SD) was -4.8% (6.1) for texts with incentives, -2.7% (6.3) for texts only, and -1.3% (5.5) for waiting list. In the texts only group compared to waiting list, the mean difference in % weight at 12 months from baseline for men with MLTC was 0.4 (99.5% Confidence interval (CI) -3.8, 4.6. p=0.8). In the texts with incentives group compared to waiting list, the mean difference in % weight at 12 months from baseline for men with MLTC was 0.4 (99.5% CI, -3.7, 4.4. p=0.8). Similarly, all subgroup comparisons found no moderation of the primary weight loss outcome by the presence or absence of co-morbidities or disability. Of the 357 adverse events reported, the most common were infections (23%).Qualitative FINDINGS: will be presented that illuminate the experiences of men living with obesity, MLTC and their weight loss trajectories. Health adverse events experienced by men regardless of trial group or long-term conditions can impact substantially on motivation and weight loss.

CONSEQUENCES: The effectiveness and cost-effectiveness FINDINGS: for Game of Stones interventions are generalisable for underserved men with long term obesity related co-morbidities or disability.

Funding Acknowledgement: This trial is was funded by the National Institute for Health and Care Research (NIHR), UK (Ref: NIHR 129703). using UK aid from the UK Government to support global health research. The views expressed in this publication are those of the authors and not necessarily those of the NIHR or the UK government. This project was supported by NHS Bristol, North Somerset and South Gloucestershire Integrated Care Board; NHS Greater Glasgow and Clyde and The Public Health Agency, Northern Ireland.

8A.7

Effect of weight loss interventions on the symptomatic burden and biomarkers of polycystic ovary syndrome: a systematic review of randomised controlled trials

Presenter: Jadine Scragg

Co-Authors: Alice Hobson, Lia Willis, Kathryn Taylor, Sharon Dixon, Susan Jebb

Author institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford

Abstract

PROBLEM: Polycystic ovary syndrome (PCOS) affects up to 45% of women of a reproductive age and is associated with obesity. Clinical guidelines recommend weight loss, but the impact of weight loss is unclear. This meta-analysis aims to quantify the effect of weight loss interventions on symptom burden and clinical markers of PCOS.

APPROACH: MEDLINE, Embase, PsycINFO, CINAHL, Cochrane, Web of Science and trial registry databases were searched from inception through November 2023. Randomised clinical trials of women with PCOS were included if they compared any intervention aiming to reduce weight against no or lower-intensity weight loss interventions. Conversations with people with

PCOS informed the outcomes. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-analyses guidelines. Pairs of independent reviewers screened the studies, extracted the data, and assessed risk of bias. Pooled mean differences or odds ratios were obtained from random effects meta-analyses.

FINDINGS: 44 comparisons from thirty-six studies with 2335 adult participants were included. Four, 20 and 12 studies were judged at high, unclear or low risk of bias, respectively. Compared with no or lower-intensity weight loss interventions, higher-intensity weight loss interventions were associated with greater weight loss (-3.2kg, 95% CI,-3.9 to -2.5; I2=82%) and improvements in symptoms and biomarkers, including menstrual frequency (mean difference 1.9; 95% CI,0.85 to 2.9, I2=61%), free androgen index (mean difference -1.2, 95% CI,-2.2 to -0.1; I2=57%) and HOMA-IR (-0.59, 95% CI,-0.77 to -0.42; I2=0%), but not hirsutism, total testosterone, sex-hormone binding globulin, follicular stimulating hormone or luteinising hormone.

CONSEQUENCES: Weight loss programmes may lead to improvements in some of the markers of PCOS and should be considered more routinely as a treatment option for PCOS.

Funding Acknowledgement:

8B.1

What causes 'Missingness' in primary care? A realist synthesis and interview study

Presenter: David Baruffati, Calum Lindsay

Co-Authors: Mhairi Mackenzie, Geoff Wong, David Ellis, Sharon Simpson, Michelle Major, Kate O' Donnell, Andrea Williamson

Author institutions: University of Glasgow, University of Oxford, University of Bath, Homeless Network Scotland

Abstract

PROBLEM: Large scale epidemiological research in Scotland identified a cohort of patients missing multiple primary care appointments. These patients tend to experience multimorbidity, socioeconomic deprivation, and face a greater risk of premature mortality than the general population. This phenomenon was termed 'missingness'; 'the repeated tendency not to take up offers of care such that it has a negative impact on the person and their life chances'. Across policy and research, missed appointments are typically framed as a problem for services caused by 'non-engaging' patients. Proposed solutions have drawn on an evidence base that typically does not distinguish between situational, single missed appointments and more enduring missingness, the causes of which remain poorly understood. In failing to understand and address the drivers of missingness, such interventions are likely increase to access inequalities. This study aims to understand why missingness happens to inform future interventions development.

APPROACH: Our mixed-methods study is a realist synthesis of 196 papers from the existing literature, and qualitative interviews undertaken with 30 experts-by-experience and 30 professionals. Realist research takes a theory-driven approach to primary and secondary evidence, seeking to explain the causal dynamics of social phenomena. Applying a realist logic to the literature and interviews, we produced a programme theory of missingness using a novel theoretical framework which integrates the candidacy framework with fundamental cause theory.

FINDINGS: Missingness is driven by the interaction between overlapping service- and patient-side determinants throughout the patient journey. These dynamics include whether patients feel the appointment or service is 'for them' - whether it feels necessary, suitable, beneficial or appropriate.

Many patients' experiences of services are characterised by poor communication, power imbalances, stigma and relational threat, and non-attendance may be a protective act. Patients may be exposed to competing demands on their resources, including work and finances, caring responsibilities, treatment burden, and unmet basic needs. Service systems may lack flexibility or choice in where, when, and with whom appointments take place. While often rooted in prior experiences of care, importantly, these FINDINGS: demonstrate that the drivers of missingness are amenable to change.

CONSEQUENCES: These FINDINGS: highlight the need for future non-attendance research to adopt a missingness lens. In doing so, research should move beyond demonstrating statistical associations towards exploring, through in-depth, theoretically rich methodologies, the complex drivers of missingness as they are shaped across different contexts. For policymakers and practitioners, they also suggest key principles for interventions. These include identifying at-risk patients; providing targeted, person-centred care to address specific needs and barriers; identifying causal pathways operating both within and outside of healthcare and collaborating to address these; and designing interventions around increasing safety for those seeking care.

Funding Acknowledgement: National Institute for Health and Care Research

8B.2

Getting an appointment to see a GP - case study learning about sustainable access systems

Presenter: Helen Atherton

Co-Authors: C. Pope. Bryce. C, Eccles. A, Heath. J, Dowrick. A, Wheeler. B, Phillips. C, Gronlund. T, Bo Drivsholm. T, Drud Due. T

Author institutions: University of Southampton, University of Warwick, University of Oxford,

Abstract

PROBLEM: Difficulties getting GP appointments continue to dominate public and media discourse about patient (dis)satisfaction with the UK NHS, and with primary care. The GP workforce is shrinking, patient numbers and health needs are increasing, with the result that patients wait longer for appointments, causing commentators to question the sustainability of the UK model of general practice. Various systems to manage appointments have been developed and deployed in the UK and elsewhere. The Covid-19 pandemic added further disruption to the ways access was managed within practices. As we move to a 'new normal' post pandemic it is timely to examine the varied general practice access systems in use and how they are working for patients and practitioners.

APPROACH: Focused ethnographic case studies (observation, interviews and documentary analysis) in 8 English general practices that had at least three years' experience (at least 18 months pre-pandemic) of the implementation of an 'innovative' access/appointment system, to explore how these systems work - in particular whether practices made adjustments and adaptations or if they abandoned previously introduced systems. Practices were purposively sampled, identified via consultation with professional and stakeholder advisor networks and informed by an earlier scoping review. Analysis has included individual and team coding, production of practice summaries to capture contextual information and key FINDINGS: , and the development of a thematic coding structure.

FINDINGS: We describe the different types of access systems in use in our case studies, the ways these were adapted, and use examples of the everyday interactional challenges

encountered in “making an appointment” to understand how they are working from the perspective of both general practice staff and patients. Our analysis explores how access is accomplished (including rules and workarounds) and reveals points of tension and challenge, including the gaps between how the system purportedly ‘works’ and how it ‘feels’ for staff and patients.

CONSEQUENCES: This research project is, to our knowledge, the first study that has revisited UK general practices that have previously been involved in research where a new access system was deployed and has been evaluated. Our study offers unique data building on earlier interventions designed to fix the problem of patient access. We explore what happened when these interventions were used during the Covid-19 pandemic and beyond. Our analyses provide transferable evidence to support and inform future learning about sustainable change in primary care practice and service delivery. It is time we learnt what happened to previous attempts to address the problem of access to inform lasting improvements to GP services.

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8B.3

Patient and professional experiences of access to general practice: a qualitative study informed by the Candidacy framework

Presenter: Evleen Price

Co-Authors: Evleen Price, Akbar Ansari, Katy Horder, Janet Willars, Jake Beech, Rebecca Fisher, Hugh Alderwick, Mary Dixon–Woods, Carol Sinnott

Author institutions: THIS Institute Department of Primary Care and Public Health University of Cambridge,the Health Foundation

Abstract

PROBLEM: Much of the debate on access to general practice has focused on demand and supply of appointments. However, this conceptualisation of access may obscure the ways that people move through systems as “candidates” for care that are organisationally, culturally and professionally constructed. In this project we use the candidacy framework –which recognises access as a dynamic and contingent process – to explore patients’ and professionals’ experiences of access to general practice and to consider the possible impacts of different approaches to access.

APPROACH: Semi-structured qualitative interviews were offered online, by telephone or in-person with general practice staff (clinical and administrative) recruited through the East of England Clinical Research Network and with patients and carers recruited through five Healthwatch groups with an emphasis on diversity of age, gender, medical history and geographical location. Interview topic guides and analysis were informed by the Candidacy framework and focused on participants’ most recent access experiences.

FINDINGS: Interviews were conducted with 41 patients and carers and 29 general practice staff. Early analysis has identified emerging themes on how changes to access arrangement influence multiple aspects of patient candidacy. Particularly consequential are increasing fragmentation of care within general practice, diversification of roles and skill-mix, and use of forms of remote care. These all impact on patients’ identification of themselves as candidates and on their ability to seek and ability to secure care, as well has influencing key features of quality general practice care (e.g. continuity). Analysis also suggests a distinction between “annoying” versus “unsafe” barriers to access and the

consequences of demand arising from failures and delays elsewhere in the health and care system.

CONSEQUENCES: The initial findings demonstrate the value of the candidacy framework in recognising that access is not a simple matter of demand and supply of appointments, but instead is subject to multiple influences and is wide-ranging in its impact. This is important in identifying and evaluating new strategies to improve access.

Funding Acknowledgement: CS, AA, EP, JW and MDW were supported by The Healthcare Improvement Studies (THIS) Institute. THIS Institute is supported by the Health Foundation, an independent charity committed to bringing about better health and healthcare for people in the UK.

8B.5

GP access for inclusion health groups: perspectives and recommendations

Presenter: Victoria Tzortziou Brown

Co-Authors: Victoria Tzortziou Brown, Aaminah Verity

Author institutions: Wolfson Institute of Population Health

Abstract

PROBLEM: General practice has seen the widespread adoption of remote consulting and triage systems. There is a lack of evidence exploring how inclusion health populations have been impacted by this transformation. This study was co-designed with experts by experience and aimed to explore the perspectives and experiences of people from inclusion health groups when trying to access GP care.

APPROACH: A mystery shopper exercise involving 39 in-person practice visits and 13 phone-calls were undertaken. The findings were reflected upon by a multidisciplinary stakeholder group which identified recommendations for improvements. Assessing the experiences of access to primary care can be very challenging and often relies on patient surveys with variable response rates. Such data doesn't include the voice of service users who don`t get beyond the first barrier to access. By using mystery shopping as a research tool this study provided detailed insights and feedback on GP registration and access from a group of service users that isn't represented in patient satisfaction surveys.

FINDINGS: Only 31% of the mystery shopper visits (n=8) resulted in registration and the offer of an appointment to see a GP for an urgent problem. None of the mystery shoppers was able to book an appointment over the phone but 10/13 felt that they would be able to register and make an appointment if they followed the receptionist`s instructions. Most mystery shoppers felt respected, listened to and understood the information provided to them. Just under half of the practices (46%, n=6) received positive comments on how accessible and supportive their spaces felt. Practice and system-level recommendations were identified by the stakeholder group. These included practice, advocacy and system level recommendations.

CONSEQUENCES: Ongoing GP access issues persist for inclusion health populations. We identified practice and system level recommendations for improving access for this vulnerable population. To date, there has been little published research exploring the impact of remote consultation and triaging on inclusion health populations' ability to access and effectively navigate GP care. This study provides an analysis of the GP access issues faced by inclusion health populations and identifies solutions that can assist mitigate these challenges.

Funding Acknowledgement: This study was funded by Public Participation, NHS England. VTB was funded by NIHR.

8B.6

Australian general practitioners' experiences delivering essential care services during the 2020 and 2021 coronavirus-related lockdowns

Presenter: Pallavi Prathivadi

Co-Authors: Dr Mridula Shankar, Dr Asvini Subasinghe, Mrs Jennie Raymond, Dr Cathy Grech, Professor Danielle Mazza

Author institutions: Monash University

Abstract

PROBLEM: During the peak of the coronavirus pandemic (COVID-19), aggressive mitigation strategies were implemented across Australia. These included city-wide lockdowns, which, combined with scarcity of personal protective equipment, and occupational health risks, negatively impacted the delivery of essential care services by GPs. The UK RCGP provided clear guidance to UK GPs to help safely deliver care during this time. Similar guidance was not available in Australia, and Australian GPs largely made autonomous decisions on how to triage patients based on acuity and urgency of medical conditions, and risk of COVID-19 transmission to staff. Therefore, the aim of this study was to describe Australian GPs' experiences and approaches to delivering essential care services during the COVID-19 pandemic and to explore if GP service delivery in Australia was in line with RCGP guidance.

APPROACH: 291 GPs who were actively involved in patient care during the March 2020 to December 2021 COVID-19 lockdowns in Melbourne and Sydney undertook an electronic deidentified survey which explored their perceptions of essential care service delivery during this period. The 45 multiple choice question survey collected data relating to the change in delivery of GP care during COVID-19, as well the participants experience of delivering care. The survey was modelled on the UK RCGP traffic light system of patient care: Green (continue regardless of outbreak scale), Amber (continue if capacity allowed), and Red (postpone, with aim to revisit).

FINDINGS: 274 completed surveys were received. Approximately 65% of participants were from Melbourne, 53% female, 49.5% over the age of 46 years, and 85.6% Fellows of the RACGP. Five key FINDINGS: were identified: (1) There was a shift towards telehealth provision across the board from diagnosis (95% of participants reported increased use) to follow up (96.6%). (2) Preventative care that had definite health outcomes (e.g. immunisations) overwhelmingly continued regardless, but did not if they had possible health outcome (e.g. health assessments). (3) Many women's health services continued regardless, including high risk cervical screening (68.7%), postnatal checks (63.3.%) and abortion services (62.3%). (4) High acuity and urgent conditions continued regardless (e.g. 91.1-93.6% of cancer/red flag symptoms). (5) Care for low acuity conditions varied depending on telehealth suitability (e.g. routine ECGs were postponed by 66.2% of GPs). Overall, Australian GPs reported consistent practices for 17 out of the 30 essential care services outlined in the UK RCGP guidance.

CONSEQUENCES: Despite a lack of national guidance, Australian GPs appropriately triaged the provision of essential care services during COVID-19. Where discordant with RCGP guidelines, Australian practices tended to continue care regardless while RCGP recommended more restrictive practice. Australian guidelines should be developed to ensure appropriate prioritisation of delivering essential services for future pandemics that considers local contextual factors and these experiences of providers during the COVID-19 pandemic.

Funding Acknowledgement: RACGP Foundation/ HCF Research Foundation COVID-19 Research Grant

8B.7

How has quality changed in UK general practice since 2021? A multi-site longitudinal study

Presenter: Ellen MacIver

Co-Authors: Rebecca Payne,Francesca Dakin,Ellen MacIver,Nadia Swann,Tabitha Pring,Aileen Clarke,Asli Kalin,Lucy Moore,Emma Ladds,Sarah Rybczynska-Bunt,Richard Byng,Sarah Greene,Laiba Husain,Nina Hemmings,Rebecca Rosen,Katherine King,Sietse Weringa,Emma Ladds,Stuart F

Author institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, UK Nuffield Trust, London Peninsula Schools of Medicine and Dentistry, University of Plymouth, Plymouth, UK Academic Department of Military General Practice, Defence Medical Services, Birmingham

Abstract

PROBLEM: Following a shift to remote care during the COVID-19 pandemic, most UK general practices have reverted partly, but not fully, to in-person consulting. It is time to assess the different domains of quality in this new, 'hybrid' model.

APPROACH: As part of the NIHR-funded Remote by Default 2 (RBD2) study, data were collected from longitudinal case studies of 12 general practices (2021-2023) selected for maximum diversity in location, demographics, and digital maturity. Researchers-in-residence built a relationship with each practice and made multiple visits over 24 months. This ethnographic dataset was supplemented by multi-stakeholder workshops; interviews with policymakers and stakeholders; patient surveys; official reports (GP Patient Survey, Care Quality Commission); and public-domain practice reviews. Data were uploaded onto NVivo, coded thematically, and analysed with reference to the Institute of Medicine quality domains (effectiveness, efficiency, safety, timeliness, patient-centredness, equity) and core features of primary care (first-contact, undifferentiated, holistic, coordinated, comprehensive, longitudinal, relational).

FINDINGS: The current context of general practice is characterised by accumulated financial austerity, loss of resilience (including secondary care pressures and loss of a societal safety net), complex patterns of illness, an increasingly diverse, fragmented, and transient workforce, material and digital infrastructures that are unfit for purpose, and replacement of direct human-to-human interactions with physically distanced, asynchronous ways of working. Against this background, clinicians and staff continue to aspire to traditional values of general practice (relationship-based, holistic, compassionate care, and ongoing support for patients and families) but providing these is increasingly difficult. Digital access and triage systems designed to increase efficiency have, paradoxically, introduced new forms of inefficiency and compromised other quality domains including accessibility, patient-centredness and equity. Whilst traditional in-person long-term condition reviews have been reintroduced in some practices, others rely on remote, asynchronous data entry by patients and fragmented care shared between clinically-qualified staff and assistants with only basic training. Measures to mitigate digital exclusion (e.g. digital navigators) provide help to an extent, but do not compensate for extremes of structural disadvantage. Staff are stressed, demoralised and leaving; quality of clinical care is sometimes compromised; many patients are dissatisfied and frustrated; and we believe there are significant risks to patient safety.Conclusions:Whilst some patients have benefited from 'hybrid' care, the overall picture is concerning. Digitisation, distanciation (the tendency of work

interactions to become physically distanced and asynchronous), role differentiation, protocolisation and other changes intended to improve services have sometimes had the unintended effect of compromising quality, especially for the most vulnerable patients. In some settings, general practice care is becoming dehumanised, deprofessionalised, clinically compromised, unfulfilling and unsafe.

CONSEQUENCES: Our findings reveal a system that is approaching—or, in some cases, beyond—breaking point. The substantial risks to patients and the very survival of general practice should be urgently addressed.

Funding Acknowledgement: Funding was from National Institute for Health and Care Research (NIHR) Health and Social Care Delivery Research (HS&DR) (grant number 132807) (Remote by Default 2 study), Marie Curie Postdoctoral Fellowship for SW, Wellcome Trust Doctoral Fellowship for EL, NIHR SPCR Studentship for FD and NIHR Pre-doctoral Fellowships for RP, AK and EM.

8C.1

Are group nature-based interventions feasible for treating mothers experiencing postnatal mental health difficulties and their infants? A mixed-methods single-arm pilot feasibility study

Presenter: Katie Hall & Sherien Elsheik

Co-Authors: Rosa Roberts, Richard Brown, Lucy Duggan, Lucinda Stanton, Sherien Elsheik, Christopher Barnes, Paul Moran, Katrina Turner, Jonathan Evans

Author institutions: University of Bristol (KH, PM, KT, JE), Avon and Wiltshire Partnership Mental Health NHS Trust (RR, RB), Lightbox CIC (LD), Bluebell Trust (LS), Refugee Women of Bristol (SE), University of Derby (CB)

Abstract

PROBLEM: Postnatal mental health difficulties, including depression and anxiety, are common and under-treated, especially amongst under-served groups of mothers. There is growing evidence for the potential for 'Green Social Prescribing' to improve mental health and reduce health inequalities. This involves connecting people to community nature-based interventions. However, little research has focused on postnatal mothers.

APPROACH: This study explored the acceptability of a novel co-designed five-week group intervention for mothers experiencing postnatal mental health difficulties and their infants (called 'The Mother Nature Project') and the feasibility of implementation in practice. We used a four-group pre-test/post-test design. Each stage of the research was informed by a Patient and Public Involvement (PPI) group comprising ten mothers from diverse backgrounds, including mothers from the refugee community. Eligible mothers (self-reported postnatal mental health difficulties, with an infant <2) were recruited from local charities and children's centres. The intervention was facilitated by an accredited nature-based practitioner and a perinatal mental health peer support worker in an outdoor community location. Each session comprised three simple 'forest bathing' invitations, to engage participants in the natural environment.Assessment of symptoms occurred at baseline, and then after the five-week intervention, using the Edinburgh Postnatal Depression Scale (EPDS), Generalised Anxiety Disorder Assessment (GAD-7), the Warwick-Edinburgh Wellbeing Scale (WEMWBS), and Nature Relatedness score (NR-6). Analysis of feasibility outcomes was based on descriptive statistics and 19 qualitative participant interviews.

FINDINGS: Twenty-eight mother-infant dyads from diverse cultural and socio-economic backgrounds (including refugee women) consented to participate across four intervention groups. Twenty-seven dyads started the programme, 26 were retained, of

whom 24 attended at least three sessions. Albeit a small, uncontrolled study, statistical analysis found a promising signal of effect for three of the four outcome measures: the EPDS (mean difference = -4.3 [SD = 4.4], p value 0.009), GAD-7 (mean difference = -4.2 [SD = 3.7], p value 0.004), WEMWBS (mean difference = 8.8 [SD = 6.6], p value 0.001), NR-6 (mean difference = 0.4 [SD = 0.4], p value 0.06).Thematic analysis of 19 qualitative interviews indicated improvements in women's mood, wellbeing, sleep, confidence, social connectedness, and their relationship with their infant. Women described the value in using metaphors of nature to process difficult experiences in their transition to motherhood. They reported a closer relationship with nature and a greater commitment to pro-environmental behaviours as a result.

CONSEQUENCES: This study offers preliminary evidence that the postnatal nature-based intervention was feasible to deliver and highly acceptable to mothers. Nature-based interventions may be an important treatment option for mothers experiencing postnatal mental health difficulties, and may have greater cross-cultural validity than current treatment options. However, further research is needed to understand their effectiveness, cost-effectiveness, and how they can be implemented at scale.

Funding Acknowledgement: This work was supported by a NIHR Academic Clinical Fellowship for KH, a Green Social Prescribing Funding Award, and Avon and Wiltshire Partnership Trust NIHR Research Capability Funding awarded to KH (award reference RCF 21-22-015). Additional note: Please also see this short video montage of footage from the project if of interest: https://vimeo.com/812725653, password: MNSR23.

8C.2

The CLEAR AIR study – a cluster randomised controlled trial of audit and feedback formats to improve clinical, environmental, and equitable asthma outcomes

Presenter: Owen Thomas

Co-Authors: Sarah Alderson, Bethan Copsey, Paul Carder, Stella Johnson, Imran Mohammed, Robbie Foy

Author institutions: University of Leeds, West Yorkshire ICB

Abstract

PROBLEM: Preventable factors such as salbutamol overprescribing and limited 'preventer' inhaler use are linked to two-thirds of UK asthma deaths. The most deprived regions in England experience more than triple the asthma mortality rate when compared to the least deprived regions. Respiratory inhalers alone account for 13% of all primary care emissions, despite 'green' dry powder inhaler alternatives being available. Audit and feedback is an established quality improvement method that has been demonstrated to be particularly effective when targeting prescribing practices with low baseline compliance. However, there is evidence that quality improvement initiatives may sometimes inadvertently widen the health inequality gaps seen in their target populations.The CLEAR AIR study is rigorously evaluating different audit and feedback report formats to determine the most effective methods of driving clinical and environmental improvements in primary care asthma prescribing, whilst clarifying which regional drivers of inequalities modify the impact of asthma prescribing initiatives.

APPROACH: This cluster randomised controlled trial (IRAS 321442; clinicaltrials.gov NCT05761873) randomised all primary care practices in West Yorkshire (n=273) to receive seven bi-monthly asthma prescribing reports either in 'digital and post', or 'digital-only' formats from June 2023 to May

2024.Outcome data from electronic health records and OpenPrescribing.net will primarily measure the prescribing rate of 'green' inhalers within primary care, alongside a range of secondary prescribing targets including the frequency of prevent inhaler and oral prednisolone prescriptions. Practice-level data on the wider determinants of health will allow comparisons of the effectiveness of the feedback intervention to be made between subgroups, to clarify the intervention's impact on pre-existing health inequalities.A qualitative process evaluation (IRAS 333034) will use semi-structured interviews to explore how these reports are used within practices, identify barriers preventing reports from facilitating change, and test the acceptability of large-scale quality improvement trials that gain consent at the level of the Integrated Care Board.

FINDINGS: Our baseline results found that on average, per Primary Care Network (PCN), 18% of patients were prescribed six or more salbutamol inhalers per year, with 39% prescribed 3 or less 'preventer' inhalers per year, and 9% prescribed 2 or more courses of oral prednisolone per year. On average, only 51% of 'preventer' inhalers issued were 'green' dry powder inhalers and each PCN produced 47,805 kgCo2e per month from salbutamol inhalers alone. These results highlight the potential of this intervention to improve asthma outcomes, whilst supporting primary care to sustainability meet its NHS net-zero and CORE20PLUS5 commitments.

CONSEQUENCES: Regardless of this trial's outcome, the CLEAR AIR study will demonstrate the utility of this cost-efficient, rigorous study design in undertaking high-quality research embedded within NHS improvement programmes, producing a significant impact on the design of future regional quality improvement campaigns.

Funding Acknowledgement: n/a

8C.3

Understanding the implications of climate change on the future of primary care and service provision for those with multiple long-term conditions in England.

Presenter: Dr Glenn Simpson

Co-Authors: Dr Hajira Dambha Millller, Prof. Paul Little, Prof. Miriam Santer, Dr Elizabeth Lovegrove, Dr Sian Holt

Author institutions: University of Southampton

Abstract

PROBLEM: Multiple long-term conditions (MLTC) refers to people living with two or more long-term conditions. It will become increasingly prevalent in coming decades due to the ageing population and is associated with high rates of morbidity, mortality and health-care expenditure. Alongside this growth in MTLC, forecasts over coming decades predict greater seasonal variations in long-term weather patterns due to climate change. England will experience more intense heatwaves and droughts during summer months, whilst winters will become warmer, increasing the risk of flooding and severe storm events. Over the next decade, these changes are likely to have significant impacts on population health, as well as compounding pressures on already strained healthcare services. People with MLTC are particularly vulnerable to these extremes of weather, which is significant to primary care, as currently this patient cohort access or receive most of their care from the sector. However, there is a paucity of evidence examining the impacts of climate change and associated weather extremes on primary care services, particularly in relation to care provision for vulnerable populations. Therefore, new knowledge is urgently needed to inform national and local primary care service planning, and to identify preventative

opportunities that could mitigate some of these impacts.

APPROACH: Our research uses two methods: 1) A scoping review collating published/unpublished evidence on the impact of climate change on the MLTC population and primary care services. 2) Focus groups with patients, caregivers and care professionals to elicit views on how climate change has adversely affected the health of those with MLTC and identify possible future interventions and preventative measures. This poster will present findings from the scoping review component of the study.

FINDINGS: : Fieldwork will be conducted between May-September 2024. Interim Findings will be reported. Anticipated outcomes from this research, include raising wider awareness of climate change-related health impacts on MLTC and primary care services. Our work will stimulate discussion among primary care practitioners, patients, policymakers and other stakeholders about possible responses to mitigate possible harmful effects of climate change on health.

CONSEQUENCES: This exploratory study will fill an important knowledge gap. This work will allow us to identify future opportunities for intervening and planning of primary care services in response to climate change. Overall, our work is aimed at improving the lives of people with MLTC and delivering more effective primary care services for vulnerable populations in the future. This research will also be relevant to future training requirements of primary care staff and other care professionals, including raising awareness of the health risks of climate change and how to manage these.

Funding Acknowledgement: This study/project is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference 698). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

8D.1

Polluting the Planet

Presenter: Deborah Swinglehurst, Nina Fudge, Malcolm Turner

Co-Authors: Nina Fudge

Author institutions:

Abstract

‘Polluting the Planet’ is one of seven stories from our illustrated patient-centred collection called “Let’s talk differently about medicines”. We seek to contribute fresh understandings of medicines and introduce readers to polypharmacy as one example of medical overuse. The stories are designed to spark conversations between patients, family and clinicians and open up new avenues to discuss and address polypharmacy amongst older people. They resonate with a concern raised by Chief Medical Officer, Chris Whitty, in his 2023 annual report: ‘Improving quality of life in older age sometimes means less medicine, not more. It is essential that all patients, but especially those in later old age, are able to have realistic discussions with their doctors’. The characters and stories featured in “Let’s talk differently about medicines” are fictional but are deeply grounded and inspired by the participants and

FINDINGS: of our ethnographic research on polypharmacy, conducted between 2017 and 2021 in patients’ homes, general practice and community pharmacy. Our research focused on patients aged 65 or older who were prescribed 10 or more items of regular medication (so called ‘higher risk’ polypharmacy). We engaged in a design-led methodology called Storytelling Group, working with patients in a process of co-design and user-testing which led to the creation of these resources. This creative

enquiry presentation will take the form of an oral storytelling. It will be accompanied by visual illustrations and will conclude with some reflective prompts to encourage engagement with the story and consideration of avenues for action. We will also show print copies of the illustrated collection. 'Polluting the Planet' features Tom, a retired lorry driver who is an enthusiastic member of a community environmental group in his village and engaged in a re-wilding project. Tom reflects on his experiences of grief, his own health problems, his medical care and the people and places that matter to him, as the narrative explores the problem of waste as one consequence of polypharmacy and considers pharmaceuticals as a key contributor to the NHS's carbon footprint. The story draws parallels between notions of care in the context of supporting environmental flourishing and notions of care for individual patients in supporting them to flourish and live well. It also engages with critical debates regarding polypharmacy as a symptom of mass consumption affecting both clinicians and patients and seeks to identify ways in which - by working together - clinicians and patients might make moves to shift the conversation and take steps to improve the situation. This presentation is an invitation to experience the power of storytelling to promote collective revelation and make complex ideas accessible. We hope it will pique listeners' curiosity and imagination as to the potential of storytelling within health improvement initiatives.

Funding Acknowledgement:

8D.2

'In the particular is contained the universal': reflexive exploration of a Photovoice researcher

Presenter: Josephine Reynolds

Co-Authors:

Author institutions:

Abstract

I am principal investigator of a study utilising Photovoice, a participatory action methodology, to explore the experiences of carers from ethnically diverse communities supporting loved ones with cognitive decline. The Putting Me Into Memory Services (PMIMS) Study has been co-produced with the Chinese, Caribbean and South Asian communities of Sheffield to seek greater understanding of their cultural interpretations (understandings, behaviours, cultural norms and traditions) of ageing and dementia and the barriers and enablers of access and uptake to dementia services. The study involved participants submitting photographs of their daily lives and discussing these during a focus group. This creative enquiry summarises a reflexive exploration of my emotional responses to a selection of these photographs and my motivations for conducting this primary care research. Through these fly-on-the-wall snapshots of domestic moments, their 'particular' reminds me of our collective 'universal'. The viewer must consider their own experience in order to interpret the meanings behind the photographs and by doing so draws out common understanding. I will consider 3 themes: - Valuing our elders - The frustrations of the system - Loneliness Valuing our elders Photo 1 was submitted by a Chinese participant and depicts wild mushrooms growing from the trunk of a decaying tree on the forest floor. I found this image, in relation to the study topic, profoundly moving. It reminded me of the inter-connectedness of generations and tapped into my deep unease at how the elders in our society are often dismissed and undervalued; intensified further if suffering from the cruel effects of dementia. By celebrating the prevailing value, wisdom and stability that older generations can provide, perhaps we can reframe the narrative from burden to benefit? The frustrations of the system Photo 2, 3 & 4 were submitted by

participants from the Caribbean community and visually represents the shared frustration that my patients and I feel when faced with the failings of our current health system. I work in a Deep End, ethnically diverse practice in Sheffield and often feel despair at the inequity experienced by my patients. In the context of advocating for loved ones, this can be an exhausting task and carers can often feel left in the dark. Loneliness Photo 5 was submitted by a Chinese participant and caused a strong emotional response in me. The caption highlights the loneliness of the carer; despite living with her mother suffering with dementia, she feels emotionally alone. She is reminded of this repeatedly through the mundane moments of daily life. Although the context is completely different, it brought to mind my own feelings of loneliness as a single mum. I felt with sharp focus, the pain of emotional isolation despite being in the presence of loved ones.

Funding Acknowledgement:

8D.3

Didcot's Brilliant

Presenter: Angela Conlan

Co-Authors: Dionne Freeman - Artist in Residence and Angela Conlan - Arts Project Lead, Oxford Health Arts Partnership, Oxford Health NHS FT

Author institutions:

Abstract

A reflection on artwork created by Didcot's Brilliant. Over the last year, residents in Didcot were invited to participate in an arts project that aims to celebrate what makes Didcot brilliant with Artist-in-Residence, Dionne Freeman, who has worked with people of all ages and abilities in the town to co-produce artwork that will be displayed in the grounds of Didcot hospital and in the underpass at Didcot station. The aim of the project was to engage staff and patients in painting and to connect them with the wider community (such as arts groups, schools, and community organisations). Community members received participatory postcards for artwork to be sent back to the hospital. Called “A View from my window”, allowing people to share their view or an imaginary scene with patients who were also looking out of their windows and encouraging a connection. This created an opportunity for all the community to engage in contribute to the art project and for patients to receive postcards whilst they stayed in hospital giving them a greater sense of connection to the outside world. “It is magic to see the postcards from the children come through the post and to see how hard they worked on the pictures." These informed the design of the large artworks for the train station. Long-term Impact: Over time, the project may have lasting effects on the community's perception of healthcare facilities. It could lead to increased support for the hospital and a deeper understanding of the role it plays in the community's well-being. Developing a place-based project around the hospital through art has brought about a multitude of benefits for patients, staff, visitors, and the broader community. It not only enhanced the hospital experience but also promoted creativity, community engagement, and cultural enrichment, ultimately contributing to a healthier and more connected community. The most powerful evidence we collected about the impact on patients were the patients themselves; “Doing this drawing activity has helped my hand stop shaking, It was really good for existing the muscles and focusing the movement" "I have been looking forward to this all week" "I really want you to know how much you encouraging me to paint has helped my hand. Through painting it started my exercising of it which has transformed my movement in my hand from a week ago" "I have been telling PALS all about the work we do in here- I think it's amazing and I've loved it" "Gave me freedom. I have painted the sky

as it makes me feel free. I feel like anything is possible when I see the sky and birds flying" "I feel calm" "I'm pleased with this and I've had something else to think about other than my pain"

Funding Acknowledgement:

8D.5

Hearing patients' voices differently: using poetry workshops as a creative approach to public engagement in research

Presenter: Jessica Watson

Co-Authors:

Author institutions:

Abstract

Aims: To explore how poetry can be used as a creative way to engage the public in research. To share poems produced by diverse patient groups with lived experiences of medical testing. To engage participants in a poetry-based activity. We will perform poems created during a series of poetry workshops designed to engage the public in research. We will reflect on how poetry can give voice to patients' lived experiences in an impactful way.

Funding Acknowledgement:

8D.6

Hear Us

Presenter: Alisha Newman

Co-Authors: Halle Johnson, Louise Ting

Author institutions:

Abstract

It is crucial that primary care research and services fully reflect and respond to population needs. Yet, people and communities with the greatest health and care burden are least likely to influence research, potentially sustaining or even worsening health inequalities. Community members have told us that although they would value opportunities to influence research, they don't know how, or can't always engage in the ways offered. The targeted engagement and involvement of under-served populations is therefore vital to ensure that primary care research, services, and treatments are relevant and equitable. Increasingly poetic enquiry is being used in research to amplify the voices of those who are seldom-heard, to understand and share lived experience, and to communicate

FINDINGS: in an accessible way. Found poetry is an approach which uses text from various sources and refashions them to create new meaning through poetry. Co-led by public involvement and engagement (PPIE) leads and a public member, the creative enquiry 'Hear Us' will:

• build on existing PPIE staff networks

• further develop relationships with individuals and communities less represented in research

• be a catalyst for new community outreach and engagement work PPIE leads in a number of academic primary care research centres will be invited to gather existing text and illustrated materials from meetings and events, and to undertake prospective work, to understand the views and opinions of people from underserved communities on:

• their primary care priorities

• their perceptions of research

• ways to support their involvement in and engagement with research Working together, the project team will collate and transform the submissions into a collection of illustrated found poetry.

Through this enquiry, we aim to:

• build positive community relationships

• raise public awareness of primary care research

• give community members an opportunity to share their experiences and views

• raise awareness of public priorities and experiences in an engaging and accessible way

• share learning about ways to involve and engage people from underserved communities

• encourage researchers to examine their own involvement and engagement practice

Further, the exhibit will offer academic primary care researchers the opportunity to interact with the poem during the conference via a written response to what they have heard. This in turn will be fashioned into a new poem, the works having meaning collectively and individually.

Funding Acknowledgement:

8D.7

You Will Be Seen Now

Presenter: Seri Durosinmi

Co-Authors:

Author institutions:

Abstract

The piece is written from both GP and patient's perspectives during a consultation; the expression of their viewpoints throughout allows for either party to face and challenge their preconceived perceptions of their counterpart. The patients' perspective is especially founded on experiences of those I've worked with and took time to learn from, during my placement year, as well as on my own personal experiences. The GP perspective is directly founded on the previous knowledge of doctor's experiences shared through articles, doctors I know personally, as well as a Primary Care module I've studied – in particular, literature we study called 'The Appointment' - a book conveying the thoughts and feelings of a GP during their consultations. The GP's perspective conveys that their medical position and outlook often seems to prevent people from appreciating what is really taking place underneath – mentally and emotionally. The GP's expressions were aided by the perspectives shared in Graham Easton's 'The Appointment' - the GP expresses a desire to be seen as a person, away from the pressures and expectations that come with the GP title. Upon reflecting on the reality depicted in the book, and the reality shared through GP presentations about the nature of each day of work during my module, I was able to reflect and suggest a vented expression of the difficulties to allow readers to bring a sense of human nature to GPs despite the efficiency of their work, providing an almost 'mechanical' or machine-like view of them. The GP perspective was written to express primary caregivers - like GPs - aren't machines of medical/clinical knowledge but are people that deserve to be seen as such. The patient's perspective conveys that they often feel their clinical presentation of a possible ailment can overshadow the person they are underneath. The disease and clinical presentation can often cloud the reality of the life a person might live – something strongly expressed to me in the context of Oncology. I reflected on this and the feelings this conjured up in patients and their families and worked to depict this through the patient view emphasis. The poem ends with the appreciation of both parties' expressions enabling their persons to be viewed away from the titles of patient and GP, and just being seen. With this poem, I wanted to bring light to the people making up in the complex dynamic of patient and doctor – not in context of their titles of 'patient' or 'doctor' but the truth: both are people before anything else. It is written to reflect the nature of medicine that can often be missed – the reminder that we are all living human beings.

Funding Acknowledgement:

8E.1

How can we improve the evidence base for monitoring long term conditions in primary care?

Presenter: Martha Elwenspoek

Co-Authors: Martha MC Elwenspoek, Rachel O'Donnell, Alice Malpass, Katie Charlwood, Mary Ward, Howard Thom, Jonathan Banks, Clare Thomas, Hayley Jones, Jonathan Sterne, Francesco Palma, Christina Stokes, Alastair D Hay, Jessica Watson, Penny Whiting

Author institutions: Bristol Medical School

Abstract

PROBLEM: Patients with long term conditions (LTC), such as chronic kidney disease (CKD), type 2 diabetes mellitus (T2DM), and hypertension, have regular blood tests to monitor disease progression, response to treatment, and detection of complications. There is currently no robust evidence to inform recommendations on monitoring and most guidance is largely based on expert opinion. Creating this evidence base is challenging because the benefits and harms of testing are dependent on what is done in response to the test result. The aim of this project is to develop evidence-based testing panels to monitor people with CKD, T2DM, or hypertension.

APPROACH: We created a list of candidate tests to consider for our panels by identifying tests that are currently recommended and tests that are currently done in these patient populations (using routine data). We defined a series of filtering questions to determine whether there was evidence to support the rational of monitoring, such as 'is this patient population at increased risk of the condition the test tries to pick up' and 'can the GP do anything in response to an abnormal test result?'. Through a series of rapid reviews we identified evidence to answer each question. The evidence was presented at a consensus meeting where clinicians and patients voted for inclusion or exclusion of each test or whether further evidence was needed. We are currently performing further analyses using routinely collected primary care data to collect additional evidence.

FINDINGS: We found sufficient evidence to include HbA1c and eGFR for monitoring T2DM patients; haemoglobin and eGFR for CKD; and eGFR for hypertension. The consensus panel excluded the following tests: haematinics, because they are not necessary to detect anaemia in addition to measuring haemoglobin levels; clotting tests, because there is no rationale linking bleeding disorders to the LTCs of interest; B-type natriuretic peptide, because it has a low accuracy for heart failure; and liver function tests for the purpose of drug monitoring, because it can be tested once after starting a new drug and there is no need for regular monitoring afterwards. However, the majority of tests were selected for further analyses, including blood electrolytes, lipid profile, full blood count, and bone profile, which are still ongoing.

CONSEQUENCES: The cost-effectiveness of the evidence-based testing panels need to be tested in clinical practice. We are currently developing an intervention package and are planning to run a feasibility trial. This programme of work has the potential to change how LTCs are monitored in primary care, ultimately improving patient outcomes, and leading to more efficient use of healthcare resources.

Funding Acknowledgement: This project is funded by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research Programme (NIHR201616). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

8E.2

"It's just some numbers": using cognitive informational styles theory to understand behaviour and expectations in relation to blood test monitoring for long term conditions

Presenter: Alice Malpass

Co-Authors: Rachel O'Donnell, Jon Banks, Clare Thomas

Author institutions: University of Bristol

Abstract

PROBLEM: Annual monitoring blood tests assess long term condition [LTC] disease progression, treatment response and associated diseases. Patients with LTCs who want to be more involved in their health. Drawing upon the patient activation and cognitive informational styles theory we wanted to better understand patient and healthcare professional behaviour, views and beliefs in relation to blood test monitoring for long term conditions.

APPROACH: As part of the Optimal Testing study we conducted qualitative in-depth-interviews. A topic guide was developed with PPI input. Patients and clinicians were purposively sampled from 4 GP practices, representing a range in social deprivation scores, patient list size and location (rural/urban). Interviews were conducted with patients living with Type 2 Diabetes , hypertension or chronic kidney disease (N=21); and with a range of health care professionals [HCP], including GPs, nurses, health care assistants, practice pharmacists and phlebotomists (N=21). Informed consent was taken for each interview. Interviews were recorded, transcribed verbatim and uploaded into NVIVO software.Reflexive thematic analysis was conducted. HCP and patient transcripts were coded separately and sequentially, before comparative analysis across clinician/patient coding. Theoretical codes were introduced after inductive coding had been completed as a way of developing the analytic insights of the thematically coded data. Drawing upon informational style theories, codes were created for 'monitors' (those who actively seek out information) and 'blunters' (those who avoid information) and applied across the patient data set. Patterns were explored between deductive theoretical coding and inductive thematic coding.

FINDINGS: We developed a typology of patient blunter and monitor characteristics and identified four key patient behaviour patterns in this typology: seeking out information about tests/test results, making blood test appointments, asking questions about tests/test results during or after a consultation, and attending appointments. Our results explore the links between paternalism and blunter or monitor behaviours; clinicians descriptions of monitor type behaviours; clinicians descriptions of blunter type behaviour; psycho-social explanations for monitor versus blunter behaviours; differences between HCP role and views of blunter and monitor behaviours; factors that may reinforce blunter style behaviour; the use of coercion versus better information to manage blunter style preferences.

CONSEQUENCES: LTC blood test information needs to be presented in a way that turns numeracy (the ability of patients to understand blood test numbers) into a form of illness knowledge. It is only then that we are more likely to see blood test result communication leading to improved patient outcomes. Using the monitor/blunter typology has helped us to better understand patient preferences for information and the way this interacts with clinician behaviours and attitudes, which will inform our development of an intervention aimed at improving communication.

Funding Acknowledgement: This work was funded by NIHR as part of the Optimal Testing study.

8E.3

How should we define severity phenotypes for long-term health conditions in analyses of primary care electronic health records?

Presenter: Jenny Cooper

Co-Authors: Krishnarajah Nirantharakumar, Shamil Haroon

Author institutions: University of Birmingham

Abstract

PROBLEM: Primary care electronic health records (EHR) are a rich real-world data source to study research priorities in patients with multiple long-term conditions (MLTC) who are often excluded from clinical trials. Studies of MLTC in EHR rarely account for disease severity since it is often not routinely recorded in patients' records. However, those with severe disease are phenotypically very different to those with mild disease in terms quality of life, treatment regime and susceptibility to and progression of other conditions. We aimed to explore views and develop consensus on reliable proxy indicators of severity within EHR for analyses of key long-term health conditions.

APPROACH: We used a multiphase, building sequential mixed-methods study design to identify severity phenotypes within EHR for nine key long-term conditions including diabetes, heart disease, and depression. Informed by existing literature, our previous research and clinical experience, we identified potential severity phenotypes based on measures including disease complications, symptoms, medications, test results, and interventions. We then conducted exploratory data analysis in a primary care EHR database containing over 12 million patients' records to determine the feasibility of using these options in primary care data. Purposive sampling was used to recruit participants with both clinical training and expertise in analysing EHR. Participants completed a survey, and contributed to a structured nominal group technique discussion session, which was facilitated to elicit participants' views (informed by the exploratory data analysis). Each participant used a 5-point Likert scale to rate clinical importance and feasibility of each of the proposed severity phenotypes independently.

FINDINGS: 11 male and 7 female clinical academics predominantly from general practice and public health backgrounds were recruited. Mean scores for clinical importance were highest for severity phenotypes based on disease complications (e.g. retinopathy in diabetes), and lowest for phenotypes based on symptom codes (e.g breathlessness in heart failure) and medication prescriptions (e.g. use of antidepressants in depression). However, use of prescription data and use of Quality and Outcomes Framework (QOF) incentivised measures (e.g. foot ulcer classification in diabetes) were ranked most feasible in EHR. Several clinical measurements such as ankle-brachial pressure index for peripheral vascular disease were too poorly accessible in the EHR database to be feasible measures of severity classification.

CONSEQUENCES: Many severity indicators that are important to patients and clinicians are not well captured in primary care EHR records databases. Better incentivisation and standardised recording methods (such as via QOF or templates) for primary care staff may improve data quality in EHR. However, several important proxy measures of severity are feasible in electronic health records, and should be used to improve the granularity of future analyses in studies involving patients with multiple long-term health conditions.

Funding Acknowledgement: NIHR

8E.5

What blood tests are justified for routine monitoring of long-term conditions?

Presenter: Lewis Buss

Co-Authors: Martha Elwenspoek, Katie Charlwood, Penny Whiting, Jessica Watson

Author institutions: Centre for Academic Primary Care, University of Bristol; Population Health Sciences, Bristol Medical School, University of Bristol

Abstract

PROBLEM: It is unclear what blood tests should be monitored periodically in people with hypertension (HTN), type 2 diabetes mellitus (T2DM) and chronic kidney disease stage 3 (CKD3). As part of our larger Optimal Testing project, we convened an expert panel that identified greatest uncertainty around monitoring sodium and potassium in HTN, T2DM and CKD3; haemoglobin in T2DM; and thyroid function in CKD3. Here we examine whether abnormalities of these analytes are more common in these long-term conditions than in those without. APPROACH: We used the clinical practice research datalink (CPRD) to identify people with HTN, T2DM and CKD3 diagnosed between 01/01/2011-30/12/2019 and age- sex- and practice-matched controls. We used Cox regression to analyse time to first abnormal blood result (sodium <135 or >145mEq/L, potassium <3.5 or >5.5 mEq/L or haemoglobin <120 or 130 g/L), to first clinically significant abnormal result (sodium <130 or >150 mEq/L, potassium <3.0 or > 6.0 mEq/L, or haemoglobin <100 g/L), and MED3 coded hypothyroidism.

FINDINGS: The total number of cases and 1:1-matched controls for HTN, T2DM and CKD3 were 83,563, 25,820, and 18,012, respectively. The proportion with at least one blood test was higher in cases than controls: 74%, 78% and 84% versus 39%, 40% and 48% for electrolytes in T2DM, HTN and CKD3, respectively; 71% versus 36% for haemoglobin in T2DM; and 47% versus 33% for TSH in CKD3. Among those with at least one test performed, the frequency of testing was still higher in cases, ranging from 1.6 versus 0.7 tests/year for sodium in T2DM to 0.7 versus 0.5 tests/year for TSH in CKD3. The hazard ratios for measuring an abnormal blood result were all significantly >1 for the LTCs, ranging from 5.4 (95%CI 4.9-6.1) for potassium in T2DM to 2.5 (2.3-2.7) for sodium in CKD3. To account for ascertainment bias due to higher testing in cases we restricted the analysis to those with at least one blood test and further adjusted for the yearly frequency of testing. The magnitude of all HRs fell, ranging from 1.7 (1.5-1.8) for haemoglobin in T2DM to 1.1 (1.0-1.2) for sodium in CKD3. There was a similar pattern for clinically significant abnormalities and coded hypothyroidism, with all HRs > 1 in the unadjusted analysis. But after accounting for testing frequency only potassium abnormalities in CKD (HR1.6, 94%CI 1.2-2.1) and sodium in HTN (1.2, 1.1-1.4) remained significantly > 1.

CONSEQUENCES: Our results suggest that routinely testing electrolytes, haemoglobin and TSH in selected LTCs leads to increased detection of small abnormalities – producing potential downstream work such as retesting to check resolution. However, the underlying rate of clinically significant test abnormalities is similar between those with LTCs and controls.

Funding Acknowledgement: This study/project is funded by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research Programme (NIHR201616). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

8E.6

What is the impact of regular monitoring using blood tests in people with long term

conditions on patient outcomes? Trial emulation using routinely collected primary care data.

Presenter: Katie Charlwood

Co-Authors: Katie V Charlwood, Martha MC Elwenspoek, Jessica C Watson, Jonathan AC Sterne, Penny F Whiting

Author institutions: University of Bristol

Abstract

PROBLEM: It is generally accepted that people with long term conditions benefit from regular monitoring. However, the evidence base for the optimal monitoring strategies, including which test should be used at what frequency, is weak. Current practice is largely based on expert opinion and local protocols vary, which has led to substantial variation in blood test use within the UK. We aim to investigate whether regular monitoring in people with type 2 diabetes mellitus (T2DM), hypertension, or chronic kidney disease with certain blood tests impacts health outcomes using routinely collected primary care data.

APPROACH: We are developing analyses to emulate a target trial using primary care electronic health records from Clinical Practice Research Datalink (CPRD) and Hospital Episode Statistics (HES). We are using a sequential trial approach to estimate the effect of regular testing with commonly used blood tests (including liver function tests, renal function tests, and lipid profile) on patient outcomes. We will compare patients who have received regular tests to patients who have not received these tests. The primary outcomes are events that could be prevented with regular monitoring such as unplanned hospital admissions. We will censor patients when they deviate from their assigned strategy, pooling data from the trials to use pooled logistic regression to calculate outcome cumulative incidence and risk difference. Time-varying confounding will be accounted for by applying time updating inverse probability weights.

FINDINGS: We are developing the analysis for liver function tests to monitor people with T2DM and aim to apply these methods to other tests and conditions within the next months. The eligibility criteria for this trial were having a T2DM diagnosis and HbA1c record +/- 30 days of diagnosis between 2004 and 2019, not being pregnant during the study period, and no history of liver disease. 41,778 people were eligible for trial recruitment. Patients were recruited on the date of their first HbA1c test 12 weeks after diagnosis and assigned to the testing strategy compatible with their data on that day. 18,489 people had a monitoring appointment without a liver function test and were assigned to the control group. 29,309 people had a liver function test with their HbA1c test and were assigned to the intervention group. Eighty percent of people in the control group and 56% of the intervention group switched monitoring strategy during follow-up and were censored.

CONSEQUENCES: We will use these findings to decide whether to recommend regular monitoring with certain blood tests in patients with T2DM, hypertension, or chronic kidney disease. Challenges developing these methods include accounting for residual confounding, high censoring rates, and limitations associated with routine data.

Funding Acknowledgement: National Institute for Health (NIHR) Programme Grants for Applied Research (PGfAR) Ref. NIHR201616

8E.7

Allied health group interventions for the management of adults with chronic conditions. An umbrella review of systematic reviews

Presenter: Sarah Dennis

Co-Authors: Professor Sarah Dennis 1,2,3 Ms Wing Kwok 1,4,5 Professor Jennifer Alison 1,5 A/Professor Leanne Hassett 1,3,4 A/ Professor Gillian Nisbet 1 Professor Kathryn Refshauge 1 Professor Cathie Sherrington 1,4 Professor Anna Williams 6

Author institutions: 1. Faculty of Medicine and Health, University of Sydney 2. Ingham Institute of Applied Medical Research 3. South Western Sydney Local Health District 4. Institute for Musculoskeletal Health, University of Sydney and Sydney Local Health District 5. Allied Health, Sydney Local Health District 6. Faculty of Nursing and Midwifery, Western Sydney University

Abstract

PROBLEM: Primary health care in Australia is a fee for service model. GP visits are subsidised by Medicare Benefit Schedule (MBS) but there are limited Medicare subsidies for people with chronic conditions requiring allied health interventions which means patients face out of pocket costs impacting equity and access to allied health services. Currently, MBS subsidised allied health interventions are only available to group programs provided for people with type 2 diabetes by exercise physiologists or dietitians. Allied health services at no cost to patients are available in public hospital outpatient departments but waitlists are long. This umbrella review was initiated in response to the findings of the MBS Review Taskforce Report on Primary Care 2020. The recommendation to extend MBS subsidies for allied health group interventions was not supported, concluding that more research was needed to demonstrate effectiveness. The research question was: What is the effectiveness of allied health group therapy services to improve the health-related outcomes for community dwelling adults with one or more chronic conditions?

APPROACH: An umbrella review of systematic reviews was conducted between April and July 2022, searching eight library databases. Systematic reviews were eligible if they reported randomised controlled trials (RCTs) or quasi-RCTs, published in English after 2000, included community dwelling adults aged ≥18, at least one chronic condition (eligible for GP Management Plan), and group intervention in scope for an allied health professional. Studies were excluded if inpatients of hospital or aged care facility were included, or interventions were out of scope for allied health, or unsupervised.

FINDINGS: 2385 systematic reviews were identified: after screening and full text review 154 were included and data extracted from 90. The chronic conditions included: cancer (n=15), cardiovascular disease (n=6), mixed chronic conditions (n=3), kidney disease (n=1), low back pain (n=12), respiratory disease (n=8), diabetes (n=14), heart failure (n=9), risk of falls (n=5), hypertension (n=4), osteoarthritis (n=6) and stroke (n=8). Most group interventions included exercise and were in scope for physiotherapists and exercise physiologists. Overall, a group exercise program of 45-60 minutes per session, 2-3 times per week for 12 weeks for community dwelling adults improved health outcomes for most of the chronic conditions. Lifestyle education and support for people with type-2 diabetes improved glycaemic control.

CONSEQUENCES: A large number of systematic reviews confirm that prescribed group exercise delivered by allied health professionals significantly improves health outcomes for community dwelling adults with a broad range of chronic conditions. This evidence supports expanding the existing Medicare funded allied health items to include group exercise sessions for a range of chronic diseases to reduce disease burden and overall healthcare costs.

Funding Acknowledgement: No funding

Trauma-informed primary care: from evidence to practice

Presenter: Natalia Lewis

Co-Authors: 1. Natalia Lewis, University of Bristol 2. Michelle Farr, NIHR ARC West, University of Bristol, 3. expert by experience from Bridging Gaps project 4. Kelsey Hegarty, University of Melbourne, Australia

Author institutions:

Abstract

To improve participants knowledge and skills about trauma-informed primary care through creating the opportunity to:

1) Explore research evidence for trauma-informed primary care

2) Familiarise with examples of implementing trauma-informed organisational interventions in primary care

3) Reflect on how applicable these examples are to their organisations

A trauma-informed approach in healthcare starts from the assumption that every patient and member of staff may have been affected by trauma. It is an organisational change intervention that incorporates knowledge about universal prevalence and impacts of trauma into policies and practices, creates safe environments and relationships, and promotes physical and emotional safety for all patients and staff. By providing services in a trauma-informed manner, it aims to prevent re-traumatisation of patients and staff and improve experiences and outcomes for all. Many policies and guidelines recommend implementing such approaches across healthcare organisations and systems. We will summarise research evidence for the effectiveness and acceptability of trauma-informed organisational interventions in primary care and provide two cases of implementation in the context of Australian and UK primary care. The Australian case will share examples from the Safer Families Readiness Program of how practices have chosen to change to improve responses to trauma. The UK case will share examples of how all GPs and practices can adopt more trauma-informed approaches and how one practice improved trauma-informed access within current budgets. Facilitated by primary care researchers and an expert by experience, participants will explore how applicable these examples are to their own organisations. This workshop is aimed at commissioners, managers, practitioners, researchers, people with lived experience who are interested in implementing trauma-informed approaches in primary care.

Funding Acknowledgement:

8G.1

Sustainable approaches to coproducing engaging and effective healthcare interventions with people from underserved communities

Presenter: Lucy Yardley

Co-Authors:

Author institutions:

Abstract

Aim and intended educational objectives: Many different forms of co-production and participatory research are currently being explored to try to improve inclusivity, diversity and equity in primary care research. This workshop will provide an opportunity for primary care researchers with experience of coproduction to share their experiences of what approaches have worked well and the challenges encountered and for researchers interested in learning about coproduction to gain insight into the advantages and limitations of different approaches. Through discussion, the workshop will facilitate the generation of promising approaches for the future. "Format: Introductions (10 minutes): All workshop participants will very briefly

introduce themselves and state their interest/experience in coproducing interventions. Workshop coordinators will then initiate two 20 minute structured discussions around the following topics: a) What are the most inclusive, effective and sustainable methods of engaging people from underserved groups in coproduction? b) What approaches are most appropriate when the aim of the research is to coproduce healthcare interventions that will be effective in achieving better health? Future directions (10 minutes): Workshop coordinators will prompt group consideration of what has been learned from the workshop discussions, including directions for future research and collaboration." Content: Workshop coordinators will initiate the 20 minute discussions by briefly describing and critically reflecting on some of their own experiences of using the Person-Based Approach in a variety of ways for coproducing interventions (https://www.personbasedapproach.org/ppi.html). Workshop participants with experience of coproduction will also be invited to share their experiences of coproducing interventions. Experiences of coproduction that will be shared by workshop coordinators will include working with: young people; black and Asian women, people from the Gypsy, Roma and Traveller communities; Urdu speakers; people living in the global south; people experiencing homelessness; people who use drugs and alcohol. We have sought permission for two of our PPI collaborators from underserved groups to take part (waiving conference fees as they will only attend this workshop). All workshop participants will be invited to contribute by recording on a group padlet their views on a) the advantages and b) disadvantages of different approaches (for example, for particular contexts and/or for particular purposes) and c) to suggest potentially useful or novel approaches or combinations of approaches. The workshop facilitators will also use the padlet to record views expressed during the workshop. The views collated on the padlet will then be used to prompt the final discussion of promising future directions for research and collaboration in coproduction. Intended audience: Primary care researchers at all levels of experience who have an interest in coproduction and participatory research with people from underserved groups.

Funding Acknowledgement:

9B.2

Consultations in the general practice setting for adults who use interpersonal abuse and violence.

Presenter: Dr Wei-May Su

Co-Authors: Dr Elizabeth (Libby) Dai, Dr Elizabeth Conroy, Prof Kelsey Hegarty, Prof Penelope Abbott

Author institutions: Western Sydney University, The University of Melbourne, University of Notre Dame, HETI, NSW Health,

Abstract

PROBLEM: Interpersonal abuse and violence is a public health tragedy. We cannot address the cycle of abuse and violence within our community without also addressing those who use abuse and violence. This scoping review is to understand what we know about the General Practice consultation, specifically: Within general practice, how are adults who use interpersonal abuse and violence identified, responded to, and motivated towards changing abusive behaviour?We use the Royal Australian College of General Practice (RACGP 2021) definition. Interpersonal abuse and violence may be directed towards a partner or family member, or towards someone in the community. Behaviours can include physical, emotional (including neglect), sexual, economic and social abuse, and can occur in person or through technology. Most interpersonal abuse and violence is directed towards women, and most commonly perpetrated by

men. However, interpersonal abuse and violence can occur in multiple ways, and our review is not limited by gender patterns or the form of violence used.A preliminary search of MEDLINE, the Cochrane Database of Systematic Reviews, JBI Evidence Synthesis and Open Science was conducted and no current or underway systematic reviews or scoping reviews on the topic were identified. RACGP. (2021). Abuse and Violence: working with our patients in general practice, 5th edition (the White Book).

APPROACH: The scoping review will be conducted in accordance with the JBI methodology for scoping reviews (Peters MDJ 2020). The search strategy aims to locate both published and unpublished studies using a three-step search strategy. First an initial limited search of MEDLINE (Ovid) and Google was undertaken to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy for Medline (OVID); Embase (OVID); CINAHL (EBSCO Host); PsychInfo (EBSCO Host); Scopus, and grey literature. Sources of unpublished studies and grey literature to be searched include Google and Open Access Repositories (Google Scholar). Other search techniques included hand searching, scanning bibliographies of pertinent authors and contacting experts.

FINDINGS: This is a work in progress. We will share our protocol and preliminary results. Preliminary findings indicate that much of what we know about abuse and violence comes to us from survivors, police, legal or forensic settings, or identified addiction or mental ill-health. Medical practitioners can also be affected by interpersonal violence by colleagues or patients or can themselves be perpetrators.

CONSEQUENCES: General Practitioners often report discomfort consulting in this space, which is a barrier to effectively addressing the global violence epidemic. We anticipate

FINDINGS: from this review will inform future research and training programs to upskill practitioners.

Funding Acknowledgement: This research is undertaken as part of Dr Wei-May Su's MPhil candidature, Western Sydney University, with in kind support from Safer Families.

9B.3

How does Panel Size impact Primary Care Physician level Continuity of Care?

Presenter: Andrew Bazemore

Co-Authors: Zach Morgan

Author institutions: American Board of Family Medicine; Center for Professionalism and Value in Healthcare

Abstract

PROBLEM: Continuity of care (CoC) between patients and their primary care physician (PCP) is essential for effective primary care. Whether larger patient panels form a barrier to timely access to appointments and hinder CoC attainment has not been thoroughly studied in the United States, where physician level continuity measurement remains fairly novel and nascent. We used a large secondary claims database and recently endorsed measure of physician-level CoC to determine the relationship between CoC and panel size.

APPROACH: This cross-sectional analysis utilized 2019 Virginia All Payer Claims Data (APCD) to investigate the association between panel size and CoC among Medicare patients. Patients were attributed to their primary PCP using a proprietary methodology, and CoC was measured using the Bice-Boxerman Continuity of Care (BB-COC) index. Panel size was defined in two ways: by attribution method (counting patients attributed to each PCP) and unique patient method (counting patients having any

PC visit with the PCP). Logistic regressions were performed, adjusting for patient and PCP covariates, with random intercepts at the PCP level.

FINDINGS: Analysis included 533,583 patients attributed to 2,988 PCPs with 2,855,004 PC visits. PCPs had a median panel size of 593 by attribution and 820 by unique patients. The mean BB-COC score was 0.56, with 52% of patients exhibiting high CoC. There was no significant association between CoC and panel size by attribution. However, a significant association was observed with panel size by unique patients. Patients attributed to PCPs with panel sizes in the bottom quartile had a 60% high CoC rate compared to 49% in the top quartile, with an adjusted odds ratio of 2.32. CONSEQUENCES: This study highlights the importance of panel size in achieving higher CoC, particularly when considering all unique patients rather than solely attributed ones. Physicians managing smaller panels demonstrated significantly higher CoC rates. Monitoring patient volume and ensuring timely access to care could enhance CoC between patients and their PCPs. These

FINDINGS: underscore the need for healthcare systems to consider optimal panel sizes to facilitate better patient-physician relationships and improve primary care outcomes

Funding Acknowledgement: None

9B.4

How to present cancer risk assessment results to patients, GPs and specialists? Co-designing a new CanRisk report

Presenter: Francisca Stutzin

Co-Authors: Stephanie Archer, Tim Carver, Antonis Antoniou, Doug Easton, Marc Tischkowitz, Juliet Usher-Smith, Fiona Walter

Author institutions: University of Cambridge, Queen Mary University of London

Abstract

PROBLEM: Multifactorial cancer risk prediction tools, such as CanRisk, are increasingly being incorporated into routine healthcare. Understanding risk information and communicating risk to patients can be challenging and research shows that healthcare professionals rely substantially on the outputs of risk prediction tools to communicate results to patients. This paper focuses on how to best present the results from CanRisk so people undergoing risk assessment can directly access key information, and healthcare professionals can communicate risk estimates effectively.

APPROACH: Over a 13-month period, we led an 8-step co-design process with stakeholders including patients, members of the public, and healthcare professionals. Steps comprised 1) a think aloud session using an existing CanRisk report; 2) a preliminary round of structured feedback on the existing report; 3) an informal literature review; 4) prototype development; 5) first round of structured feedback; 6) updating the prototype; 7)second round of structured feedback; and 8) finalising the report.

FINDINGS: We received 56 sets of feedback from 34 stakeholders. Overall, the original CanRisk report was not suitable for those without specialist training in genetics. Feedback helped to define the needs of users, prioritise recommendations from the literature, and guide the development and update of the prototype into the revised report.

CONSEQUENCES: This co-design experience shows the value of collaboration for the successful communication of complex health information. As a result, the new CanRisk report has the potential to better support shared decision-making processes about the management of cancer risk across clinical settings.

Funding Acknowledgement: Cancer Research UK (PPRPGM-Nov2/7100002).

9C.1

What interventions have been used to improve patients' spiritual health in UK primary care, a realist review? Part of the 'SHARP' (spiritual health assessment and recommendation in primary care) project.

Presenter: Orla Whitehead

Co-Authors:

Author institutions: Newcastle University

Abstract

PROBLEM: Spiritual health is an important part of holistic health in terms of patient care, but also care of ourselves as doctors. Spiritual health includes self-actualisation, being true to our ethical code, identity, culture, meaning and purpose; relationships with others, our communities, our wider culture and sometimes a deity or a sense of something greater; spiritual and religious practices and activities. There are multiple barriers to embedding spiritual health within primary care, including lack of training, concerns about regulator (the GMC) and peer disapproval, and discordance between clinician and patient beliefs. However, spiritual wellbeing is associated with better health and longevity. There is evidence from the point of view of spiritual and religious community support that there can be barriers to a useful relationship with clinicians to improve patient care. Taking a realist approach to synthesising the evidence so far will allow us to understand what has been tried to improve spiritual health, what has worked well, what could be better, and how could spiritual health be better embedded in UK primary care?

APPROACH: We are undertaking a realist review of current or previous interventions used in the UK to improve spiritual health care in primary care. This will review and synthesise the evidence around initiatives such as primary care chaplaincy trials, and the relationship between spiritual community workers and primary care. This methodology allows a wider appreciation of evidence, and an open minded, iterative approach that will best elicit the evidence needed on this topic.

FINDINGS: This review is in its early scoping stages. Primary care chaplaincy services have been trialled in areas of Scotland and England to improve patient access to spiritual health care. The use of primary care chaplaincy may reduce demand on GP appointments, and they could be viewed as an integral part of the multi-disciplinary team. However, primary care chaplains are small in number, and this service is offered in very few areas, so access is the main limitation. Where spiritual care has been trialled in Europe (Germany and Switzerland) it has showed some benefit to patients, however there are limitations on long term funding.

CONSEQUENCES: This review is crucial to understand how spiritual health has been addressed in primary care so far, and allow us to progress the conversation on the topic in a useful, pragmatic way. The next stages of the SHARP project involves a mixed method study with social prescribers, to understand barriers and facilitators to discussing spiritual health. The review and study, together with our previous work, will allow us to co-design a training package to embed the discussion of spiritual health within the holistic care offered by primary care in the UK.

Funding Acknowledgement: Thank you to the The John Templeton Foundation who have funded this project.

9C.2

What is the role of Vocational Support Workers in supporting patients' return-to-work planning?

Presenter: Rosie Harrison

Co-Authors: R. Harrison, G. Wynne-Jones, C. Chew-Graham, I. Madan, V. Parsons, K. Walker-Bone, G. Mansell, B. Saunders

Author institutions: Keele University, Guy's and St Thomas NHS Foundation Trust, King's College London, Monash University, Aston University

Abstract

PROBLEM: Over 2.6 million people in the UK are absent from work due to ill-health with detrimental effects for the economy and the individual in terms of mental and physical wellbeing, as well direct financial impacts, and is thus a key policy priority. Accessing vocational support during sickness absence to facilitate return-to-work (RTW) is challenging for many people, and there is a paucity of evidence about what makes effective vocational support delivered in primary care settings. As part of the Work And Vocational advicE (WAVE) trial, we aimed to explore the delivery of vocational support by trained Vocational Support Workers (VSWs), from the perspectives of patients, VSWs, employers and GPs. APPROACH: Semi-structured interviews were conducted with 10 patients who had received fit notes, two employers, two VSWs and one GP. Interviews were audio-recorded, transcribed and analysed using an inductive thematic approach. Patients have been involved throughout the study through a Research User Group (RUG) who influenced the development and implementation of the study. The lay co-applicant attended regular team meetings which included discussions of the initial findings and analysis of the qualitative study.

FINDINGS: Our findings show that RTW planning was an individualised process, which incorporated how the patient felt about their health condition and workplace. By taking a holistic approach, the VSWs were able to identify and work with the patient to mitigate their barriers to RTW, and support an expedient return to the workplace. The independence of the VSW from their employers and other organisations was an important aspect of providing vocational support, as it engendered trust and provided the opportunity for patients to discuss potential workplace adaptations without fear of adverse consequences from their employer or any statutory benefits they may receive. Additionally, patients could disengage from RTW planning when contact with employers was sporadic or minimal. VSWs mitigated this through building patients' self-efficacy and empowered them to negotiate their RTW proactively with their employer. Whilst employers perceived direct contact with VSWs positively, patients were concerned of the potential implications of such interaction. To provide effective vocational support, VSWs required training and ongoing mentoring support through multi-disciplinary supervision. Regular supervision offered a valuable opportunity to draw on the experiences of the multi-disciplinary team and provided access to peer support, an important aspect of ongoing professional development.

CONSEQUENCES: Enhancing sustainable primary care which facilitates healthy people and healthy systems necessitates attention paid to the role of vocational support and the ways in which patients can be supported in their RTW planning. These FINDINGS: point to the need for vocational support to be initiated and delivered within primary care, and could inform future vocational support interventions to support people to RTW more efficiently.

Funding Acknowledgement: This study was funded by the National Institute for Health Research (NIHR) Health Technology Assessment (HTA) programme (grant ref: 17/94/49).

9C.4

The Space of Consulting: A Photographic History of General Practice

Presenter: Barbara Caddick & Helen Leach

Co-Authors:

Author institutions:

Abstract

Originally a creative enquiry submission: This work demonstrates the contribution that archival research and an understanding of the past can bring to the field of academic primary care. Historical photographs of clinical encounters and spaces of primary care have reframed how we as researchers think about the built environment of primary care. Taking a historical approach to bring together contextual and archival photographs taken in primary care shows that this environment has changed in a relatively short space of time. Photographs depict these changes visually and this has informed our understanding of how the changing spaces of clinical practice impact and influence the encounters that happen within them. The interdisciplinary integration of historical research into that of primary care allows for a deeper exploration of context and understanding. In this creative enquiry, we will use archival images from the Royal College of General Practitioners Heritage Collections and more contextual images to illustrate these changes, starting with the patient's home, moving to a surgery inside the GP's house, to purpose-built clinical facilities and onward to consider the impact of remote consultations where the patient and practitioner do not share the same space. A brief investigation of these images will explore changes to the healthcare environment and consider how they may relate to the changing power dynamics within the medical encounter and the increasing sense of depersonalisation felt by both patients and clinicians. Historically, medical encounters have taken place in personal spaces, intertwining the lives of doctors, their families, and their communities. The subsequent development of purpose-built facilities replaced the home with wipe-down chairs, plastic curtains and, particularly since the Covid-19 pandemic, infection control guidelines restricting the furnishing of clinical spaces with personal artefacts. The photographs consider whether these changes have contributed to some of the evolving attitudes towards general practice by shifting the encounter from the 'personal' to the 'impersonal' space. Not acknowledging the history of these spaces is at odds with many patients' experiences; by bringing historical experiences into context, we may be better placed to create spaces that strengthen relationships between patients and clinicians and not just clinical efficiency This work complements ongoing current research into relationships in primary care, particularly in the evolving new world of remote consulting and provides a novel view. By utilising photographs, this work will provoke reflection as to how space and environment influence the clinical encounter and relationship between patients and clinicians. Whilst this piece uses archival images, future work could include engagement with the public to sharing photographs and memories of space and relationships within primary care.

Funding Acknowledgement:

9D.1

Refugees' health and primary care research: A co-occurrence network analysis during a decade

Presenter: Manal Etemadi

Co-Authors: -

Author institutions: University of Bristol

Abstract

PROBLEM: Universal primary healthcare services play an integral role in supporting and optimising the health and wellbeing of Asylum seekers and refugees. Providing access to vaccinations and primary care is an important priority to ensure that migrants' health needs are addressed. This study aimed to objectively describe the knowledge domain and emerging

trends of refugees' health in primary care research.

APPROACH: This research was of the type applied, scientometric, and descriptive. The author conducted co-occurrence network analyses to graphically depict the relationships between the extracted words. 109 journal articles published on refugees and primary care during the last decade (2014-2024) have been reviewed. First, basic publishing and citation data were gathered using the Scopus database. MeSH terms of the articles were reviewed and categorized. The co-occurrence matrix of was used by the Ucinet software to calculate parameters including degree centrality and betweenness centrality. The results of these analyses were then used to conduct a social network analysis (SNA) aimed at clarifying relationships among high-frequency words for the purposes of data quantification and visualization. The Micro Social Network Analysis indicators, such as degree centrality and betweenness centrality, and macro-indicators such as size and density have been used.

FINDINGS: 193 nodes (words) has been identified in the network. The keywords with high co-occurrence were mental health, health care delivery, health services accessibility, and access to healthcare, which proved that the focus of research in the past few years has been turned to refugees' mental health and their access to primary care services. Health services accessibility, Health care delivery, Health Services Needs and demands had the highest degree centrality which show the importance of these terms in the network, while health equity and social needs had the lowest degree centrality. Moreover, Health care delivery, mental health, and health services accessibility had the highest betweenness centrality, identified as the vital points that provide important bridging connections between two research interests. The author finds that centrality measures can be useful in identifying keywords that appear in various contexts of primary care and refugees.

CONSEQUENCES: Trending keywords could be used as a reference for future research. The presentation of the thematic map of the articles will make the researchers more aware of the status of the research conducted and the subject's gap. The results of this study revealed that the top three main terms with the highest co-occurrence frequency also exhibited the highest degree centrality. It could help readers broaden innovative ideas and discover new research area opportunities, and also served as important indicators for host health system governance policymaking. This is a call for health equity agenda in primary health care research.

Funding Acknowledgement: -

9D.2

What factors influence access to primary health care and contributes to health inequalities for minority groups in sub-urban New Zealand?

Presenter: Alexander Browne

Co-Authors:

Author institutions:

Abstract

<p>SAPC/RCGP Elective prize winner 2024

Funding Acknowledgement:

9D.3

An evaluation of salon and primary care staff perspectives for CVD prevention in ethnically diverse women in hairdresser and beauty salons

Presenter: Ciana Dsouza

Co-Authors: Marjorie Lima de Vale Phd , Veline L'Esperance MSc, Sarah Armes, Clare

Coultas Phd, Louise Goff Phd, Ashlyn Mernagh-iles HND, Alexis Karamanos PhD, Salma Ayis PhD, Vasa Ćurčin, PhD, Stevo Durbaba MSc, Mariam Molokhia, Phd and Seeromanie Harding PhD

Author institutions: King's College London School of population health and environmental sciences

Abstract

PROBLEM: Cardiovascular disease (CVD) prevention shows health and gender disparities, particularly among the economically disadvantaged and some ethnic minority groups. Cardiovascular disease affects 3.6 million women in the UK and annual CVD-related health care costs the NHS in England about £9 billion. Beauty salons for health promotion have shown promising results in the United States as environments where women feel comfortable exchanging advice due to long-standing positive rapport and relationships. Integrating community structures into existing primary care pathways can provide a sustainable process to address inequalities in access to health care with significant patient and NHS benefits.

APPROACH: our practices have been selected in South London using GIS and online directories mapped to neighbouring salons in socioeconomically deprived and ethnically diverse areas. Insights for focus group discussions were drawn from our qualitative evaluation of the salon and GP staff CVD health promotion training carried out previously. Two focus group discussions were held (2 practices for each discussion) made up of at least one nurse, one HCA, and one administration staff member from each Practice. In-depth interviews were carried out with one GP from each Practice (n=4) separately to avoid any hesitations from the other surgery staff to openly discuss issues. One focus group discussion was held with the salon staff. Thematic analysis will be used to generate insights into their experiences of health promotion, why women are being under-diagnosed with cardiovascular diseases, and barriers and opportunities for better engaging these groups. Data from focus groups and individual interviews will be analysed using reflexive thematic analysis; a foundational analytic method in qualitative research that supports the identification, analysis and reporting of patterns (themes) within data with NVivo 12 software. We will identify concordant and discordant views from practice and salon staff and reasons behind these.

FINDINGS: We aim to explore understandings from salon and primary care staff of why women are being under-diagnosed with cardiovascular diseases, and barriers and opportunities for better engaging these groups. Focus groups and interviews will inform a culturally adapted complex intervention to reduce cardiovascular risk and promote uptake of NHS health checks amongst eligible women.

CONSEQUENCES: Our FINDINGS: will guide the co-development and signposting of a complex health intervention incorporating culturally tailored CVD health promotional materials in a culturally equitable and accessible manner.

Funding Acknowledgement: Funding: NIHR RfPB grant 202769

9D.4

The evolution of Ghana's Networks of Practice: The influence of state and non-state actors on the implementation of a primary health care policy

Presenter: Adwoa Agyemang-Benneh

Co-Authors: Jonathan Hammond, Igor Francetic, Katherine Checkland

Author institutions: University of Manchester

Abstract

PROBLEM: Politics plays a key, sometimes underexplored, role in the allocation of public funds to healthcare. In addition to macro-level decisions about national funding, internal decisions about the distribution of those funds, and about optimal governance and service delivery models will be affected by the politics at play at multiple scales. In low- and middle-income countries in particular, non-state agencies (e.g., NGOs and multilateral funders) are often active actors in the policy-making arena as well as in policy implementation.Primary care networks, a primary health care (PHC) model, are viewed as an innovative way to link primary care stakeholders to achieve improvements in population health. Increasingly, such networks are viewed as an appropriate model of primary care governance and service delivery, especially in low-income settings where healthcare systems involve multiple state and non-state actors.Ghana is currently 'scaling up' so-called networks of practice (NoP), a PHC model that has evolved since being piloted in 2017. This evolution has been largely unexplored.This study aimed to explore how the NoP's implementation and evolution to date has been influenced by political processes associated with state and non-state actors, identifying the key mechanisms in this process.

APPROACH: This qualitative study involved semi-structured interviews and documentary analysis. Interviews were conducted with key stakeholders in Ghana's NoP policy and implementation process. Relevant documents were analysed, including grey literature on the broader political occurrences in the country. Capano and Pritoni's policy cycle framework was used for data analysis, including agenda setting, formulation, adoption (decision making), implementation and evaluation.

FINDINGS: Ghana's NoPs have a clearly set agenda at each stage of its evolution, driven by various actors. This informed the policy formulation process. However, adoption has varied across the country depending on which actors took on a central role. We also found that NoP policy implementation shifted over time from a focus on financing to a service delivery approach, reflecting the priorities of influential state and non-state actors. Importantly, foreign donors also contributed to continued development of the network concept in specific areas, linking its implementation to targeted funding. The implementation and evaluation stages are still in progress, limiting a conclusive analysis of these stages.

CONSEQUENCES: The policy process is significantly influenced by the political context, and state and non-state actors at play. Ghana's example shows how changes in state authority and influence of donor agencies may define the policy cycle of a primary health policy. It also provides key lessons of necessary considerations to be made when PHC models are being implemented in low- and middle-income countries.

Funding Acknowledgement: A. Agyemang-Benneh is a Doctoral Researcher whose work is funded by the NIHR School for Primary Care Research

9E.1

Do nebulised short-acting β_2 agonists cause transient blood glucose changes that impact asthma exacerbations?

Presenter: Craig Mortimer

Co-Authors: Dimitra Nikoletou, Ann Ooms, Julia Williams

Author institutions: South East Coast Ambulance Service NHS Foundation Trust, Kingston University - London, St George's University - London

Abstract

PROBLEM: β_2 agonists are a class of drug used to target specific receptors within the smooth

airway muscle of asthma patients in exacerbation. Whilst the intention is to reduce constriction and inflammation through targeted action, a weak binding ability often results in stimulation of α1, α2 and β1 receptors resulting in adverse changes within the cardiovascular, respiratory and endocrine systems. As a result of α1 and α2 stimulation, transient changes within blood glucose levels are often referenced given the potential for increased levels to impact the ventilation/perfusion (V/Q) ratio and thus potentially magnify the exacerbation. Focusing on the emergency setting where exacerbations are often more severe, greater variables are involved and dosages are higher, the study sought to ascertain the effect nebulised β_2 agonists have on the blood glucose levels of asthma patients and how that correlates to their cardiorespiratory output.

APPROACH: Two phases of data collection undertaken within a single NHS ambulance Trust provided analysable data encompassing a 6-month timeframe. Phase 1 (P1) involved ambulance paramedics recruiting asthma patients at point of care, with Phase 2 (P2) being retrospective data collected from all patients receiving nebulised salbutamol across the 6 months. To reduce the level or variability and provide more consistent data sets for singular and joint analysis strict inclusion/exclusion criteria developed through consultation with different patient and public groups was used to recruit participants and filter P2 data. Primarily descriptive analysis was used to summarise and identify patterns within the data followed by inferential analysis to highlight relationships.

FINDINGS: At the end of the timeframe data sets from 176 patients were analysed. Demographic showed 64% female, mean age 42 years and a largely white British ethnicity distribution. FINDINGS: from both phases are consistent. Post nebulisation measurements showed decreased heart rate (HR) in 62.5% (P1), 65% (P2) of patients; decreased respiratory rate (RR) in 87.5% (P1), 74% (P2) and an increased peripheral oxygen saturation (SpO2) in 75% (P1), 59% (P2). Phase 1 data further showed a post nebulisation capillary blood glucose (CBG) level increase in 87.5% of patients. A central tendency for RR and HR to reduce, and SpO2 to increase post treatment is seen. P1 subset data further shows a tendency for CBG levels to increase in circumstances when the RR reduces and the SpO2 level increases. Further research is needed to understand the dichotomy in pulse rates.

CONSEQUENCES: A strong correlation seen between RR, SpO2 and CBG measurements during administration suggests the presence of actionable side effects amongst asthma patients. Due to the potential effect of increased glucose levels in both the short and long-term, clinical significance is shown for all asthma patients with or without existing diabetic markers.

Funding Acknowledgement: South East Coast Ambulance Service NHS Foundation Trust provided funding acquired from the Clinical Research Network Kent Surrey and Sussex (CRN KSS) to facilitate PPIE focus groups as part of study protocol development.

9E.2

Self-management behavioural change as a result of engagement with online peer support: Insights from a qualitative analysis of a UK asthma online community

Presenter: Vinesh Dhir

Co-Authors: Wood HE, Li X, Karampatakis GD, De Simoni A.

Author institutions: Queen Mary University of London

Abstract

PROBLEM: Background:Patients with long term conditions take part in online health

communities (OHCs) for advice and guidance from peers (other patients with similar conditions). Engagement with these communities may prompt changes in self-management behaviour. Limited information, however, exists on determinants of behavioural change as a result of engagement with an OHC.Aim:To understand factors that might drive changes in self-management behaviour following engagement with an asthma OHC.

APPROACH: Design & setting:Qualitative and sentiment analysis of posts written between December 2022 and August 2023 in the OHC of the Asthma + Lung UK (ALUK) charity. Method:OHC posts were identified using the search term 'helped' with Google search engine and collected for analysis, together with all other posts within the same threads. Thematic analysis was applied to posts driving a change in behaviour using the Behaviour Change Technique (BCT) Taxonomy. Sentiment analysis was used to explore the sentiment (positive, neutral and negative) accompanying behaviour change.

FINDINGS: Results:Thirty-five threads were identified, of which 17 (48.6%) showed self-management behaviour change as a result of users' interactions. The 17 threads included a total of 362 posts by 18 users (9 female, 1 male, 8 not stated). Intention to change behaviour was declared in 32/362 posts, actual change in 6/362 posts, and both in 1 post. Behaviours and intentions to change behaviour included: contacting primary care services, trying on other users' recommendations, asking to change medication, and purchasing equipment. 52 posts were identified as driving the behaviour change, using 12 BCTs. Common BCT were: Demonstration of behaviour (n=30), Action planning (n = 26), Instruction on how to perform the behaviour (n=17), Adding objects to the environment (n=15), and Pharmacological support (n= 10). In all cases, a combination rather than a single BCT were used in each post that led to change. In 66.7% of these threads, the sentiment of participants showing behaviour change shifted from negative to positive.Conclusion:Online peer support can be associated with self-management behavioural change among individuals with chronic health conditions such as asthma. 'Demonstrating behaviour' and 'action planning' by users might be successful techniques in fostering both intention and actual behavioural change in patients taking part in the OHC.

CONSEQUENCES: - Patients with chronic illnesses engage with OHCs for support and advice.- We found that online peer support is associated with self-management behavioural change, like seeking further pharmacological support from healthcare services, over-the-counter/self-supportive advice, and contacting medical professionals.- By applying the behaviour change technique taxonomy BCTs we identified 'Action planning', 'Instruction on how to perform the behaviour', 'Adding objects to the environment', and 'Pharmacological support' as the active ingredients driving patient self-management behavioural change as result of engagement with asthma OHCs.

Funding Acknowledgement: NIHR202037 Programme Grant for Applied Research

9E.3

The role of remote facilitation within the IMP2ART study- a potentially useful tool for implementation within Primary Care?

Presenter: Liz Steed

Co-Authors: Viv Marsh, Atena Barat, Vicky Hammersley, Jessica Sherringham, Stephanie Taylor, Hilary Pinnock

Author institutions: Queen Mary University of London, University College London, University of Edinburgh

Abstract

PROBLEM: Supported self-management is the cornerstone of asthma care yet its implementation within primary care continues to face challenges. Implementation science theory (iPARIHS) recommends that skilled facilitators can be an important catalyst for change. This approach was used in the IMP2ART whole systems implementation trial, where skilled respiratory nurses supported implementation of supported self-management through remote facilitation in an introductory one hour workshop and follow-up contacts over 12 months. Understanding what facilitation activities were practiced, and possible, through remote only facilitation is important to understand the extent IMP2ART was implemented as planned and to inform future use of facilitation in primary care. This was the primary aim of this study.

APPROACH: IMP2ART recruited 144 primary care practices to a cluster randomized implementation trial with half randomized as implementation practices. Four respiratory nurses with prior experience of facilitation were identified, trained and supervised. To assess facilitation a bespoke tool the FACE (Facilitators Activities and Competencies Evaluation) was developed based on identified competencies in the literature. A 10% sample of implementation practices, stratified so at least one practice per facilitator was selected, underwent coding which was conducted independently by two members of the research team.

FINDINGS: Stage one of coding looked at delivery of seven initial workshops. Preliminary FINDINGS: suggest that in all practices' facilitators were able to deliver core activities such as communicate the importance of team working and setting a team plan. Some activities however were more challenging, such as facilitating the team to interpret audit and feedback results and ensuring equal participation by all members of the practice. These activities may have been made more complicated by limited visibility of participants due to the remote nature of facilitation and technical difficulties such as only one microphone shared between many.

CONSEQUENCES: Online facilitation has significant potential to support implementation of initiatives within primary care. It is also likely to be a cost-effective and efficient implementation strategy. The IMP2ART trial has shown that this is feasible, however it is possible that this mode of facilitation may limit delivery of some facilitation activities. This has implications for the set up and design of online facilitation which should be considered at the outset of implementation design.

Funding Acknowledgement: Funding: The National Institute for Health and Care Research (NIHR) Programme Grants for Applied Research (RP-PG-1016-20008).

9E.4

Exploring the experiences of remote health care delivery among people with chronic obstructive pulmonary disease from minoritised ethnic groups and their carers: a qualitative study

Presenter: Nina Fudge, Helen Atherton

Co-Authors: Brenda Hayanga, Helen Atherton, Stephanie Taylor, Nina Fudge, Marta Wanat, Grainne Colligan, Ceri Durham, Eleanor Southgate

Author institutions: Queen Mary University of London, City, University of London, University of Southampton, University of Oxford, Social Action for Health (community partner)

Abstract

PROBLEM: Remote health care delivery (via telephone, smartphone, video link/other website platforms) has become a more common form of health care delivery but some studies have highlighted that while remote care delivery may work well for some

type of patients, it may not work well for patients with chronic obstructive pulmonary disease (COPD). Patients with COPD commonly have other long term health conditions with complex needs, are older, are less likely to access or use technology and patients from an ethnic minority group may require language support during consultations. Thus, the move to remote health care delivery could widen inequalities. Little is known about the views and experiences of remote care from the perspectives of patients with COPD from minoritised ethnic groups, and their carers.

APPROACH: Individual semi-structured interviews are being conducted by telephone, face-to-face or online depending on participant preference. Till date, 12 interviews have been conducted among patients with COPD who also have one or more long term conditions and 11 interviews have been conducted with their caregiving family member/friend to better understand their experiences of remote health care delivery, to identify what works well, what the challenges are and how their experience of health care delivery/remote health care delivery can be improved. Interviews are being recorded and transcribed verbatim and will be analysed using thematic analysis. Of the interviewed patients and carers, four of each will also be involved in the photovoice method. This method can elicit greater depth of understanding about a topic and it will help us to capture data in another way that will be rich and meaningful to participants. Our public contributors have been involved in every aspect of study delivery including the prompts that need to be considered for participants to take photos to share their experience of remote health care provision.

FINDINGS: Of the 12 patients and 11 carers interviewed, the age ranged between 42-78 years and 25-64 years. Patients have one or more long term conditions. The ethnicity of patients and carers was diverse and comprised Other White, Black Caribbean, Black African, Other Black, Indian, Pakistani, Bangladeshi, Arab and Mixed ethnic groups. The telephone mode was mostly used by patients and by carers involved either with patient present or on their behalf for remote consultations. The FINDINGS: will highlight several areas/issues related to remote care delivery including areas where improvements might be needed e.g. appointments, communication, information and support, virtual option preferred but not offered.

CONSEQUENCES: The FINDINGS: following completion of the analysis will be used to highlight the experiences of patients from minoritised ethnic groups and their carers about remote care delivery and provide potential solutions to improve availability, accessibility, and quality of remote care delivery.

Funding Acknowledgement: This study is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference 665). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

9E.5

Health Inequalities in Primary Care: Ethnicity, Antibiotic Resistance and Respiratory Health

Presenter: Anna Pathmanathan

Co-Authors: Christie Cabral, Ashley Hammond

Author institutions: Universiy of Bristol

Abstract

PROBLEM: A recent study has found that people from ethnic minority backgrounds are likely to have a greater level of antibiotic resistant gut microbiota compared to white ethnicities. This study aims to quantify associations between ethnicity and health outcomes related to respiratory infections, and exacerbations of chronic respiratory

illnesses (including asthma and COPD). People from minority ethnic groups tend to be associated with poorer health outcomes. Although there is evidence that quantifies the association between ethnicity and various respiratory health outcomes, there is currently no evidence regarding how antibiotic resistance contributes to this. Therefore, this research aims to understand these relationships between ethnicity, antibiotic resistance and respiratory health.

APPROACH: To investigate differences between demographic groups in health service use and antibiotic prescribing, data will be obtained from the BNSSG system-wide dataset (SWD), an anonymised individual patient level dataset encompassing Primary and Secondary care patient data across the BNSSG Integrated Care Board region. This study will investigate associations between ethnicity and health outcomes related to respiratory infections including antibiotic prescriptions for different diagnoses, GP and emergency department attendance, and hospital admissions.To explore experiences of ethnic minority patients and GPs who provide primary care to ethnically diverse communities, qualitative interviews with up to 20 doctors and up to 30 patients will be conducted . Interviews will ask about: experiences of primary care consultations for respiratory conditions; explore any problems with accessing or giving healthcare; investigate reasons for any inequalities that are identified by the quantitative analysis; and obtain views on how to reduce inequalities for this group.To ensure public involvement in the research, a recruitment strategy was developed (with public input) to from an advisory group of people with African and Asian heritage with no restrictions on age or gender. This group will meet regularly to advise on the research including: interpretation of the quantitative analysis

Findings; development of qualitative study recruitment strategy and interview topic guide; integration of mixed methods study

FINDINGS: and strategies for disseminating the results.

FINDINGS: The application to access the Bristol, North Somerset, and South Gloucestershire (BNSSG) system-wide dataset (SWD) has been submitted and is being reviewed. The public advisory board recruitment resources have been disseminated and recruitment is in progress.

CONSEQUENCES: This study will be one of the first of its kind to measure health outcomes related to respiratory infections in different ethnic groups using a unique dataset combining both primary and secondary care interactions at the individual patient-level. This data will allow us to determine whether antibiotic prescribing in different ethnic groups is associated with poorer respiratory infection outcomes. It will identify possible reasons for increased antibiotic resistance in ethnic minorities, which will enable the development of interventions and identify healthcare service improvements to reduce this disparity.

Funding Acknowledgement: NIHR School for Primary Care Research

10A.1

Mindfulness for people from areas of socioeconomic deprivation: a realist review.

Presenter: Kelly Birtwell

Co-Authors: Stewart Mercer, Claire Planner, Caroline Sanders, Jo Protheroe, Sophie Park.

Author institutions: The University of Manchester, the University of Edinburgh, Keele University, the University of Oxford.

Abstract

PROBLEM: People from areas of socioeconomic deprivation have poorer physical and mental health, and lower life expectancy than people from more affluent areas. According to the inverse care law, such

patients have greater health needs, but experience more challenges accessing care. Mindfulness-based interventions (MBIs) can improve levels of stress, depression, anxiety and chronic pain. Primary care referral pathways for mindfulness may help to improve patient outcomes and ease the burden of the inverse care law. However, there is little research on mindfulness for people from areas of socioeconomic deprivation. In the studies that have been conducted, drop-out rates are high at 40-80%, and little is known about why people withdraw from MBIs.Our aim was to review existing evidence and develop a theory to explain how, why, and to what extent MBIs work (or not) for people from areas of socioeconomic deprivation.

APPROACH: We conducted a realist review which is a theory-driven systematic review, informed by the principles of scientific realism. Realist reviews develop evidence-informed theories ('programme theories') about how complex interventions work, for whom, and to what extent. We developed a programme theory based on evidence from qualitative, quantitative, and mixed methods empirical studies, grey literature, relevant psychological theories, and consultations with stakeholders. Stakeholders were involved throughout and included past mindfulness course participants/patients, GPs, mindfulness teachers, psychologists and therapists.

FINDINGS: Several configurations of contexts-mechanisms-outcomes were developed to inform the programme theory. E.g. where pressure and demands on time (due to work, family, and other commitments) are high (context) mindfulness course attendance and home practice may be seen as 'extra work' (mechanism) resulting in additional stress and disengagement from the course (outcomes). Findings suggest that mindfulness-based interventions can help people from areas of socioeconomic deprivation to cope with daily stressors, improve relationships, and can lead to improved wellbeing and mental health. However, in order for people to benefit, it is important that MBIs fit with existing health beliefs, with the practicalities of people's lives (including the time demands of an MBI), and that people can understand the MBI content and feel safe and supported enough to engage. Key themes include educational approaches, culture and spirituality, and relational aspects.

CONSEQUENCES: Existing mindfulness-based interventions need to be adapted in order to suit the needs and circumstances of people from areas of socioeconomic deprivation, and alternative approaches to delivering mindfulness should be considered. Brief, flexible approaches that can be delivered via primary care may benefit patients in Deep End practices. This research addresses health inequities and aims to reduce intervention-generated inequalities, which can occur if MBIs are delivered as a 'one size fits all' approach. FINDINGS: will inform the provision of future psychological support and recommendations for mindfulness teacher training organisations.

Funding Acknowledgement: K. Birtwell is funded by a fellowship from the National Institute of Health and Care Research School for Primary Care Research. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

10A.2

Exploring the experiences of interpreters providing remote interpreting services for people with long term conditions from minoritised ethnic groups: a qualitative study

Presenter: Nina Fudge, Helen Atherton

Co-Authors: Brenda Hayanga, Helen Atherton, Stephanie Taylor, Nina Fudge, Marta Wanat, Grainne Colligan, Ceri Durham, Eleanor Southgate

Author institutions: Queen Mary University of London, City, University of London, University of Southampton, University of Oxford, Social Action for Health (community partner)

Abstract

PROBLEM: Remote health care delivery (via telephone, smartphone, video link/ other website platforms) has become a common form of health care delivery. However, people with long term conditions with complex needs, who may be older, are less likely to access or use technology. Additionally, people from an ethnic minority group whose first language is not English, may require language support during consultations. Interpreting services are being used for remote appointments, but little is known about the views and experiences of interpreters (not family or friends) providing remote interpreting services.

APPROACH: We conducted individual semi-structured interviews with 19 interpreters to explore their views of interpreting in order to understand the experience and challenges of providing interpreting support remotely for patients having remote consultations and what might be improved. Interviews were recorded and transcribed verbatim and are being analysed using thematic analysis.

FINDINGS: : The interpreters were providing support for a variety health care conditions (including depression, diabetes, chronic obstructive pulmonary disease, cardiovascular disease). The remote modes most commonly used were a mix of video and telephone. The non-English languages supported were a mainly mix of South Asian and African languages. Most interpreters had completed a level 3 community-level interpreting qualification, and some had a level 6 qualification. A few did not have an interpreting qualification. The number of years of remote interpreting experience ranged from less than 1 year to more than 10 years with most experience between 1 and 5 years. Initial FINDINGS: highlight issues around the limited time given to prepare for a consultation, e.g. “don’t give you even seconds to prepare”. At times no prior information at all was provided to the interpreter. We also identified challenges during telephone interpreting, e.g. “cannot see the expression, the body language”, and challenges during video interpreting including issues with technology e.g. “our patients are not very web literate.” There were also issues with interpreting medical terminology e.g. “if you are rigid in your translation, the meaning of that particular question may not come across that well.” The interpreter with more years of interpreting experience can help to overcome some of the challenges during remote interpreting but several suggestions for improvement were made, such as providing interpreters with more training or resources to aid understanding of a health condition, more preparation time, technological support e.g. “provide interpreters with access to resources in the languages that you are interpreting, especially like dictionaries or you know software that can help you improve your vocabulary to talk about the condition.”

CONSEQUENCES: The FINDINGS: following completion of the analysis will be used to highlight issues raised around remote interpreting and provide potential solutions to improve availability, accessibility, and quality of remote care delivery.

Funding Acknowledgement: This study is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference 665). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

10A.3

Title: The IBISES model: development of a Community Research Link Worker role

through action research, to increase accessibility of primary care research within ethnic minority communities

Presenter: Kate Fryer

Co-Authors: Kate Fryer, Josie Reynolds, David Bussue, Qizhi Huang, Rebecca Mawson , Johanna White, Emma Linton, Caroline Mitchell

Author institutions: University of Sheffield, The Deep End Clinical Research Network

Abstract

PROBLEM: People from ethnic minority backgrounds are underrepresented in primary healthcare research despite worse health and experience of healthcare services. Academic institutions can perpetuate this inequality with over-reliance on 'evidence' syntheses characterised by participation bias, a lack of diversity within research teams influencing positionality and interpretive bias, and a failure to understand a lack of trust and negative prior experiences of research within ethnic minorities.

APPROACH: We used a Participatory Action Research (PAR) approach to reflect on the evolution of a novel primary care Community Research Link Worker role (CRLWs) across several studies, to build research capacity and challenge researcher positionality and bias in our research. Community organisations supported the recruitment and training of CRLW.

FINDINGS: Five primary healthcare research projects were undertaken using the CRLW model (2022-23) with Black-African, Black-Caribbean, Arab, South Asian, Chinese, and Roma communities (144 participants involved in patient and public involvement events, focus groups and interviews). The CRLWs utilised community networks to recruit participants, facilitated focus groups and co-presented at dissemination events. CRLW co-analysed qualitative data in two projects. Projects included: research prioritisation around prostate cancer screening and treatment (with black men and family carers) , a qualitative study exploring experience of contraceptive services (South Asian, African, African Caribbean women); research prioritisation with the Roma and Chinese communities around lung health and dementia respectively and a qualitative 'Photovoice' study with carers of people living with Dementia (South Asian, African/ African Caribbean, Chinese communities) . Through an iterative reflective PAR process with open dialogue between community groups and researchers, we developed a 7-stage successful research training, delivery, and engagement model utilising CRLW (IBISES).

1. Identify key people and organisations representing local ethnic minority communities.

2. Build relationships and establish trust.

3. Identify and train CRLWs: generic and project-specific

4. Support CRLWs throughout study.

6. Evaluate and co-produce next steps.

7. Share outcomes of the study with the community.

Ideally the CRLW role should also follow a participatory process of priority setting with community members, formulating a research question, and co-design of the research. The CRLW model increased participation by people from ethnic minority communities in our research when compared to previous methods of engagement used by our experienced research team. Community leaders and CRLWs told us that sharing resources and power in the research process builds trust and interest in research participation in their communities.

CONSEQUENCES: Integrating CRLWs into the research team had a transformative impact on the accessibility of primary care research to communities and on the positionality of

researchers working with these communities . We recommend a CRLW model which builds capacity and embeds reflective practice, mutual respect, and power sharing across the research team.

Funding Acknowledgement: Sheffield CCG NIHR CRN RCGP Research England

10A.5

Socio-economic and ethnic inequalities in premature birth in England: a retrospective-cohort study of national data.

Presenter: Iona Hindes

Co-Authors: Buthaina Ibrahim, Dominik Zenner, Jennifer Jardine, and Stamatina Iliodromiti

Author institutions: Queen Mary University of London, Royal College of Obstetricians and Gynecologists

Abstract

PROBLEM: Premature birth (<37 weeks) has lifelong health consequences and excessively burdens minorities and those living in high deprivation in the UK. As primary care remains the first line of contact for most mothers regarding their antenatal and reproductive healthcare, services need to be aware of inequalities and contributing factors. In England, the COVID-19 pandemic severely impacted maternal health and access to care, thus premature birth and associated inequalities need to be examined further in this context. This research aimed to identify and quantify the socioeconomic and ethnic inequalities in premature birth rates in England.

APPROACH: We conducted a retrospective cohort study that used data from the NHS England, Hospital Episode Statistics (HES) database. All women who had a singleton live birth between 1st April 2018 and 31st March 2021 were included. Pregnancies with a gestation period of less than 24 weeks or more than 42 weeks were excluded, as were pregnancies recorded as ectopic, terminated, or aborted. Age was restricted to between 13 and 55 years. Ethnicity groups included White, Mixed, South Asian, Black, and Other. Deprivation was based on the English Index of Multiple Deprivation and aggregated into quintiles ranging from least deprived 20% to the most deprived 80% - 100%. We used multivariate modified Poisson regression and robust standard errors to ascertain the risk of premature birth in each deprivation quintile and ethnicity group. Models were adjusted for the interaction between deprivation and ethnicity, age, year, parity, previous adverse birth outcomes, and maternal health covariates.

FINDINGS: : We identified 1,590,902 maternity-related admissions in England recorded in HES. Of these records, 1,111,045 singleton live births with no missing data, were included in complete case analyses. In the fully adjusted model, the risk of preterm birth was 5.32% (95%CI:5.19-5.45). The risk of preterm birth increased with socioeconomic deprivation; the highest deprivation quintile was 1.32 times more likely to give birth preterm than the lowest quintile (95%CI:1.29-1.36). Regarding ethnicity groups, only South Asian ethnicity groups remained at 1.13 times higher risk for preterm birth than white ethnicity groups (95%CI:1.05-1.22). Across all ethnicity groups, increasing deprivation was associated with an increased risk of premature birth. Those who tested positive for COVID-19 were at 1.77 times higher risk of giving birth preterm (95%CI: 1.64-1.91) and the period of tiered lockdown restrictions was associated with a 6% decrease in premature births (95%CI:0.91-0.98).

CONSEQUENCES: Our FINDINGS: suggest that deprivation is a considerable risk factor for preterm birth, with the most deprived groups suffering the highest risks of prematurity. Although the impact of deprivation appears to be additive across all ethnicity groups, South

Asian ethnicity groups are particularly vulnerable to premature birth. Targeted policies and tailored support structures are warranted to achieve and sustain equity long-term.

Funding Acknowledgement: NIHR: School of Primary Care Research

10A.6

What works: Addressing inequalities in the primary and secondary care interface

Presenter: Amy Dehn Lunn

Co-Authors: Amy Dehn Lunn, Heidi Lynch,

Author institutions: Queen Mary University of London

Abstract

PROBLEM: A dysfunctional primary-secondary care interface impacts on patient experience, patient safety and staff workload, and is likely to widen health inequalities by disproportionately impacting underserved populations. An estimated 15 million GP appointments are used every year dealing with issues between primary and secondary care. Most evidence examining strategies at this interface overlook the impact on disadvantaged groups.

APPROACH: We used our Living Evidence Map “http://www.heec.co.uk">www.heec.co.uk to identify relevant literature and complemented it by grey literature searches. Our Living Evidence Maps use machine learning within EPPI-Reviewer software to efficiently map interventions to address inequalities in primary care. Articles examining the outpatient primary-secondary care interface and inequalities were identified from these Living Evidence Maps and synthesised with grey literature. Furthermore we augmented the literature base with equity-focused guiding principles from the EQUALISE study, a realist review examining what worked to address inequalities.

FINDINGS: We identified six points at which inequalities can arise in the outpatient primary-secondary care interface. In all areas, there was relatively little evidence around interventions specifically to reduce inequalities. Schemes developed within the UK and internationally to improve primary care referral reduced variation and may in turn improve equity. There was some evidence for care coordination, improved patient communication and targeted prehabilitation to reduce inequalities for patients navigating the interface and awaiting care. Co-location and integration of care have shown improvements in patient experience and outcomes, including projects focussed on disadvantaged groups. There is limited evidence of Patient-initiated follow-up (PIFU) on inequalities, but evidence from the EQUALISE study suggests PIFU may worsen inequalities because it takes more patient effort. Did not attend (DNA) rates are disproportionately high in lower socio-economic status groups. Interventions to reduce DNA rates have been successfully implemented, including text message, telephone and letter reminders, but the impact has in general not been disaggregated across different patient groups.

CONSEQUENCES: There are multiple points across the primary-secondary care interface which could worsen inequalities; however the evidence base is weak. Policy makers and practitioners include consider use of appointment reminders in secondary care, especially for disadvantaged groups, targeted support for patients with language barriers, digital exclusion, caring responsibilities and care coordinators for patients with poor health literacy. More research is needed to better describe how, when and where inequalities arise and effective interventions to reduce inequalities.

Funding Acknowledgement: We received core funding for the Health Equity Evidence Centre from NHS England, East of England.

10B.1

Improving the measurement of quality of life in people with multiple long term conditions

Presenter: Kieran Sweeney

Co-Authors: John Brodersen, Karl Bang Christensen, Eddie Donaghy, David Henderson, Bruce Guthrie, Stewart Mercer

Author institutions: University of Edinburgh, University of Copenhagen

Abstract

PROBLEM: The growing number of people living with multiple long term conditions (MLTC) poses a major challenge in healthcare, but the evidence base for interventions in patients with MLTC is limited, with many studies failing to demonstrate improvement in quality of life (QoL) using outcome measures such as EQ5D and SF36. However, these generic measures were not developed for people with MLTC and their psychometric adequacy in multimorbidity research is questionable. The need for new QoL measures designed for use in people with MLTC has been identified as a research priority. In response to this, researchers at the University of Copenhagen recently developed the Multimorbidity Questionnaire (MMQ). The present study involved the translation and revalidation of the MMQ in English.

APPROACH: The Danish-language MMQ underwent preliminary translation into English by a panel of bilingual experts in Spring 2023. Following this, a PPI focus group was held in which six participants, with a range of socioeconomic backgrounds, reviewed and refined the questionnaire line-by-line in order to adapt it semantically for use in a UK context. Six individual cognitive interviews were then held with participants with diverse experiences of MLTC. Interviews employed a think-aloud approach to assess content validity. Following this, MMQ was used in a postal survey of approximately 600 patients with MLTC, sampled randomly from 12 GP practices in Lothian. EQ5D and ICE-CAP (generic measures of QoL) were included alongside MMQ in order to assess concurrent validity. The survey also included feedback items assessing acceptability and feasibility.

FINDINGS: Through six cognitive interviews, MMQ demonstrated strong content validity, with comprehensive coverage, high relevance and strong understandability. Three items underwent minor rewording after the first four interviews, to improve clarity. While some items lacked direct relevance to interviewees, they nevertheless demonstrated strong face validity, and given the strength of the underpinning qualitative work, these items were retained. Broadly, it was felt that MMQ's acceptability would be improved by shortening the measure. The survey was sent to 2370 patients, and 587 responses were received (25% response rate). At the time of writing, data analysis is currently underway. This involves Rasch modelling, considered the strictest form of Modern Test Theory psychometrics. Planned analyses include unidimensionality, internal reliability, measurement invariance, known-group validity, and concurrent validity. Feedback items and completion rates will also be analysed to assess acceptability and feasibility. Complete analysis is expected by April 2024.

CONSEQUENCES: While full results are not yet available, this is a study with a robust design which addresses an urgent priority within MLTC research. Validation of MMQ will provide a much needed tool for measuring QoL in people with MLTC. Rasch analysis will also provide a framework for future work to improve MMQ's acceptability by shortening it to its most useful items.

Funding Acknowledgement: Royal College of General Practitioners, Scientific Foundation Board

10B.2

The association of loneliness and social isolation with multimorbidity over 14 years in older adults in England: a population-based cohort study

Presenter: Hilda Hounkpatin

Co-Authors: Nazrul Islam, Beth Stuart, Miriam Santer, Andrew Farmer, Hajira Dambha-Miller

Author institutions: University of Southampton, Queen Mary University of London, University of Oxford

Abstract

PROBLEM: Previous longitudinal studies have linked multimorbidity to loneliness and social isolation. However, the direction and nature of these associations over time are unclear. We aimed to assess bidirectional associations of multimorbidity with loneliness and social isolation over a 14-year follow-up period in a nationally representative cohort of adults aged ≥ 50 years.

APPROACH: In this retrospective cohort study, we used seven waves of data (collected between 2004/2005 and 2018/2019) from adults in the English Longitudinal Study of Ageing. Multimorbidity was defined as the presence of ≥2 long-term conditions. Loneliness was measured using the 3-item University of California Los Angeles (UCLA) scale. Social isolation was derived based on cohabitation status, frequency of contact with children, relatives, and friends, and social organisation membership. Cox proportional hazards models, adjusted for social isolation or loneliness, demographic and health behaviour variables, were fitted.

FINDINGS: The study sample consisted of 4256 adults with baseline and follow-up data on loneliness, social isolation, multimorbidity, and covariates. Loneliness was associated with increased risk of incident multimorbidity during follow-up [aHR (95% CI): 1.16 (1.09-1.23)], whereas social isolation was not [aHR (95% CI): 0.95 (0.89-1.01)]. Multimorbidity was associated with increased risk of incident loneliness [aHR (95% CI): 1.14 (1.07-1.21)], but not significantly associated with risk of incident social isolation [aHR (95% CI): 0.97 (0.91-1.03)] during follow-up.

CONSEQUENCES: Loneliness is independently associated with increased risk of subsequent multimorbidity, and vice versa. Interventions that target loneliness may prevent or delay the development of multimorbidity and also improve wellbeing for people with multimorbidity.

Funding Acknowledgement: The National Institute for Health and Care Research School of Primary Care Research

10B.3

What are the benefits of a comprehensive template to support personalised care for patients with Multiple Long-Term Conditions: a mixed methods study in general practice.

Presenter: Caroline Coope

Co-Authors: Caroline Coope1, Kate Lippiett3, Alice Moult2, Dereth Baker2, Andrew Turner1, Cindy Mann1, Clare Jinks2, Krysia Dziedzic2, Grace Scrimgeour1, Simon Chilcott1, Mari Carmen Portillo3, Rachel Johnson1 & Chris Salisbury1,

Author institutions: Centre for Academic Primary Care University of Bristol, School of Medicine Keele University, Health Sciences University of Southampton

Abstract

PROBLEM: The management of patients with multiple long-term conditions (MLTCs) poses one of the greatest challenges facing primary

care services with an increasing population prevalence of those living with multiple long-term conditions (MLTCs) and a decline in the skilled and experienced generalist workforce. Existing primary care systems dominated by a single disease approach are inefficient for managing the complex health needs of patients with MLTCs. A personalised approach to care is advocated for managing patients with MLTCs. Previous work to implement comprehensive multimorbidity reviews within primary care has delivered improvements in patients experience of personalised care but not in patient health-related quality of life, or burden of illness or treatment. Multimorbidity annual reviews using a 'smart' template were implemented in general practices in three areas of England. The objectives of this study were to explore whether use of the multimorbidity template improved patient experience of personalised care, facilitated staff benefits, and offered service benefits related to clinical quality, efficiencies, and workload.

APPROACH: A convergent mixed methods research design was used. Staff and patients involved in a multimorbidity annual review were interviewed. An abductive thematic codebook approach was used to analyse the interviews. A self-report questionnaire (PC3EQ) measured patient experiences of person-centered care and was completed before and after their review. Questionnaires were analysed using mixed-effects linear regression. Routinely collected medical data was extracted from the electronic records of eligible participants for variables of interest and analysed descriptively.

FINDINGS: Sixteen general practices agreed to take part in the study across the three areas of England. Eligible patients with MLTCs and identified as having an annual review during the study period (n=5060) were made up of patients of whom 90% had at least one coronary vascular disease diagnosis, more than half had diabetes (62.8%), respiratory disease (53.9%) and/or a mental health diagnosis (56.8%).A pre- and post-review survey was completed by n=117 patients who had received a multimorbidity review. There was a small, statistically significant increase in the overall PC3EQ score post review (Mean difference,1.31 (95% CI, 0.31, 2.30)). From a staff and patient perspective, whether the template supported personalised care depended on the skills and approach of the staff conducting the review. The template can be used as a tick box exercise, whilst the personalisation of care emanated from the staff delivery approach and their knowledge and skills around multiple long-term conditions. For patients personalised care was experienced in the context of a reciprocal dialogue between them and staff and a genuine interest and effort to respond to their needs.

CONSEQUENCES: The multimorbidity template can facilitate a more personalised care approach, however the delivery approach, knowledge and skills of staff appear to be a key determinant in patients experiencing personalised care.

Funding Acknowledgement: This research is funded by the National Institute for Health and Care Research (NIHR) Applied Research Collaboration (ARC) Multiple Long-Term Conditions Implementation Programme. This research was supported by NIHR ARC West, NIHR ARC Wessex, NIHR ARC West Midlands, NIHR ARC South West Peninsula. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

10B.5

Validation of the kidney failure risk equation (KFRE) to predict kidney failure and guide referrals from primary care for individuals with CKD who also experience multiple long-term health conditions or frailty

Presenter: Heather Walker

Co-Authors: Juan-Jesus Carrero, Michael Sullivan, Anne-Laure Faucon, Bhautesh Jani, Katie Gallacher, Patrick Mark

Author institutions: School of Cardiovascular and Metabolic Health, University of Glasgow, Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, School of Health and Wellbeing, University of Glasgow

Abstract

PROBLEM: An estimated 10-15% of the population have a diagnosis of chronic kidney disease (CKD). Increasing numbers of individuals with CKD will also experience multiple long-term conditions (multimorbidity) and/or frailty. NICE clinical guidelines recommend the use of the kidney failure risk equation (KFRE), to estimate the five-year risk of kidney failure for patients with CKD and to guide referrals from primary care to secondary care kidney clinics. The impact of multimorbidity and/or frailty on the ability of KFRE to predict kidney failure and guide secondary care referral has not been studied.

APPROACH: This study aimed to validate KFRE in individuals with CKD, with and without multimorbidity and/or frailty, in a research-based cohort (UK Biobank) and a population-based cohort (Stockholm Creatinine Measurements project (SCREAM)). Individuals were included if they had CKD, defined as eGFR<60mL/min/1.73m2, and had available proteinuria measurement at time of testing or within the previous 12 months. Multimorbidity was defined as the presence of two or more long-term conditions in addition to CKD. Frailty was assessed by the Fried frailty phenotype, Rockwood frailty index and laboratory frailty index. The outcome was kidney failure (the need for long-term dialysis or kidney transplantation). KFRE performance at 5-years was assessed using the area under the receiver operating characteristic curve (AUC) for discrimination and calibration curves for calibration.

FINDINGS: We included 24,489 individuals from UK Biobank and 42,902 individuals from SCREAM (mean age 62.8 (SD 5.6) and 70.1 (SD14.1), 54% and 66% female, respectively). In UK biobank, 14,998 individuals had multimorbidity, 8,533 were classed as frail and 6,503 had both multimorbidity and frailty. In SCREAM, 30,147 had multimorbidity, it was not possible to assess frailty in this cohort as frailty measures were not routinely recorded. Overall, there were 312 kidney failure events and 1,471 death events in UK Biobank and 1,098 kidney failure events and 10,152 death events in SCREAM within 5-years.Model performance was consistent across both cohorts in all sub-groups. Discrimination power of KFRE was good in individuals with and without multimorbidity and/or frailty (AUC ≥0.88 across all sub-groups). In all sub-groups calibration plots revealed under-estimation of risk at 5-years. There was a higher cumulative incidence of both kidney failure and death in the multimorbidity and frailty groups, with a prominent increase in risk of death over time compared to the no multimorbidity/frailty groups.

CONSEQUENCES: KFRE adequately and consistently predicts kidney failure risk in individuals with multimorbidity and/or frailty. Given the high rates of mortality amongst individuals with multimorbidity or frailty, explorations of models that account for competing risk of death is warranted. Further work is planned to explore patient and healthcare professionals' perspectives of kidney failure risk and the use of KFRE in individuals with CKD and multimorbidity and/or frailty to guide care and policy.

Funding Acknowledgement: HW is a fellow on the Multimorbidity Doctoral Training Programme for Health Professionals, which is supported by the Wellcome Trust, grant number 223499/Z/21/Z.

10B.6

Ethnic inequalities in primary care for people with multiple long-term conditions: evidence from the General Practice Patient Survey

Presenter: Brenda Hayanga

Co-Authors: Mai Stafford, Laia Bécares

Author institutions: City, University of London, King's College London, The Health Foundation

Abstract

PROBLEM: People from minoritised ethnic groups with multiple long-term conditions (MLTCs) face more disadvantage in the number, impact, and quality of care for their long-term conditions. Studies of single conditions suggest that patients from minoritised ethnic groups report poorer experiences in primary care. However, we know little about whether experiences of primary care vary across ethnic groups for people with MLTCs. Given the current emphasis on tackling healthcare inequalities and improving patient experience in the UK, an investigation is required to ascertain whether ethnic inequalities in patient experience for people with MLTCs exist.

APPROACH: This retrospective study uses data from the GP Patient Survey, the General Practice Workforce and the Office for National Statistics. We focus on experience of accessing primary care and interacting with healthcare professionals which are deemed important for people with MLTCs. Using multilevel regression models, we analyse the relationship between ethnicity and these experiences of primary care and assess the relative importance of demographic, area-level and practice-level factors as influences on primary care experiences across ethnic groups for people with MLTCs.

FINDINGS: After accounting for demographic, practice and area-level factors, the extent to which patients were satisfied with healthcare provider interaction (i.e. how health care providers listened, gave patients enough time, treated patients with care and concern, involved patients in healthcare decisions, met patients' needs and were trusted by patients) was higher amongst people of Irish ethnicity than white British people. All other ethnic groups had lower levels of satisfaction compared to their white British counterparts with the exception of Black African, mixed white and Black Caribbean and other mixed people whose levels of satisfaction were not significantly different to those of white British people.Irish, Black African and Black Caribbean people had higher levels of satisfaction with accessing primary care (i.e. satisfaction with appointment times, types and overall experience) than white British people. However, people of Arab, Bangladeshi, Chinese, Indian, Pakistani, other Asian, mixed white and Asian, other white and other ethnicity had lower levels of satisfaction with accessing primary care than white British people. The influence of demographic, practice and area-level factors varied across ethnic groups.

CONSEQUENCES: The ethnic inequalities in the experiences of primary care identified in this study are concerning given that patient experience is a key aspect of healthcare quality and is said to be associated with favourable health outcomes. The poorer experiences of primary care might be one mechanism by which people with MLTCs from minoritised ethnic groups have poorer health outcomes. Qualitative studies are vital for the identification, understanding, and formulation of solutions which will effectively address the sources of ethnic inequalities in primary care experiences for people with MLTCs from minoritised ethnic groups.

Funding Acknowledgement: The Health Foundation

10B.7

Identifying research priorities for managing chronic conditions in primary care in Ireland;

a James Lind Alliance priority setting partnership

Presenter: Laura O'Connor

Co-Authors: Susan Smith, Managing Chronic Conditions in Primary Care Steering Group, Maryrose Tarpey, Andrew Murphy

Author institutions: HRB Primary Care Clinical Trials Network, University of Galway, Trinity College Dublin, James Lind Alliance

Abstract

PROBLEM: Chronic conditions are extremely common, with approximately 1 million people in Ireland currently managing at least one chronic symptom or disease. Combined with an aging population, this represents a large and growing burden on primary care. Research in this area is increasingly involving stakeholders, but more could be done to ensure studies focus on areas of greatest importance to those most directly affected. We set out to develop a top ten list of research priorities in this area, using the James Lind Alliance priority setting partnership method.

APPROACH: With the guidance of the James Lind Alliance (JLA) we established a priority setting partnership (PSP) to bring together patients, carers, and healthcare professionals to identify unanswered questions about the management of chronic diseases. Their methods include large scale stakeholder participation in two surveys, one to gather initial input and one to rank the resulting longlist, as well as a final workshop to create the top 10 list through informed, impartially facilitated discussion.

FINDINGS: The initial survey asking for questions about the management of chronic diseases was shared from March to May 2023. 185 responses contained 350 statements, which when grouped and reviewed resulted in a list of 30 unanswered questions. The interim ranking survey, presenting these 30 questions for ranking, was shared in late 2023 and received 123 responses. The final workshop deciding the top 10 research priorities took place January 2024. The workshop had 17 attendees, with a balance of people with chronic conditions, people working in primary care, and carers. Over several small group sessions, group rankings of the top 20 items were developed and refined into the final ranking, agreed by all participants.

CONSEQUENCES: Identifying priority areas for research in chronic condition management in primary care will help researchers and funders ensure that future projects reflect the needs of those most affected. The ranked questions also offer a snapshot view of the concerns of stakeholders regarding chronic condition management in primary care in Ireland.

Funding Acknowledgement: The Health Research Board fund the HRB Primary Care Clinical Trials Network, who led on this project

10C.1

Why do GPs prescribe beta-blockers for anxiety disorders? A qualitative interview study

Presenter: Dr Charlotte Archer

Co-Authors: David Kessler, Nicola Wiles, Carolyn Chew-Graham, Katrina Turner

Author institutions: University of Bristol, Keele University

Abstract

PROBLEM: The beta-blocker, propranolol, is licensed for the management of anxiety, and prescriptions increased substantially between 2003-2018, particularly in young adults. However, beta-blockers are not recommended by the NICE clinical guidelines for anxiety, which may be due to the inconclusive evidence of their effectiveness in treating anxiety. Further, recent safety reports have highlighted an under-recognised risk of propranolol in patients with mental health

difficulties. This study aimed to understand when and why General Practitioners (GPs) are prescribing beta-blockers for anxiety.

APPROACH: We interviewed 17 GPs from ten practices in Bristol and the surrounding areas. Interviews were digitally-recorded, transcribed verbatim and analysed thematically. A patient and public involvement (PPI) group with lived experience of anxiety provided input into the initial interview topic guide, suggested revisions to the questions during iterative data collection and analysis and informed dissemination.

FINDINGS: Most GPs suggested that beta-blockers were an important 'tool' for helping patients with anxiety manage their physical symptoms. For some patients, they could also facilitate a 'positive feedback loop', whereby a reduction in physical symptoms could also lead to improved psychological symptoms. Many GPs viewed beta-blockers as a 'low-risk' option compared to antidepressants, particularly in young adults where they might have concerns around risk of suicidal ideation. Some GPs thought of beta-blockers as an alternative to benzodiazepines, acting quickly and not leading to dependence. GPs explained that some patients wanted a 'quick fix' for their anxiety, and due to substantial waits for talking therapies and delays in antidepressants taking effect, beta-blockers were the quickest option available in primary care. GPs described how some patients seemed to be more willing to try beta-blockers as they were not a 'mental health drug' and therefore potentially more acceptable and less stigmatising. Further, GPs viewed beta-blockers as more of a 'patient-led' treatment, where patients could manage their own dose and frequency, with less need for GP input.

CONSEQUENCES: Many GPs suggested that beta-blockers have a role to play in the management of people with anxiety, especially in those with physical symptoms, and they provided justification for their prescribing. There is a need to conduct a definitive trial in this area to determine if beta-blockers are a safe and effective treatment for anxiety.

Funding Acknowledgement: CA's launching fellowship and this project were funded by Bristol, North Somerset and South Gloucestershire's integrated care board (RCF 2021, 2.3).

10C.2

Do clinicians and patients think it is acceptable and useful to use an algorithm to predict risk of psychosis in primary care?

Presenter: Daniela Strelchuk

Co-Authors: Daniela Strelchuk, Sarah Sullivan, David Kessler, Irwin Nazareth, Katrina Turner

Author institutions: University of Bristol, University College London

Abstract

PROBLEM: Psychosis is a serious mental illness. Early intervention in people with an at-risk mental state of developing psychosis can decrease their risk of transitioning to psychosis. However, identifying these individuals in primary care is difficult, as GPs might not be familiar with the concept of being at risk of psychosis, or feel they have the skills and knowledge to identify this group. Also, the prediction models used in secondary care for psychosis are not applicable in primary care. Our research team have developed an algorithm – called P Risk - which uses electronic primary care health record data, to help GPs identify people who may be at risk of developing psychosis. Although the P Risk is statistically accurate at identifying people at risk of psychosis, we need to assess its acceptability before implementing it in clinical practice. This study aimed to explore clinicians' and patients' views of the acceptability and usefulness of using P Risk in primary care.

APPROACH: Semi-structured interviews were held with 10 GPs, 11 patients and 6 Early Intervention (EI) team clinicians, as according to NICE guidelines, EI teams should assess and offer treatment to patients at risk of psychosis. The interviews explored participants' views of P Risk, and were audio-recorded and analysed thematically.

FINDINGS: Most GPs welcomed the development of the P Risk tool, as it would help them identify people who may be at risk of developing psychosis. However, some GPs raised concerns about availability of treatment for this patient group, patients' willingness to engage with it, and the negative impact that may have on patients being told that they are at risk of psychosis. Overall, EI clinicians were positive about the use of P Risk in primary care, as the tool would remind GPs about psychosis, and assist them in discussing risk factors with patients (e.g. cannabis use), and strategies to address them. However, some EI clinicians raised concerns about EI teams' capacity to assess a potentially high number of referrals and highlighted that not all EI teams were commissioned to work with these patients. Most patients thought P Risk would help GPs identify early symptoms of psychosis that could go unnoticed, but said revealing that one was at risk had to be worded very carefully as not to worry the patient, and only communicated if a patient's risk was medium or high, and in the context of providing them with effective treatment.

CONSEQUENCES: Whilst most clinicians and patients welcomed the development of P Risk, if the tool is to be used in primary care, there needs to be a clear pathway for assessing and offering treatment to those identified as being at risk of psychosis.

Funding Acknowledgement: This study was supported by NIHR RfPB and BRC. This study was supported by the NIHR Biomedical Research Centre at University Hospitals Bristol NHS Foundation Trust and the University of Bristol. The views expressed in this publication are those of the author(s) and not necessarily those of the NHS, the National Institute for Health Research or the Department of Health.

10C.3

Identification and Management of Bulimia Nervosa & Binge Eating Disorder in Primary Care: a systematic review of qualitative research

Presenter: Stella Kozmér

Co-Authors: Christopher O'Rouke, Dr Samantha van Beurden, Dr Natalia Lawrence, Dr Jane Smith

Author institutions: University of Exeter, Dorset Healthcare NHS University Foundation Trust

Abstract

PROBLEM: Binge eating disorder (BED) and Bulimia Nervosa (BN) are the most common eating disorders in the UK. Despite this, their identification is overlooked, and support for the management of these conditions is lacking in primary care. Research on patients' and healthcare professionals' perspectives could shed light on issues surrounding the identification and management of BED and BN and areas where this might be improved.

APPROACH: A systematic review of qualitative research was conducted to explore the perceptions of patients and healthcare professionals in relation to the identification and management of BED and BN in primary care (PROSPERO registration: https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=394919). Searches of peer-reviewed literature were completed in Medline, Embase, PsycINFO, Global Health (all via OVID) and CINAHL (via EBSCO host) from database inception to February 2023. The quality of articles was assessed using the Critical Appraisal Skills Programme checklist

for qualitative research. Data was extracted on methods of data collection and analysis, country of origin, date of publication, eating disorders focused on, type of healthcare professional and gender of patients. Thematic synthesis was used to synthesise the data. Patient and healthcare professional advisors were involved in interpreting results, shaping the presentation of findings and supporting the integration of both patient and healthcare professional perspectives into themes and a subsequent model.

FINDINGS: 2043 articles were identified and screened for inclusion by two reviewers independently and checked by a third reviewer where necessary, with 17 studies ultimately included. 3 studies were of high quality with a low risk of bias; the rest were medium quality and risk of bias. 7 studies were from the UK, 4 from the US, and the rest were from Canada, Norway, France, Australia, and New Zealand. Ten articles focused on healthcare professionals' perspectives, and seven on patients' views. Five themes were generated, highlighting that several factors influence healthcare professionals' management of eating disorders. These included a "lack of knowledge" about the definition and presentation of BED/BN; "communication" issues due to a lack of confidence in addressing eating disorders during consultations whether it is a known diagnosis or only suspected; overwhelmingly negative and unhelpful "attitudes" about eating disorders, such as weight bias; "barriers to identification", such as comorbidities; and "barriers to management" for example, due to lack of resources. Patient perspectives supported these views in some areas, such as in relation to there being a lack of resources or showcased negative impacts on their experience, for example, related to the "communication" theme. A model was generated to highlight the relationship between the themes.

CONSEQUENCES: This review has identified factors that could be addressed to better equip healthcare professionals to identify and manage BED and BN in primary care.

Funding Acknowledgement: This project is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference C062). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

10C.5

Can we identify features associated with complex mental health difficulties in primary care electronic health records.

Presenter: Chris Burton

Co-Authors: Ciarán McInerney, Phil Oliver, Vyv Huddy, Michelle Horspool

Author institutions: University of Sheffield, Sheffield Health & Social Care NHS Trust

Abstract

PROBLEM: Complex mental health difficulties, such as personality disorder and dysthymia are common in general practice consulters. However diagnosing and coding of these disorders in electronic health records is much lower than expected from population surveys. We aimed to identify features in primary care records which may be useful in promoting greater recognition of complex mental health difficulties. This presented major methodological challenges given the number and range of possibly relevant features and the anticipated large number of uncoded cases.

APPROACH: We analysed data from the Connected Bradford database, an anonymised primary care database of approximately 1.15M citizens. We used multiple approaches to generate a large set of features representing multi-level collections of patient attributes across time and dimensions of healthcare. Feature sets included antecedent

and concurrent problems (psychiatric, social and medical), patterns of prescription and service use and temporal stability of attendance. These were tested individually and in combination. We analysed the relationship between features and diagnostic codes using scaled mutual information.

FINDINGS: We identified 3,420 records with a diagnostic code for personality disorder or other complex mental health related diagnosis. This was 0.3% of the population compared to an expected prevalence of 3-5%. We generated >500,000 features. The most informative feature was count of unique psychiatric diagnoses. Other features were identified, including binary features (e.g. presence or absence of prescription for antipsychotic medication), continuous features (e.g. entropy of non-attendance) and counts of features (e.g. concerning behaviours such as self-harm & substance misuse). Several of these showed odds ratios >=5 or <=0.2 but low positive predictive value. We suggest this is due to the large number of "cases" being uncoded and, thus appearing as "controls".

CONSEQUENCES: Complex mental health difficulties are poorly coded. We demonstrated the feasibility of using information theoretic approaches to develop a large set of novel features in electronic health records. Ideally these should be tested in a more tightly defined cohort. While these features are currently insufficient for diagnosis, several can act as prompts to consider further diagnostic assessment.

Funding Acknowledgement: This study was funded by the National Institute for Health and Care Research (NIHR) under its Research for Patient Benefit (RfPB) Programme (Grant Reference Number NIHR203473). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

10C.6

The CO-produced Psychosocial INtervention delivered by GPs for young people who self-harm-Intervention Development (COPING-ID) study

Presenter: Faraz Mughal

Co-Authors: Benjamin Saunders, Martyn Lewis, Ellen Townsend, Christopher J Armitage, Carolyn A Chew-Graham

Author institutions: 1) School of Medicine Keele University, 2) School of Psychology University of Nottingham, 3) Division of Psychology and Mental Health University of Manchester

Abstract

PROBLEM: Self-harm in young people is an international public health concern and reducing rates a key priority. In high-income countries young people often seek help for self-harm from General Practitioners (GPs). GPs have a key role in the management of self-harm, but some GPs describe lacking confidence treating young people. There are currently no effective interventions for GPs to offer young people (16-25 years) after self-harm. There is evidence that cognitive behaviour and dialectical behaviour type interventions can reduce self-harm repetition, however these have only been tested in specialist care settings. We developed, in partnership with young people with lived experience of self-harm and GPs, a brief psychosocial intervention (COPING) to be delivered in general practice.

APPROACH: COPING's development was guided by the UK Medical Research Council's framework for developing and evaluating complex interventions. A combination development approach was adopted across two stages. Stage one was a semi-structured interview study with GPs in England about their clinical management of self-harm and views on future COPING components and implementation. Data were analysed

thematically and mapped onto the Capability, Opportunity, and Motivation (COM-B)-Behaviour change framework. Stage two adhered to Behaviour Change Wheel steps and included an evidence search, stakeholder consultation, behavioural analyses of target behaviours, co-production, and prototyping of COPING. The study's patient and public involvement group contributed to the design of stage one, interpretation of interview data and on potential elements of the COPING intervention.

FINDINGS: Fifteen GPs were interviewed; 8 female and 7 male (age range 32-52 years). Most GPs described having the physical and psychological capability to help young people not self-harm, but some GPs felt doing so was emotionally tiring. GPs stated COPING needed to be practical and simple for GPs to use daily. Analyses of target behaviours were mapped onto six intervention types: education, training, enablement, incentivisation, environmental restructuring, and modelling. Six young people aged 16-25 with lived experience and 5 GPs participated in 3 online co-production workshops to design COPING. Members ranked/scored 42 behaviour change techniques (BCT). The final COPING draft consists of 8 BCTs and is a personalised treatment guide for GPs to use with young people across two consultations.

CONSEQUENCES: This study has co-produced a GP-led intervention for young people after self-harm. The COPING intervention has the potential to benefit young people, their families, and the NHS. COPING is currently being tested in a feasibility study to assess whether a main trial in NHS general practice is justified.

Funding Acknowledgement: This study is funded by an NIHR Doctoral Fellowship (300957) to Faraz Mughal.

10C.7

Identification of women at high risk of perinatal anxiety: a mixed methods study.

Presenter: Tamsin Fisher

Co-Authors: Tamsin Fisher, Katrina Turner, Victoria Silverwood, Tom Kingstone, Charlotte Archer, James Bailey, Jonathan Evans, Irene Petersen, Holly Smith, David Kessler, Janine Procter, Noureen Shivji, Amy Spruce, Pensee Wu, Dahai Yu, Carolyn A. Chew-Graham

Author institutions: 1 School of Medicine, Keele University. 2University of Bristol,3University College London. 4Just Family CIC, 5Keele University (PPIE contributor).

Abstract

PROBLEM: Perinatal anxiety (PNA), experienced during pregnancy and up to one year after childbirth, impacts on the mother, infant, family and society. Global prevalence of PNA is 21% compared to perinatal depression (PND) of 11%. There is little research into PNA compared to PND. We aim to identify women at higher risk of PNA using medical record data and explore views on the label 'high risk'. APPROACH: Mixed methods approach. Ethical and regulatory approvals obtained. Patient Advisory Group (PAG) and Clinical Advisory Group (CAG) informed each study. Quantitative analysis of Clinical Practice Research Datalink (CPRD) Aurum linked with Hospital Episode Statistics (HES) and national pregnancy registry databases; and IQVIA Medical Research Database (IMRD) to identify diagnoses, symptoms, processes of care and outcomes. Semi-structured interviews with women who have had PNA, primary, community and specialist healthcare professionals, and community organisation representatives, explored understanding of risk, acceptability of using a risk assessment tool and reflections on the quantitative data analysis. Interviews digitally recorded with consent, transcribed, and anonymised. Data thematically analysed and themes agreed through discussion.

FINDINGS: The PNA cohort exhibited greater socioeconomic deprivation, higher white ethnicity prevalence, more smokers, but lower obesity and comorbidities. Healthcare utilisation was higher in the PNA group. PNA was more common in younger women, those who lived in more deprived areas, those with a recent history of anxiety or depression, and those whose infants had measures indicating poor health. Infants of mothers with PNA had a higher rate of primary care consultations, were more likely to be vaccinated and were less likely to have a record of an infant check. Women and healthcare professionals attribute increased risk to factors including poor obstetric history, limited support networks, stigma and prior expectations of pregnancy and parenthood. Childhood trauma and domestic violence were felt to be key risk factors which might not be coded in primary care records.

CONSEQUENCES: The adjusted data showing higher healthcare utilisation among PNA women underlines the need for tailored healthcare strategies for them. Whilst we were limited by missing data in this study, our analysis suggests that infant health plays a key role in the relationship between PNA and infant healthcare use. Infants of mothers with PNA were more likely to be vaccinated than those with no anxiety. Whilst women would find early identification of higher risk of PNA acceptable providing that support is available to them; primary care records may not include relevant codes to make such risk prediction possible. This integrated and mixed methods approach will enable us to gain an understanding of risk, assess the acceptability of using a risk assessment tool during consultations and improve the identification and management of women with PNA across primary and specialist care.

Funding Acknowledgement:

10D.1

‘Troubling’ medication reviews in the context of polypharmacy and ageing: a linguistic ethnography

Presenter: Deborah A Swinglehurst

Co-Authors: Sarah Pocknell, Sarah Collins, Celia Roberts, Nina Fudge.

Author institutions: Queen Mary University of London, University of Edinburgh, King's College London

Abstract

PROBLEM: Healthy ageing is a global priority. Polypharmacy (the use of 5+ medicines) amongst older people is increasing, with over one-third of adults in England, aged 80-89, prescribed at least eight medications. Polypharmacy can sometimes be harmful; the risk of harm increases with age and with the number of medicines prescribed. Medication reviews are recommended as one way of reducing the potential harms of polypharmacy. However, previous studies indicate that medication reviews do little to change prescription counts. What happens in medication reviews in practice is poorly understood.

APPROACH: We used a linguistic ethnography approach to explore how medication reviews proceed and what is (and is not) accomplished during these consultations. We conducted in-depth microanalysis of 18 video-recorded medication review consultations from three general practices in England. The consultations involved patients aged 65 or older, prescribed 10+ medications (‘higher risk’ polypharmacy). Video-recordings were gathered as part of a wider ethnographic study, involving 422 hours of observation of polypharmacy practices in primary care settings (2017-2020). Our microanalysis of the interactional data was informed by ethnographic appreciation of the organisational, institutional and domestic contexts of polypharmacy.

FINDINGS: Medication review consultations were time-consuming and involved lengthy stretches of interactional trouble: non-understandings, misunderstandings and misalignments. Interactants spent considerable time and effort seeking agreement on which medicine is under review and what it is for, without which meaningful progress was difficult. Uncertainties seeped further into 'troubles talk' concerning ageing and mortality. The routinised structure of 'going through' the patient's list of medicines provided a safe space for patients to raise existential concerns about enduring illness, ageing and mortality and for clinicians to witness these. Existential concerns were partially articulated. Although both parties engaged in interactional work to acknowledge these concerns, such 'troubles talk' was left unelaborated, unresolved and unfinished. The patient's lived predicament - ambiguous, uncertain, irresolvable – played out linguistically, marked by misunderstandings, lack of clarity, markers of 'trouble' and interactional loose ends. Clinicians and patients succeeded at maintaining relationships and respect for each other but fell short of addressing polypharmacy more directly. Clinicians may not feel confident to address the existential concerns that medication reviews raise.

CONSEQUENCES: The rich, multi-layered nature of medicines-talk could be more explicitly recognised in policy guidelines and in consultation skills training. Medication reviews offer an open field of possibilities for articulating key topics and areas of concern for individual patient care, including exploring patients' existential concerns regarding chronicity, ageing and mortality. If medication reviews are to reach their full potential, patients and clinicians need time, support and education to enable this. It is also likely to require deliberate policy and professional engagement with critical debates regarding preventive interventions in older age.

Funding Acknowledgement: NIHR Clinician Scientist Award (DS); NIHR School for Primary Care bridge funding (SP)

10D.2

Understanding perceptions of the safety of prescription medication sharing: a qualitative study with primary care-based healthcare professionals and members of the public

Presenter: Shoba Dawson

Co-Authors: Barbara Caddick, Deborah McCahon

Author institutions: University of Sheffield, University of Bristol

Abstract

PROBLEM: Prescription medication sharing (i.e., the giving and/or using of a prescription medicine that has been prescribed for someone else) is a form of inappropriate medication use. If not taken correctly, prescription medicines can cause harm. Few qualitative studies have explored non-recreational prescription medication sharing behaviours from the patient perspective. Healthcare providers' perspectives similarly have been rarely explored. The aim of this study was to explore patient and healthcare provider experiences and beliefs about prescription medication sharing behaviour alongside their perceptions of the safety of these practices.

APPROACH: Members of the public who had previously participated in a quantitative telephone survey and reported loaning and/or borrowing of prescription medication in the last 12 months were purposively sampled and invited to take part in an interview. Healthcare professionals (HCPs) with roles in prescribing and/or medicines management were recruited via our professional networks. Interviews addressed experiences and outcomes related to medication sharing, influences on risk perceptions and potential

solutions for reducing unsafe medication sharing practices. Interviews were audio-recorded, transcribed verbatim and analysed thematically using an inductive approach to identify overarching themes.

FINDINGS: Data collection has been completed and analysis is ongoing. Interviews were conducted with 19 members of the public and 13 healthcare professionals. Key themes arising from preliminary analysis relate to justification for sharing behaviour. Many members of the public felt that they should not share medicines prescribed for them with others. These individuals however tended to perceive themselves as experts in the medicines that they used regularly. Familiarity with their medicines meant that these individuals were confident to self-medicate and assess the risks and benefits of lending to others with similar diagnoses and symptoms. Some also felt that sharing was justifiable as they had not explicitly been advised that medicines prescribed for them should not be shared with others. Both members of the public and HCPs felt that sharing of medicines is a topic rarely discussed within routine practice. Some HCPs and patients recalled disclosures of sharing occurring during consultations in which the patient was requesting a prescription for a medicine they had not been prescribed before. HCPs tended however not to directly address this topic for fear of jeopardising good doctor-patient relationships. Other key themes identified including situational factors influencing sharing behaviours and perceptions of the safety of these practices will be presented and discussed.

CONSEQUENCES: This is the first UK based study to investigate public and healthcare provider perceptions of the safety of prescription medication sharing. FINDINGS: will identify beliefs and situational factors that influence these perceptions. Overall finding will be used to identify potential solutions that can be realistically delivered in practice to reduce unsafe medication sharing practices.

Funding Acknowledgement: NIHR School for Primary Care Research (REF 952)

10D.3

The role of social prescribing in Medication Review and Deprescribing (SPiDeR)

Presenter: Sara McKelvie

Co-Authors: Eloise Radcliffe, Kinda Ibrahim

Author institutions: University of Southampton

Abstract

PROBLEM: In the UK, a third of all people aged 65 years and above regularly take five or more medications, known as polypharmacy. Polypharmacy can increase the risks of side effects and hospital admissions. One of national priorities for NHS England set by the Chief Pharmacist, is to reduce prescribing unnecessary medication (overprescribing) by 10% for patients being treated by their GPs. A Structured Medication Review (SMR) provides an opportunity for Primary Care clinicians to identify and support deprescribing. Social prescribing within SMR may be useful to support clinicians recommend alternatives to medication which may improve health, such as changes in diet, ways to reduce stress, increase exercise, or group activities. The overprescribing report suggested that NHS England and NHS Improvement should expand the use of SMRs in Primary Care to benefit patients most at risk of overprescribing. However it is currently unknown how social prescribers could be integrated into SMR processes in Primary Care to support deprescribing for older people.

APPROACH: The aim of this realist inquiry is to explore the potential role of social prescribers in the medication review process and identify any training needs or resources required to enable their active involvement in the process. Further objectives include identifying barriers and facilitators for social prescribers

involvement in SMR and further training or resource requirements. The team are conducting qualitative focus groups with up to 40 primary care staff (GPs, pharmacists, social Prescribing link workers) and interviews with 20 older patients and caregivers. This is a work in progress and the FINDINGS: are being developed using thematic analysis by the project team.

FINDINGS: Initial insights into patient perspectives on their medications suggest that they would welcome a holistic approach to their medicines management and often feel unsure where to gain advice on reducing unnecessary medications. Focus group participants were interested in the potential for incorporating social prescribers into their SMR processes to support sustainable work practices in Primary Care. The participants described considerable variation in how medicines management was being conducted, in some areas, pharmacists and social prescribers were already involved in proactive deprescribing processes for older people.

CONSEQUENCES: The study is ongoing but there are initial implications for sustainable health systems. SMR processes provide an opportunity for targeted medicines review and could considerably reduce the incidence of side effects and adverse drug reactions for older people. There may be benefits from reducing prescription costs but economic analysis is needed to consider the potential additional costs from social prescribing activities. Social prescribing approaches to deprescribing may have additional positive effects on overall health and wellbeing, but further research is warranted on the implementation. A team based approach to primary care prescribing may support sustainable work practices.

Funding Acknowledgement: This study/project is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference 670). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

10D.5

Structured Medication Review Storylines: an interpretive policy analysis of medicines optimisation policy in primary care.

Presenter: Nina Fudge

Co-Authors: Sara Shaw, Jessica Mesman, Darren Ashcroft, Deborah Swinglehurst

Author institutions: Queen Mary University of London, University of Oxford, Maastricht University, University of Manchester

Abstract

PROBLEM: Problematic polypharmacy, usually defined as the use of 10 or more medications, is growing worldwide, particularly in older populations. The risks of polypharmacy to individual patients are well documented: medicine errors, adverse drug reactions, falls, frailty, hospital admission, increased hospital stay and premature death. Wider societal harms of polypharmacy include the environmental and financial impacts of medicine waste through unnecessary prescribing or unused medicines. In England, health policy hinges around the potential of medication reviews to alleviate harms from polypharmacy. General practice is tasked with tackling problematic polypharmacy through medicines management and the delivery of Structured Medication Reviews (SMR). Deprescribing, or stopping medicines, in medication reviews is challenging and evidence on the effectiveness of medication reviews as an intervention is limited. Gaps remain regarding policy addressing polypharmacy and how policy narratives become implementable actions.

APPROACH: This study is underpinned by Interpretive Policy Analysis (IPA) which seeks to understand how a policy is understood,

interpreted and enacted by a range of actors. IPA will guide data collection and analysis on how medicine optimisation policy is conceptualised, developed and implemented. A corpus of 15 national policy documents spanning 10 years (2013-2023) were analysed using discourse analysis, metaphor analysis, and identifying 'emblematic issues'. We conducted in-depth interviews with 12 key stakeholders responsible for the production, writing, rewriting and implementation of the SMR and medicines optimisation policy. Respondents were drawn from national NHS organisations, professional bodies (RCGP, RPS), and local integrated care boards and primary care networks) to further identify policy storylines and narratives. Analysis sought to: situate the policy of SMR within its recent historical context; identify key drivers for the policy; and elicit storylines inherent within the policy.

FINDINGS: This is a work in progress and data collection and analysis is ongoing. Storylines as a type of narrative allow actors to draw upon various categories or issues to give meaning to complex social problems. Storylines inform and lead to action. In the case of the SMRs, problematic polypharmacy and overprescribing storylines within the policy focused on: increasing medicines safety by reducing the number of people who are overprescribed medication; promoting prescribing decisions that are patient-centred; introducing a new profession to the primary care workforce, reducing financial costs of prescribing to the NHS, and helping the NHS meet its carbon reduction commitments. This leads to the question – how well can the SMR be the solution to these wide-ranging and complex problems?

CONSEQUENCES: As well as contributing to policy analysis and furthering understanding of how policy actions are made, this work will provide context to a linked study investigating the implementation of SMRs on the ground using video-reflexive ethnography.

Funding Acknowledgement: This work was funded by THIS Institute (The Healthcare Improvement Studies Institute) through a post-doctoral research fellowship.

10D.6

How did patients feel about their medication review? Patient-reported satisfaction of medication reviews as part of a complex intervention for polypharmacy in general practice: IMPPP Trial

Presenter: Lynn Laidlaw

Co-Authors: Barbara Caddick, Deborah McCahon, Lorna Duncan, Pete Blair, Katrina Turner, Roxanne Parslow, Nicholas Turner, Nouf Jeynes, Ammar Annaw, Cindy Mann, Chris Salisbury, Carolyn Chew-Graham, Bruce Guthrie, Jeff Round, Rupert Payne

Author institutions: University of Bristol, Keele University, The University of Edinburgh, University of Alberta, University of Exeter

Abstract

PROBLEM: Polypharmacy is common and associated with patient safety risks. Polypharmacy management necessitates balancing therapeutic benefits and risks with fluctuating clinical and patient priorities. The Improving Medicines use in People with Polypharmacy in Primary Care (IMPPP) trial evaluated the effectiveness of a complex intervention to optimise medication use for patients with polypharmacy in general practice. This presentation details patients' experience of their medication review.

APPROACH: The IMPPP trial was a multicentre, open-label, cluster-randomised trial. 37 practices (19 intervention) were recruited from the South-West and West Midlands regions of England. Practices were randomised to a complex intervention comprising a clinical informatics tool (designed to support medication review and case-finding), training and implementation of

a four-stage structured medication review (pharmacist review of case-notes, inter-professional collaborative discussion between pharmacist and general practitioner (GP), review with the patient (by telephone or in-person), and follow-up if indicated). Patients with 5+ medications and triggering at least one 'potentially inappropriate' prescribing indicator were recruited per practice. Patients in the intervention arm were asked to complete a survey (online or paper) examining their experience of the review.

FINDINGS: 731 patient participants in intervention practices were invited to complete the survey (June 2022-May 2023) with 73% response rate. Median age was 72 years (IQR 78-65 years), and 48% of respondents were women. 68% of respondents reported that their review was carried out by a pharmacist, and 75% indicated that they were unfamiliar with the reviewer. Most reviews (79%) were carried out remotely via telephone; 80% of respondents reported they were happy with where the review took place. Over half of patients (53%) reported the review led to a decision to change medications; 62% of those patients considered this a shared decision, with 76% satisfied with the changes made. Around half of patients agreed that reviewers helped them to understand all the information during the review (50%) and that the review led to agreement on how to proceed (52%), although around a quarter strongly disagreed that different treatment options were discussed. Patients generally considered reviews to be patient-centred (78-85% rating clinicians as good on 4 components of CARE measure). Overall, 75% were satisfied with their review; the odds of being satisfied were significantly associated ($p<0.001$) with increasing shared decision making (OR 2.32 [95% CI 2.01-2.67] per quintile increase in SDM-Q-9 score).

CONSEQUENCES: Patients considered polypharmacy medication reviews conducted predominantly by telephone by a clinical pharmacist, to be acceptable and patient-centred, despite usually being unfamiliar with the clinician. Decision-making was perceived as shared, although there are opportunities to improve discussion of treatment options. The FINDINGS: support current models of care delivery, although must be considered in the context of the IMPPP review being supported by appropriate training and informatics.

Funding Acknowledgement: IMPPP is funded by NIHR's Health Services and Delivery Research programme, reference 16/118/14. The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health.

10E.1

Rethinking continuity in general practice for people with mesothelioma

Presenter: Emilie Couchman

Co-Authors: Emilie Couchman, Steph Ejegi-Memeh, Sarah Mitchell, Clare Gardiner

Author institutions: University of Sheffield, University of Leeds

Abstract

PROBLEM: Mesothelioma is a terminal disease that is linked to asbestos exposure. Continuity is difficult for GPs, and other healthcare professionals (HCPs), to provide within NHS general practice but is highly valued by people with mesothelioma. The aim of this study is to understand the experiences of continuity in general practice among people with mesothelioma, their close persons and their HCPs; how they achieve this (or not); and how it affects their healthcare service use.

APPROACH: Realist case studies of patient journeys through the healthcare system (involving longitudinal interviews with people with mesothelioma, their close persons and HCPs; and exploration of the organisational context). Data analysis allowed understanding

of hidden mechanisms (resources and reasoning), triggered in certain contexts, leading to specific outcomes.

FINDINGS: Forty-eight interviews (involving 9 patients, 8 close persons and 12 HCPs) were undertaken (totalling 30.8 hours/1848 minutes). Context-Mechanism-Outcome configurations related to: challenges unique to mesothelioma; capacity of patients/close persons/HCPs to facilitate continuity; multidisciplinary team (MDT) approach differs from the family doctor model; and 'the NHS primary care system is broken'.

CONSEQUENCES: Patients perceive their continuity needs to be unmet by the inflexible primary care system, which needs to adapt to a society in which people receive increasingly novel treatments and live longer with complex healthcare needs. A societal perspective shift is required to understand that an MDT now shares responsibility for care, rather than an individual family doctor. Policy documents continue to focus on access, and still do not advocate strongly enough for continuity, despite unequivocal evidence demonstrating its worth.

Funding Acknowledgement: Mesothelioma UK

10E.2

How can the whole practice approach to training and education foster a healthy system in facilitating early cancer diagnosis in primary care? Qualitative FINDINGS: from a feasibility RCT.

Presenter: Annie Hendry

Co-Authors: Stefanie Disbeschl, Alun Surgey, Julia Hiscock, Nefyn Williams, Richard D Neal, Clare Wilkinson

Author institutions: Bangor University, University of Liverpool, University of Exeter

Abstract

PROBLEM: Almost half of avoidable delay in cancer diagnosis occurs in primary care. As most cancers are first presented in primary care, general practice is the ideal setting for interventions to reduce delay and improve outcomes. Previous work has shown that good communication and teamwork among practice staff has the potential to facilitate earlier diagnosis, however, often interventions and education are aimed at clinical staff only. This study aimed to take a 'whole practice' approach to promote inclusivity and teamwork in cancer detection.

APPROACH: ThinkCancer! is a behaviour change intervention for whole practice teams consisting of educational workshops for all staff. Qualitative interviews with practice staff were conducted to assess acceptability of the intervention and gain insight into the views and experiences of practice staff regarding their role within cancer diagnosis. All interviews were conducted by telephone, audio recorded and fully transcribed. Transcripts were analysed using the Framework method.

FINDINGS: A key issue was the importance of teamwork within general practice and ThinkCancer! was described as facilitating such teamwork. The whole practice approach was met with appreciation by participants as they found it inclusive, particularly for non-clinical staff who felt underrepresented in research and education. Non-clinical staff reported enjoying the workshop and having the opportunity to learn and make their own recommendations for practice. Good communication regarding cancer was found to be important and participants reported improvements, particularly between clinical and non-clinical staff, since the workshops. Perceived barriers to communication and teamwork included heavy workloads, less opportunity for shared discussions during breaks or meetings, increased part time working and staff absences. Participants from smaller practices reported having more regular meetings and higher levels of

communication. The whole practice approach taken by ThinkCancer! is key to its' implementation. All general practice staff have a vital role in facilitating earlier diagnosis and good teamwork facilitates healthy systems with potential to improve patient outcomes.

CONSEQUENCES: Following the feasibility study, the ThinkCancer! Phase III RCT is now in progress. A process evaluation running alongside utilises qualitative methodology to allow understanding of the intervention in context, inform trial processes and FINDINGS: and facilitate implementation. The process evaluation will also aim to capture patient voices and experiences through qualitative interviews.

Funding Acknowledgement: This study was funded by Cancer Research Wales

10E.3

Are there gender inequalities between ethnic groups in primary care cancer referrals?

Presenter: Deepthi Lavu

Co-Authors: Deepthi Lavu, Judit Konya, Adnan Khan, Tanimola Martins, Sarah Price, Richard D Neal

Author institutions: APEx (Exeter Collaboration for Academic Primary Care), Department of Health and Community Sciences, Faculty of Health and Life Sciences, University of Exeter

Abstract

PROBLEM: Longer cancer diagnostic intervals, from as little as 14 days, are associated with more advanced cancer. Women and individuals from ethnic minorities tend to experience longer times to diagnosis, and therefore poorer prognosis, compared with their counterparts for various cancers. The reasons for longer intervals include differences in healthcare seeking behaviour and clinician factors including referral times,for example. In countries with a gatekeeper healthcare system, such as UK, most cancers are diagnosed following primary care initiated referrals.Our objective is to synthesise evidence on the relationship between primary care initiated cancer referrals and cancer outcomes by gender and ethnicity. This is the first review to examine the concept of gender inequalities in primary care initiated cancer referrals . Our review question is,"When primary care referral is the route to diagnosis of various cancers (such as GP referral pathway and two-week-wait pathway in the UK or similar routes in other countries), across various ethnic groups:

1. Are time intervals to diagnosis of cancer longer in women than in men?

2. Are emergency presentations more likely in women than in men?

3. Are stage and/or survival for cancers worse in women than in men?"

APPROACH: This scoping review will use the Joanna Briggs Institute methodology and PRISMA-ScR. Sources searched include electronic databases-Medline(Ovid), CINAHL,Embase(Ovid) and CENTRAL-and private collections of the team members. Based on participants, concept and context framework, this review will consider studies after 2000 that explored the relationship between gender, across various ethnic groups, and cancer outcomes following primary care cancer referral pathways in countries with gatekeeper healthcare systems. Two independent reviewers are carrying out the study selection followed by data extraction using a template. The results will be presented as a narrative analysis. For this study there is ongoing partnership with public collaborators from the Peninsula Public Engagement Group and the Exeter Collaboration for Academic Primary Care patient and public involvement group who helped develop the research question and review protocol.

FINDINGS: Out of 14,375 studies, titles and abstracts of 10,693 were screened and 216 have been included in the ongoing full text screening. The results will provide an overview of the discrepancies in primary care cancer referrals based on gender across ethnic groups and will be presented in full at the meeting.

CONSEQUENCES: The results will be used to understand the extent of peer-reviewed literature available on this topic and help identify and analyse knowledge gaps allowing for development of future research initiatives. Synthesising this evidence may also influence policy by allowing the identification of appropriate strategies and interventions to address gender and ethnic inequalities when using cancer referral pathways which could impact the timely identification and management of cancer, making care safer and improving prognosis, resulting in an impact on population health.

Funding Acknowledgement: No funding was received for this study. DL is an academic Clinical Fellow funded by the University of Exeter.

10E.5

A case control study of clinical factors associated with ovarian cancer in a younger population with high rates of migration, deprivation and ethnic diversity.

Presenter: Grace Okoli

Co-Authors: Daniel Vulcan, Dharmishta Parmar, Wasim Hamad , Fiona Walter, and Stephen Duffy

Author institutions: Wolfson Institute of Population Health Barts and The London School of Medicine and Dentistry Queen Mary University of London

Abstract

PROBLEM: To identify the risk factors and symptoms associated with ovarian cancer within a multiethnic population in East London and determine if this is consistent with current guidance.

APPROACH: Design and setting-Case control study using primary care data from 204 general practices in four multiethnic Clinical Commissioning Group (CCG) areas in East London.Method-We identified 632 women diagnosed with ovarian cancer in the sample population between January 2010 and December 2020, matched with 3159 female controls of the same age and regional primary care commissioning group. Primary care records from each case and matched control were analysed for associated risk factors and symptoms established from national clinical guidelines. Each control was allocated a pseudodiagnosis date equal to the date of diagnosis of her matched case. We had data from primary care records on symptoms up to three years prior to diagnosis, demographic factors, including ethnicity and clinical factors such as personal medical history, lifestyle and family history of ovarian cancer. Univariate and multiple logistic regression analysis (MVR) were used to estimate the effect of the various factors on likelihood of ovarian cancer. A final model was developed using backward stepwise regression.

FINDINGS: The age-specific incidence of ovarian cancer per 1,000 women between the ages of 35-89 years, was lower in our study population when compared with England and Wales. Significantly increased ovarian cancer risk were observed for those underweight, smokers past and current, white ethnicity, family history of breast or ovarian cancer, past history of non-ovarian malignancy and history of menstrual disorders. Between 12-36 months prior to ovarian cancer diagnosis, those with the following symptoms were at significantly greater risk: abdominal distension (OR = 7.100, CI 4.267-11.815, P<0.001); abdominal/pelvic pain or discomfort (OR= 5.158, 95% CI 4.041-6.584; P<0.001), change

in bowel habits (OR=2.775, 95%CI 1.978-3.892; P<0.001), bowel obstruction (OR=8.1; 95%CI 1.301-51.078; P<0.05); nausea (OR=2.701; 95%CI 1.076-6.784; P<0.05), postmenopausal bleeding (OR = 5.608; 95% CI 2.673-11.763; P<0.001), shortness of breath (OR=2.092; 95%CI=1.426-3.071; P<0.001) and weight loss (OR=3.037, 95% CI 1.321-6.980, P<0.05). These symptoms remained significant over 36-months prior to diagnosis, with the exception of bowel obstruction, nausea and shortness of breath. In the multivariant regression analysis, abdominal distension, abdominal pain, change in bowel habits and postmenopausal bleeding remained significant though these clinical factors were less predictive of ovarian cancer in our study population compared with the rest of England and Wales.

CONSEQUENCES: Conclusion We identified comparable diagnostic clinical risk factors in our multiethnic study population that mirror FINDINGS: in predominantly white populations, although with a less significant predictive capacity for ovarian cancer. The variation is more attributable to age-specific distinctions within our study population than differences in race or ethnicity. This indicates the necessity of incorporating demographic characteristics when applying clinical guidance to assess the risk of disease.

Funding Acknowledgement: The Academy Of Medical Sciences

10F.1

Prevalence of anaemia in primary care in England

Presenter: Me (Margaret Smith)

Co-Authors: Cynthia Wright Drakesmith, Sarah Haynes, Katja Maurer, Suzanne Maynard, Noémi Roy, Akshay Shah, Simon Stanworth,Clare Bankhead

Author institutions: Department of Primary Care Health Sciences, Nuffield Department of Women's and Reproductive Health, Oxford University Hospital Haematology, Nuffield Department of Clinical Neurosciences, Radcliffe Department of Medicine (all University of Oxford)

Abstract

PROBLEM: Anaemia is a common condition of all ages where the body does not have enough healthy red blood cells. This may cause tiredness, shortness of breath and impaired concentration amongst other symptoms. Anaemia affects about 33% of the world's population. The commonest type is iron-deficiency anaemia (IDA). It can be prevented or treated by an iron rich diet, but iron supplementation is often required. The other common type is anaemia of inflammation, which is related to chronic disease. Most research on IDA has focussed on low- and middle-income countries where it is one of the five leading causes of years lived with disability. However, anaemia prevalence in different demographic groups in the UK is not well known.

APPROACH: We used a population of patients from UK Primary Care practices, identified from a database of electronic health records. CPRD Aurum contains data on 39 million patients from 1485 practices and is roughly nationally representative. We described the prevalence of haemoglobin (Hb) testing in 2019 (pre-COVID) and anaemia prevalence (according to WHO age and gender-specific cut-offs for Hb) in different demographic subgroups. We estimated the percentage with low Hb in the first 3 months of 2019 who had another Hb test 3-6 months or 6-12 months later, and the percentage of these tests still below anaemia thresholds.

FINDINGS: The study population contained 14,207,841 people age 1+ years from English practices. Overall 5.4% of females and 3.1% of males had an Hb test result below the WHO-threshold for anaemia. For example, 25% of

3,523,355 women aged 15-49 years were tested in 2019, and 18.0% had low Hb (4.5% of the total). Only 12.5% of 3,570,156 men aged 15-49 were tested, 4.3% having low Hb (0.5% of the total). Prevalence of testing and low Hb increased with age: 54.5% and 54.3% of women and men age 66+ years were tested, with 25.3% (13.8% of total) and 29.6% (16.1% of total) having low Hb. Women of Asian or black ethnicity were more likely to have had a test indicating low Hb, as were women in the highest quintile of IMD. A total of 207,054 people had a low Hb recorded in the first 3 months of 2019. Of those with follow up 3-6 months later, 35.6% had another Hb test, and Hb was still below threshold in 74.1% of these. Of those with follow-up 6-12 months after the initial low Hb result, 51.3% had another test, and it was still below threshold in 70.7% of people.

CONSEQUENCES: Prevalence of anaemia and Hb testing varies considerably by sex, age-group, ethnicity and IMD, with a significant burden in women of childbearing age. Longitudinal data on test results indicates many people have persisting anaemia, raising questions about appropriate investigation and management.

Funding Acknowledgement: CB and MS are supported by the Oxford and Thames Valley Applied Research Collaborative The work was done under CPRD ERAP protocol 22_001873

10F.2

Communicating blood test results in primary care: a mixed methods systematic review

Presenter: Helen Nankervis

Co-Authors: A. Huntley 1, P. Whiting 1, W. Hamilton 2, H. Singh 3, S. Dawson 1, R. O'Donnell 1, J. Sprackman 1, A. Ferguson-Montague 1, J. Watson 1

Author institutions: 1 University of Bristol, UK, 2 University of Exeter, UK , 3 Baylor College of Medicine, USA

Abstract

PROBLEM: Safe and efficient systems for test result communication are especially important given the rising primary care workload, with the average UK GP spending 1.5 to 2 hours per day reviewing and actioning test results. We aimed to assess the factors impacting communication of blood test results between primary care providers, their patients and carers. We reviewed the benefits and harms of interventions for improving communication, evaluated needs and preferences of patients, clinicians and healthcare staff, and identified barriers and facilitators for communication.

APPROACH: We registered (PROSPERO CRD42023427433) and published the protocol for this mixed methods systematic review. Medline, Embase, PsycINFO (Ovid), CINAHL (EBSCOHost) and the Cochrane Library were searched from 2013 to 2023. Primary studies of any design providing information on the communication of blood test results by primary care to adult patients and carers were included. PPI participants, including two co-authors, participated in the design and conduct of the review. The review synthesis was conducted following JBI guidance for mixed methods systematic reviews using a segregated convergent approach.

FINDINGS: 71 studies were included; most were cross-sectional, observational and 29/71 focused on online communication. Study quality was mostly poor and risk of bias was high, partly due to a lack of reported information. While online access and text messages were considered acceptable for routine or normal results by patients, clinicians and healthcare staff; some considered them impersonal. Patients wanted more information about their results and consulted various sources to try to obtain this. Patients preferred shorter waiting times for

test results with some exceptions around sensitive results. Clinicians and healthcare staff were concerned about incorrect contact details when using text messaging, emails or voice messages. Opinions were mixed as to whether more information with test results and direct release to patients without clinician input was beneficial or could cause problems. Barriers included cost, time and unclear processes, such as who was responsible for follow-up. Additional barriers included the burden of test communication management systems including use of workarounds, alerts and notifications. We did not identify any interventions to improve communication of blood test results due to a lack of interventional studies and randomized controlled trials.

CONSEQUENCES: Blood test result communication needs, preferences, barriers and facilitators were diverse and included important common themes, useful for directing clinical and research focus. There was little relevant evidence around online access as studies often selected for current online users, online access and skills. The FINDINGS: are significant given that the NHS in England has recently mandated online patient access to test results in primary care. The impact of these changes on diverse patient groups, including those at risk of digital exclusion, warrants further exploration.

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10F.3

Natriuretic peptide testing to detect left ventricular systolic dysfunction in the OxVALVE cohort: diagnostic accuracy study

Presenter: Clare Goyder

Co-Authors: Fanshawe TR, Prothero A, Kennedy A, Wilson J, Hobbs FDR, Myerson SG, Taylor CJ

Author institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford, UK. National Institute for Health Research (NIHR) Oxford Biomedical Research Centre, Oxford University Hospitals NHS Foundation Trust, Oxford, UK

Abstract

PROBLEM: Over 40 million people worldwide have a diagnosis of heart failure (HF). This clinical syndrome has a worse prognosis than common cancers. However, there is increasing evidence that HF can be prevented through intervention at a pre-clinical stage. Therefore, the identification of patients at risk of developing HF in the community is a research priority.One group at high risk of developing clinical HF are people with Left Ventricular Systolic Dysfunction (LVSD), defined as left ventricular ejection fraction (EF) below 50% on echocardiography. However, identifying people with LVSD is challenging. There is a paucity of evidence to demonstrate how accurately biomarkers such as brain natriuretic peptide (BNP) correlate with LVSD in community populations.We aimed to determine how accurately BNP detects LVSD in the Oxford Valvular Heart Disease population cohort study (OxVALVE); and the impact of differing LVSD definitions and BNP positivity thresholds on test performance. We also explored diagnostic accuracy by New York Heart Association (NYHA) class, which describes limitations during physical activity.

APPROACH: We conducted a retrospective diagnostic accuracy study using data collected as part of the prospective OxVALVE population cohort study. This study recruited 4009 community participants aged 65 years and older between August 2009 and May 2016, through seven general practices in Oxfordshire. Participants who had undergone

both the index test (BNP) and the reference standard (echocardiography) were included (termed the OxVALVE-NP cohort). The main outcome measures of sensitivity, specificity, negative predictive value, positive predictive value were calculated for BNP compared to echocardiography.

FINDINGS: Of 1398 patients included in the analysis, the diagnosis of LVSD (EF<50%) was confirmed in 46 participants and excluded in 1352. At a BNP threshold of ≥50 pg/ml, sensitivity was 21.74% (95% confidence interval [CI] 10.95-36.36) and specificity 96.89% (95% CI 95.82-97.75) for the detection of LVSD (EF<50%), compared to echocardiography. At BNP≥ 35 pg/ml, sensitivity was 46.67% (95% CI 21.27-73.41) and specificity 93.06% (95% CI 91.59-94.34) for the detection of EF<40%. For NYHA class II, at BNP≥ 35, the sensitivity was 66.67% (95% CI 22.28-95.67) and specificity 88.49% (84.14-91.99).

CONSEQUENCES: In a well-phenotyped community cohort with a low prevalence of LVSD, BNP measurement had a low sensitivity and high specificity for detecting LVSD. Performance improved at lower BNP thresholds and with lower EF cut-offs for LVSD definition. Accuracy also improved in participants who described a slight limitation in physical exercise (NYHA II). Our results do not support widespread community screening in low prevalence settings. However, there might be some value in measuring BNP in people who describe even a subtle reduction in exercise tolerance. This group may not present to primary care so more proactive strategies to identify them might be warranted.

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10F.5

General Practitioner Access to Diagnostic Imaging: A Scoping Review of Associated Challenges

Presenter: Geoff McCombe

Co-Authors: Aisling Mac Manus1, Geoff McCombe1, John Broughan1, Claire Collins2, Ronan Fawsitt3,4, Mike O'Callaghan5, Diarmuid Quinlan2, Fintan Stanley2, Walter Cullen1

Author institutions: 1School of Medicine, University College Dublin, Dublin, Ireland 2 Irish College of General Practitioners, Dublin, Ireland. 3 General Practice, Castle Gardens Medical Centre, Kilkenny, Ireland. 4 Primary Care Advisor, Ireland East Hospital Group, Dublin, Ireland. 5 School of Medicine, University of Limerick, Limerick, Ireland.

Abstract

PROBLEM: Appropriate and efficient referrals for diagnostic imaging in general practice can have a significant effect on patient outcomes. Early diagnosis can result in improved prognosis. Therefore efforts have been made in recent years to improve General Practitioner (GP) access to diagnostic imaging. This scoping review aims to highlight the challenges faced by GPs following the introduction of enhanced diagnostic imaging referral pathways and how these challenges might be addressed.

APPROACH: A comprehensive search was conducted of 'PubMed', 'Cochrane Library', and 'Google Scholar'. A filter was applied for papers between 2013 and 2023. The Arksey and O'Malley six-stage process was utilised to guide this scoping review, along with the PRISMA extension for Scoping Reviews (PRISMA-ScR) checklist.

FINDINGS: : Thirty-two papers from a range of countries were included, (Netherlands, UK, Ireland, USA, Switzerland, Denmark, Japan, Poland, India, Hong Kong, Australia, Singapore, Germany). There were three cohort studies, one review article, two practical guides, three randomised control trials, five retrospective reviews, one mixed methods study, two reports, two scoping reviews, one evaluation of a questionnaire, one clinical trial, six systematic reviews, one narrative review, three literature reviews and one pictorial article. Challenges reported included increased workload for GPs, lack of training in use of diagnostic imaging modalities and insufficient anatomical knowledge.

CONSEQUENCES: The introduction of new diagnostic imaging referral pathways have provided many patients with improved care and outcomes as for the most part they did not have to access hospital facilities and could avoid hospital queues and delays. This has resulted in many patients receiving accelerated diagnoses and improved prognoses as a result. GPs reported that this new referral pathway also provides a greater sense of patient safety. However, with increased patient numbers attending general practices for diagnostic imaging, follow-up appointments and further testing, has resulted in general practitioners reporting feeling overworked.

Funding Acknowledgement: We are grateful to Ireland East Hospital Group, the UCD School of Medicine, and the UCD College of Health and Agricultural Sciences for supporting this project and to Medisec Ireland for funding Aisling MacManus to conduct the scoping review.

10F.6

Public acceptability of self-sampling and self-testing for infections: a rapid systematic review

Presenter: Aleksandra Borek

Co-Authors: Caity Roleston, Runa Lazzarino, Nia Roberts, Tom Fowler, Gail Hayward, Sarah Tonkin-Crine

Author institutions: University of Oxford, UK Health Security Agency

Abstract

PROBLEM: Self-sampling and self-testing (SS/ST) by the members of the public in the community have been increasingly used for sexually transmitted infections (STIs) and recently for COVID-19. They offer an important strategy for preventing and managing infections, especially during outbreaks of infectious diseases. Many factors, including public views and experiences of SS/ST, affect the use and implementation of SS/ST. We aim to synthesise the public users' views and experiences related to the acceptability of SS/ST for infections to inform future public health approaches to SS/ST.

APPROACH: A rapid systematic review (PROSPERO CRD42024507656). We searched five databases, conducted manual citation searches and searched for grey literature. We included qualitative, mixed-method and survey studies reporting public users' views on SS/ST for infections or infectious pathogens. We focused on studies conducted in Europe and published since 2014 in English. We used structured forms to extract data on study characteristics, characteristics of SS/ST devices, details of SS/ST procedures, and public views on SS/ST. We are synthesising the data narratively.

FINDINGS: We identified 6500 records and screened 2729 abstracts and 368 full texts. We included 44 studies published in Europe (22 in the UK; 8 qualitative, 14 mixed-methods, and 22 surveys). Twenty-six studies explored SS/ST for respiratory infections/pathogens (mostly COVID-19), 16 for STIs, and 2 for hepatitis C. Data synthesis is ongoing (to be completed by

April 2024). Preliminary analysis suggests that studies report high levels of public users' acceptability of SS/ST across infections/pathogens (particularly for swabs and saliva/gargle fluids SS), ease of performing SS/ST, and preferences for SS/ST at home over testing by health professionals. Participants reported many perceived benefits of and motivations for SS/ST (e.g., related to convenience and privacy), and some barriers/challenges (e.g., related to unclear instructions and difficulties collecting samples).

CONSEQUENCES: Self-sampling/self-testing appears to be an acceptable approach to testing for infections. It might be a useful public health strategy to increase testing, especially to prevent and control infectious outbreaks in the community. However, key barriers to performing SS/ST will need addressing if SS/ST were to be successfully implemented.

Funding Acknowledgement: The review was funded by the UK Health Security Agency, and supported by the NIHR Health Protection Research Unit in Healthcare Associated Infections and Antimicrobial Resistance and the NIHR Community Healthcare MedTech and IVD Cooperative.

10G.1

OPTIMISING THE IMPACT OF YOUR RESEARCH: A BYOP WORKSHOP

Presenter: Joanne Reeve

Co-Authors: J Reeve - Hull York Medical School Dr Pallavi Prathivadi - MOnash University, Australia

Author institutions:

Abstract

<p>This workshop aims to creatively challenge how we think about impact; collaboratively apply practical resources (from WiseGP and CRISP) to your own work (BYOP); and collectively discuss strategies and opportunities for implementation. Impact matters. It is a moral and ethical responsibility of doing research to consider the impact of our work. Demonstrating impact is important for career progression. Impact describes our research making a difference in our communities. Every research study counts when we think about impact. Its not just getting RCT evidence into guidelines – its everything we do with our research that influences and changes the thinking and actions of people, communities, society, political groups and more. But how can we make your research more impactful? In this workshop we use 2 very different pieces of work to bring you practical examples of how we can generate impact. WiseGP is a national initiative, developed from and with the work of clinicians, to embed and strengthen scholarship within everyday clinical practice (www.wisegp.co.uk). We'll outline the 4 step model WiseGP uses to guide its impact planning. CRISP is an international research collaboration to improve the reporting of primary care research (https://crisp-pc.org/). The CRISP checklist lists what primary care end users of your research need to see in your papers for them to be useful. The CRISP checklist highlights what primary care end users need in your papers for research to be useful. We invite you to Bring Your Own Paper/Project to this workshop. Having introduced the tools, we will work in facilitated small groups to apply them to your own research projects. Whether you are writing the bid, writing up a paper, or thinking about wider knowledge exchange opportunities, this workshop will help you creatively challenge, expand and plan your impact work. We will then come together as a large group to discuss the issues arising - including what actions are needed from SAPC/AAAPC, funders (NIHR), universities and others to ensure we collectively optimise the impact and value of research. You will leave the workshop with a personal impact plan and

an invitation to share the outcomes on SAPC and WiseGP websites. We will also write a summary of our discussions on the wider actions needed to share with research leaders.

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