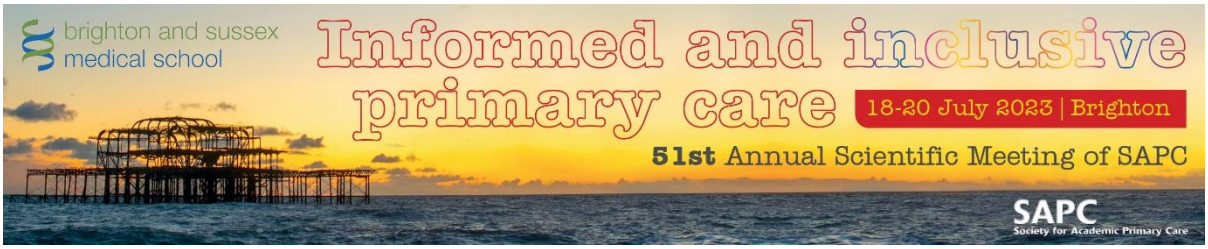

Book of Abstracts

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Australasian Association of Academic Primary Care (AAAPC) winning presentation from the annual conference 2022

General practitioner experiences in delivering early medical abortion services to women from culturally and linguistically diverse backgrounds

Presenter: Rhea Singh

Abstract

PROBLEM Women from culturally and linguistically diverse (CALD) backgrounds have higher rates of unintended pregnancy than Australian-born women but underutilise sexual and reproductive health services. Consequently, the 2020-2030 Australian National Women's Health Strategy has identified women from CALD backgrounds as a priority group for improving access to sexual and reproductive health care, including early medical abortion (EMA). Women commonly seek the counsel of general practitioners (GPs) for sexual and reproductive health concerns, making GPs ideally placed to deliver EMA services. However, little is known about how GPs should best deliver this care to women from CALD backgrounds. Our aim was to explore GP perspectives and experiences in providing EMA services to women from CALD backgrounds and their recommendations for service improvements.

APPROACH A qualitative-descriptive study design was used. Semi-structured telephone interviews were conducted with 18 GPs nationwide who provide EMA to women from CALD backgrounds in the general practice setting. GPs were purposively sampled using three strategies: email invitations to publicly listed medical abortion providers, social media posts on a special interest Facebook group, and participant referral. Following verbatim transcription, reflexive thematic analysis was used to develop themes and subthemes, categorised according to the capability, opportunity, and motivation domains of the Capability-Opportunity-Motivation-Behaviour (COM-B) model.

FINDINGS GPs experienced challenges in communication and cultural competency because of insufficient training, lack of multilingual resources, and organisational constraints in effectively using interpreter services. Additionally, inadequate government reimbursement for EMA consultations, which contributes to high out-of-pocket costs for women, was identified as a financial impediment to care because women from CALD backgrounds tend to be more socioeconomically disadvantaged than the general population. Despite these challenges, GPs believed they are ideally positioned to provide EMA to women from CALD backgrounds since their embeddedness within communities facilitates the building of trusting provider-patient relationships.

CONSEQUENCES Up-skilling GPs in culturally competent care and cross-cultural communication, multilingual patient education resources, and efficient systems for interpreter use can optimise EMA service provision to women from CALD backgrounds. Additionally, dedicated government funding for EMA provision will help overcome financial barriers to patients accessing care.

North American Primary Care Research Group (NAPCRG) winning presentation from the annual conference 2022

Personal Continuity and Prescribing Correctly: a Perfect Couple in Primary Care

Presenter: Marije te Winkel

Abstract

PROBLEM Personal continuity between patient and physician is a core value of primary care. Although previous studies suggest that personal continuity is associated with fewer potentially inappropriate prescriptions, evidence on continuity and prescribing in primary care is scarce. We aimed to determine the association between personal continuity and potentially inappropriate prescriptions, which encompasses potentially inappropriate medications (PIMs) and potential prescribing omissions (PPOs), by family physicians among older patients.

APPROACH We conducted an observational cohort study using routine care data from patients enlisted in 48 Dutch family practices from 2013 to 2018. All 25,854 patients aged 65 years and older having at least 5 contacts with their practice in 6 years were included. We calculated personal continuity using 3 established measures: the usual provider of care measure, the Bice-Boxerman Index, and the Herfindahl Index. We used the Screening Tool of Older Person's Prescriptions (STOPP) and the Screening Tool to Alert doctors to Right Treatment (START) specific to the Netherlands version 2 criteria to calculate the prevalence of potentially inappropriate prescriptions. To assess associations, we conducted multilevel negative binomial regression analyses, with and without adjustment for number of chronic conditions, age, and sex.

FINDINGS The patients' mean (SD) values for the usual provider of care measure, the Bice-Box-erman Continuity of Care Index, and the Herfindahl Index were 0.70 (0.19), 0.55 (0.24), and 0.59 (0.22), respectively. 72.2% and 74.3% of patients had at least 1 PIM and PPO, respectively; 30.9% and 34.2% had at least 3 PIMs and PPOs, respectively. All 3 measures of personal continuity were posi-tively and significantly associated with fewer potentially inappropriate prescriptions.

CONSEQUENSES A higher level of personal continuity is associated with more appropriate prescribing. Increasing personal continuity may improve the quality of prescriptions and reduce harmful consequences.

1A.1

Responses to the inverse care law in Scotland over the past 20 years: a qualitative study.

Presenter: Alessio Albanese

Co-Authors: Stewart Mercer, Carey Lunan, Cara Bezzina, James Bogie, David Henderson, David Blane

Author Institutions: University of Glasgow

Abstract

PROBLEM In 1971, Julian Tudor Hart defined the inverse care law as: 'the availability of good medical care tends to vary inversely with the need for it in the population served'. Several policies and interventions have sought to address the inverse care law in general practice in Scotland by improving the volume and quality of care in areas of deprivation, with limited evidence of impact. The aim of this study is to explore the views and experiences of key stakeholders about responses to the inverse care law in general practice in Scotland. The findings of this research will help to inform future policy and practice responses.

APPROACH The methodology used to analyse the interviews is Reflexive Thematic Analysis (RTA) (Braun & Clarke, 2006). In RTA, themes are not pre-defined with the purpose of finding codes. Instead, themes are identified via the organisation of codes around a 'central organising concept' (Braun & Clarke, 2006; 2019). In the case of the present study, the central organising concept was the Inverse Care Law (Tudor Hart, 1971). The aim was to recruit between 15 and 20 participants for the semi-structured interviews. Of the 24 participants initially contacted, 17 agreed to participate. Interviews took place between May and December 2022. The participants were key stakeholders from four professional groups: Deep End GPs (N=5); Academics (N=2); Public Health Specialists (N=7), and Third Sector Organisation Leads (N=3). A flexible APPROACH to sampling was maintained and recruitment occurred through snowball sampling and existing links within the research team. Open ended questions were used to allow for the in-depth exploration of issues pertaining to the study's overall aim.

FINDINGS Four main themes were identified. The main themes (with sub-themes in brackets) were: Context and Manifestations of the Inverse Care Law (Social determinants of health, Wider policy context, GP contract); Initiatives to tackle the ICL (Local, National and Regional level interventions, and Issues around sustainability and scaling up of these interventions); Impact of the Scottish Deep End Project (Workforce, Education, Advocacy, Research); and Recommendations (Trauma informed care, Proportionate universalism and Funding of primary care).

CONSEQUENCES The results shed a light on several aspects of the Inverse Care Law and how it has operated in Scotland over the past 20 years. The inclusion of key stakeholders from Public Health, Research, Third Sector and Deep End practices enhances the trustworthiness and validity of the results illustrated. The findings have important implications that include informing future policy, interventions, and approaches to address the inverse care law in Scotland.

Funding acknowledgement: This project was funded by the Health Foundation

1A.2

Do general practices in England influence life expectancy?

Presenter: Richard H. Baker

Co-Authors: Steven Levene, Christopher Newby, George Freeman

Author Institutions: University of Leicester, Nottingham University, Imperial College

Abstract

PROBLEM Life expectancy at birth in England steadily increased throughout the twentieth century, but the rate of improvement has slowed and, before the pandemic, even reversed in some patient groups. Office for Health Improvement and Disparities data show life expectancy reductions of females in 43.0% and of males in 39.7% of English practices between the 2013-17 and 2015-19 quinquennia used to calculate practice-level life expectancy. Such changes probably have several causes, but the role of primary care is seldom studied. For some years, there has been a growing mismatch between populations' health care needs and practices' capacity to respond.

APPROACH We undertook an ecological cross-sectional study. The outcomes, life expectancy at birth for males and females of general practice populations in England for the quinquennium 2015-2019, were obtained for 6553 general practices (all with a list size of 750 or greater). Selection of independent variables was guided by frameworks of mechanisms through which general practice influences health outcomes. We eliminated highly correlated variables and those failing to predict life expectancy at $p<0.05$ in univariate regression. The 11 retained time-matched variables were entered into weighted regression models in blocks: population (practice Index of multiple Deprivation scores, NHS Region, % white ethnicity, morbidity [% on diabetes register]); practice organization (full time equivalent [FTE) GPs, nurses and receptionists per unit of population); access (% seen on the same day of requesting an appointment); clinical performance (two quality and outcomes framework indicators: % of people aged 45 or older whose BPs were checked and % with diabetes whose BP was controlled): and the therapeutic relationship (% relationship continuity, from the general practice patient survey).

FINDINGS Mean life expectancy was 83.3 years (females) and 79.4 years (males). In both models, deprivation was a strong and significant negative predictor. Regions outside London and white ethnicity were also significant negative predictors. Number of FTE GPs (coefficient, 95% confidence intervals and p values: females 0.76 [0.60 -0.92], <0.001; and males 0.76 [[0.61 – 0.92], <0.001; and continuity: females 0.50 [0.28 – 0.72], <0.001; males 0.52 [0.30 – 0.74], <0.001, were significant positive predictors, as was % with diabetes with controlled BP. However, % over 45s with a BP check was a significant negative predictor only in females, and % on diabetes registers and % being seen on same day were significant positive predictors only in males. The remaining variables were not statistically significant. The adjusted R2 in the final models was 0.70 for females and 0.77 for males.

CONSEQUENCES These FINDINGS suggest that declines in the numbers of FTE GPs and in relationship continuity may be contributing to stalling or falling life expectancy in England. These deteriorating general practice factors are serious and potentially remediable.

Funding acknowledgement: None

1A.3

What are the experiences and needs of Perimenopause in Bristol's Black Communities?

Presenter: Jo Burgin

Co-Authors: Dr. Yvette Pyne

Author Institutions: Centre for Academic Primary Care - University of Bristol

Abstract

PROBLEM While public understanding of menopause and perimenopause is improving, the focus is often on white, middle-class women who are over-represented in both research and clinical treatment. Research has shown that symptoms of perimenopause are experienced differently depending on social and cultural norms. Women in underserved

communities often do not approach their doctor about symptoms adding to their existing health disadvantage as highlighted by large cohort studies in the USA with African American women. In the UK, minimal research has been done to look at how women of different ethnic communities experience menopause and if they seek help for their symptoms. This project aimed to understand the awareness, experiences and concerns around perimenopause in the ethnically diverse and underserved populations of Inner City and East Bristol.

APPROACH Funded by a small competitively obtained grant from the Elizabeth Blackwell Institute (Bristol) we ran two PPIE 'listening workshops' with a group of Somali women and a group of women of African, Caribbean, and South Asian heritage. We hoped to learn:

- What are their experiences and knowledge of the perimenopause?

- Have they, or would they seek healthcare? If not, what would prevent them? If they have, what were their experiences?

- What would they want to know about the perimenopause and how would they want to receive and discuss this information?

Each workshop was advertised through pre-existing community contacts and were held in local community spaces. Participants were provided with a £25 voucher for their time.

FINDINGS Awareness of perimenopause was high in both groups, but depth of knowledge varied widely between individuals; there was a huge demand for more information during the sessions.

Women in these communities found it difficult to discuss perimenopause with friends or family. Language and cultural barriers were cited as obstacles to seeking support. Participants with experience of symptoms reported negative experiences when seeking help from primary care. Specific challenges mentioned in both workshops were; strain on relationships due to male partners' lack of knowledge of menopausal symptoms, lack of understanding and support at work making it difficult to stay in the workforce, and poor access to primary care when seeking help for specific menopausal symptoms. We had excellent feedback: 78% gave 5 stars (out of 5) for how useful the workshops were and 89% gave 5 stars for how much they felt listened to.

CONSEQUENCES Following direct requests and feedback from the community, we have co-produced a digital leaflet that will be translated into multiple languages and created an online resource of links to more general information and to Bristol-specific menopause resources. Many participants provided their contact details to be involved in future research projects, particularly surrounding menopause and women's health issues.

1A.4

How do the public, health care professionals, and policy makers view unhealthy behaviours in the context of socioeconomic deprivation? A qualitative study.

Presenter: Hamish Foster

Co-Authors: Prof Frances S Mair, Prof Catherine A O'Donnell

Author Institutions: School of Health and Wellbeing, University of Glasgow

Abstract

PROBLEM Our recent systematic review suggests there are interactions between combinations of unhealthy behaviours (e.g., smoking, high alcohol intake, low physical activity, high sedentary time, poor diet, poor sleep, and low social participation levels) and socioeconomic deprivation for adverse health outcomes. This supports targeting health behaviour resources towards more deprived populations where risks are highest. Examining how key stakeholders, who

regularly contend with both unhealthy behaviours and the effects of socioeconomic deprivation, perceive health behaviour risks is crucial to understanding the barriers and facilitators to addressing a wide range of unhealthy behaviours in the context of socioeconomic deprivation.

APPROACH This was a qualitative study with data collected from two groups of participants: 1) 25 members of the public in four focus groups and 2) 18 in-depth interviews of professionals, including six community links workers, one practice nurse, one community pharmacist, four GPs, three public health professionals, and three policy makers. Audio data was transcribed, anonymised, and analysed via reflexive thematic analysis.

FINDINGS Both members of the public and professionals used broad definitions of unhealthy behaviours and often perceived combinations of unhealthy behaviours and socioeconomic circumstances as inextricable. All participants described myriad deep and intricate links between difficult socioeconomic circumstances and a wide range of unhealthy behaviours often via an overwhelming lack of choice and reduced individual agency. Both public and professional participants felt nihilism and fatalism, in relation to desire or opportunities to live healthy lives, were prevalent in more deprived communities. Health care professionals also recognised the importance, even duty, to instil hope in individuals that healthy behaviour change is achievable despite the most arduous circumstances. Community resources, including peer support and local champions 'who walked the walk' were seen as overcoming barriers to healthy living, such as access and stigma, in more deprived communities. Empowering both individuals and communities via deeper enquiry into their specific barriers was seen as successful in driving healthy change. At population and policy level, there was even less of a distinction between health behaviours and socioeconomic conditions and current policies were perceived as curtailed and narrowed by legislation and funding, which remains siloed, with existing policies only focussing on single unhealthy behaviours.

CONSEQUENCES Appreciation of the underlying socioeconomic barriers to healthy ways of living does not mean diminished hope for healthy behavioural change in individuals affected by socioeconomic deprivation. However, perceptions captured here drastically diminish the role of individual-level responsibility for healthy choices. Key stakeholders see co-designed and well-funded community level resources as best placed to support individuals trying to make healthy behavioural change in difficult socioeconomic circumstances. Innovative policy, planning, and legislation is required to incorporate wider approaches that can tackle upstream determinants of numerous unhealthy behaviours simultaneously.

Funding acknowledgement: HMEF is supported by Medical Research Council Clinical Research Training Fellowship entitled 'Understanding interactions between lifestyle and deprivation to support policy and intervention development' (grant number MR/T001585/1).

1A.5

Providing care to marginalised communities: a qualitative study of community pharmacy teams

Presenter: Kelly Howells

Co-Authors: Helen Gibson; Thomas Blakeman; Darren Ashcroft; Nina Fudge; Caroline Sanders

Author Institutions: The University of Manchester; Queen Mary University of London

Abstract

PROBLEM The NHS Long Term Plan (2020) emphasises action is required to reduce health inequalities. Recent evidence shows that health inequalities in the UK are widening, with recent government data showing that the most deprived areas of society have been disproportionately affected by the pandemic, particularly in the North of England. Community pharmacies are the most visited healthcare provider in England with approximately 1.6 million visits a day. Given recent expanded roles in community pharmacy to include health prevention and health screening, community pharmacists are ideally placed to provide and facilitate access to care for those most disadvantaged. However, little is known about the contributory role of community pharmacists in reducing health inequalities. Against this backdrop, this study aimed to explore the current and potential role of community pharmacy teams in relation to reducing health inequalities with a focus on how their role has changed since the COVID-19 pandemic.

APPROACH Data collection took place between March and August 2022. Individual qualitative interviews were conducted with 26 community pharmacy team members. The sample included a range of independent and 'chain' community pharmacies based in deprived communities across the North and North West of England. A topic guide was developed and informed by the literature and subsequently reviewed and discussed with the Community Pharmacy Patient Safety Collaborative team at The University of Manchester, which is comprised of 7 community pharmacists working across Greater Manchester. All interviews were audio recorded and transcribed verbatim. Data was analysed thematically drawing on techniques of a grounded theory approach, including open coding, constant comparison, and analysis of negative cases.

FINDINGS Most participants acknowledged that since the start of the covid-19 pandemic, community pharmacies had become busier due to the increased demand for a face to face consultation. This demand was compounded by patient difficulties in navigating remote digital systems. Few participants had received any formal training on working with marginalised communities however organisational barriers (such as limited access to translation services and limited time and resources) combined with inter-organisational barriers (lack of integrated working with GPs), made it more difficult to provide care for some marginalised groups. However, the continuity of care provided by many community pharmacists was viewed as an important factor in enabling marginalised groups to access and receive care.

CONSEQUENCES In the context of a post pandemic society in which remote care and digital technologies are increasingly relied upon to navigate healthcare systems, the roles of community pharmacy teams are more important than ever. More flexible and collaborative working across health and community organisations, in addition to translation services, would be advantageous in enabling community pharmacists to provide access to safer and equal care for marginalised communities.

Funding acknowledgement: This project is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference 520). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

1A.6

Bridging Gaps: Improving access to primary care for and with marginalised patients- "it's quite joyful for us. It's really improved our work"

Presenter: Lucy Potter

Co-Authors: Lucy Potter, Tracey Stone, Bridging Gaps group, Florrie Connell, Helen

Cramer, Helen McGeown, Maria Carvalho, Jeremy Horwood, Gene Feder, Michelle Farr

Author Institutions: University of Bristol, One25

Abstract

PROBLEM People who experience severe and multiple disadvantage (SMD- combinations of homelessness, substance misuse, domestic abuse and poor mental health) have high health needs and poor access to primary care. The priorities and abilities of patients with SMD and the organisation of primary care are poorly aligned and inequalities in access are worsening, exacerbating vulnerabilities.The aim of this research was to collaborate with people with lived experience, a charity that supports them and general practice staff to co-produce interventions to improve access to primary care for people with SMD. We sought to explore the perspectives of marginalised patients, those who support them, and general practice staff participants on ways to improve access, and their experience of co-producing and implementing the service improvements.

APPROACH We used a co-production approach where people with lived experience are involved in decision-making throughout the process. The co-production group (Bridging Gaps) was started by LP and women with lived experience of SMD who had been supported by One25 (a Bristol women's charity which reaches out to some of the city's most marginalised women). We contacted general practices identified by the co-production group and collaborated with their staff to co-develop service-improvements together.We used qualitative methods to explore professional and lived experience perspectives on this complex issue. Six collaborative meetings were observed at three general practices with documentary analysis of minutes. Nine practice staff and four lived experience participants were interviewed. Three lived experience participants and one staff member who supports them participated in a focus group. Data was analysed inductively and deductively using thematic analysis.

FINDINGS We focus on the answers to two practical questions in our findings:

- What are the key issues and challenges in improving access to primary care for people with SMD?
- What are the potential strategies to improve access to primary care for people with SMD?

Enabling motivated general practice staff with time and funding opportunities, galvanised by lived experience involvement, resulted in sustained service changes. These included using Care Coordinators and patient lists to prioritise access to patients in greater need and an information sharing tool. A key focus was shifting ways of working to provide proactive continuity of care from trusted professionals.

CONSEQUENCES This work describes co-produced strategies to prioritise access to patients in greater need, in addition to rich contextual information on how to shift ways of working to better serve marginalised patients. This is a unique example of highly inclusive research and service-improvement work for and with highly marginalised patients, with practical tools that can be used and adapted in practice now. Investing in this different way of working may improve inclusion of marginalised patients, health equity and staff wellbeing.

Funding acknowledgement: LP is funded by Wellcome PhD programme for Primary Care Clinicians

1B.2

Reducing Antibiotic Resistance in urinary tract infection in the practice - a randomised controlled trial

Presenter: Ildiko Gagyor

Co-Authors: Guido Schmiemann, Alexandra Greser, Andy Maun, Jutta Bleidorn, Angela Schuster, Christoph Heintze, Peter Heuschmann, Olga Miljukov, Tim Eckmanns, Anja Klingeberg, Anja Mentzel

Author Institutions: University of Bremen, Department of Health Services Research, Institute for Public Health and Nursing Research, Bremen, University Hospital Wuerzburg, Department of General Practice, Wuerzburg, University of Wuerzburg, Institute for clinical Epidemiology and Biometry, Division of General Practice, Faculty of Medicine, Medical Center - University of Freiburg, University Hospital Jena, Department of

Abstract

PROBLEM Urinary tract infections (UTI) are a common reason to prescribe antibiotics in primary care, in In Germany, up to 40 % of the UTI-related prescriptions are second-line antibiotics. These drugs can substantially contribute to emerging resistance rates of uropathogens. In order to achieve a change in the prescription behavior, REDARES intends to implement recommendations of guidelines to manage uncomplicated UTI in primary care using practice-oriented information.

APPROACH The aim of this randomized controlled study in general practices was evaluate whether a multimodal intervention consisting of the provision of guideline recommendations, information on regional resistance data and feedback on antibiotic prescription rates, reduces the prescribing rate of second-line antibiotics and the overall rate of antibiotic prescriptions for uncomplicated urinary tract infections (UTI) in women.

FINDINGS The prescription rate of second-line antibiotics was less at month 12 in the intervention group compared to the control group. After adjustment for pre-intervention rates, the mean difference between control and intervention group was lower in the latter. There was a significant difference in the rate of antibiotic prescriptions between the intervention and the control group.

CONSEQUENCES The trial demonstrated improvement in general practitioners' prescription behavior by the multimodal intervention that reduced the rate of second-line antibiotics and antibiotic prescriptions in uncomplicated UTI in women. These results should be the basis for future measures for a guideline-adherent antibiotic prescription in German general practice.

Funding acknowledgement:

1B.3

Point-of-care testing in care homes: a qualitative interview study with UK care home staff

Presenter: Abi Moore

Co-Authors: Margaret Glogowska, Gail Hayward

Author Institutions: University of Oxford

Abstract

PROBLEM Nearly half a million older people live in care homes in the UK. They require greater input from GPs, receive more antibiotics and have a higher admission rate compared to older people living in the community. In particular, episodes of acute functional decline without a clear cause in this population represent a diagnostic challenge to healthcare professionals and can result in antibiotic prescriptions or hospital admissions, although this may not always be the most appropriate management strategy. One solution may be to introduce more point-of-care tests (POCTs) into the care home setting. We aimed to understand how UK care home staff currently use and interpret POCTs and

their perceived value of additional point-of-care testing in care homes.

APPROACH This was a qualitative interview study with UK care home staff, including managers, nurses and carers. Participants were recruited through advertisements circulated via email, social media and word of mouth. Semi-structured interviews were conducted over the phone between January 2021 and April 2022. Thematic analysis was facilitated by NVivo software.

FINDINGS 25 care home staff were interviewed, with a range of experience and a mix of nursing and non-nursing backgrounds. Most had experience of using POCTs including urine dipsticks and rapid lateral flow tests for COVID-19, and some had also been trained to test blood glucose. In general, they felt that fingerpick blood samples were easier to obtain than urine samples or nasal/throat swabs. Participants perceived that the advantages for care home residents of additional point-of-care testing in the care home included that the resident would have someone familiar doing the test, they could have a more rapid diagnosis when they were unwell, and they could potentially avoid a hospital attendance or admission. Some participants also talked about being able to more rapidly isolate residents in the case of an infectious outbreak. Participants felt that the advantages for care home staff included having more information when communicating to outside healthcare professionals about a resident of concern. However, they also highlighted the need for training to ensure any new procedure was done correctly and felt that any new test would have to be easy to read or interpret. Participants described the need for new tests to be cost-effective and to be appropriately funded, and how that any upskilling care home staff to perform POCTs should be recognised.

CONSEQUENCES Care home staff are receptive to expanding point-of-care testing within the care home. Their views on ideal test characteristics can be used when considering candidate tests to evaluate in this setting in the future.

Funding acknowledgement: Oxfordshire Health Services Research Committee

1B.4

Knowledge and attitude factors influencing primary care clinicians' diagnosis, treatment, and management of urinary tract infections in England: A qualitative 'think-aloud' study

Presenter: Angela Kabulo Mwape

Co-Authors: Kelly Ann Schmidtke and Celia Brown

Author Institutions: Warwick Medical School (WMS), University of Warwick.

Abstract

PROBLEM Antimicrobial resistance is a global problem, and inappropriate prescribing is a major contributing factor. Urinary tract infections are one of the most common conditions for which antibiotics are prescribed. While antibiotics are effective in treating urinary tract infections, suboptimal prescribing of antibiotics occurs, which contributes to antimicrobial resistance. The present study is the first to use a 'think-aloud' approach to describe the knowledge and attitude factors influencing clinician decision-making when diagnosing, treating, and managing UTIs.

APPROACH Semi-structured qualitative interviews were conducted with primary care clinicians in England over Microsoft Teams. Interviews were transcribed and coded in two ways. First, clinicians' responses for each scenario were coded as either following (optimal) or not following (suboptimal) evidence-based national guidelines. Second, the knowledge and attitude factors that influenced decision-making were coded

according to an empirically-informed umbrella framework. Clinicians external to the study team reviewed the findings to promote their trustworthiness and utility.

FINDINGS Ten clinicians (6 female) took part. Despite clinicians' expressing high awareness of relevant evidence-based guidelines (a knowledge factor) and high confidence (an attitude factor), more than half of their decisions were suboptimal in some way. Our framework analysis suggests that knowledge could impede adherence, e.g., where local guidelines conflicted with national guidelines.

CONSEQUENCES Suboptimal prescribing decisions could result from a combination of different knowledge and attitude factors. Most clinicians relied on their experiential knowledge rather than using evidence-based guidelines. To optimise antibiotic prescribing, policy-level interventions could increase concordance across local and national guidelines, or more tailored individual-level interventions could help clinicians recognize where their experiential knowledge causes deviations from evidence-based guidelines when diagnosing, treating, and managing urinary tract infections.

Funding acknowledgement: This research was undertaken as part of the Chancellors scholarship award to complete a doctoral programme at the University of Warwick

1B.5

Patients' experiences and views of recurrent urinary tract infections: qualitative evidence synthesis and meta-ethnography.

Presenter: Leigh Sanyaolu

Co-Authors: Catherine Hayes, Dr Donna Lecky, Dr Alison Weightman, Dr Haroon Ahmed, Dr Rebecca Cannings-John, Professor Adrian Edwards, Professor Fiona Wood

Author Institutions: Cardiff University, UK Health Security Agency

Abstract

PROBLEM Urinary tract infections (UTIs) are common and result in significant morbidity, negative impacts on daily life, reduced quality of life and reduced work attendance. Recurrence is common and recurrent UTIs have an estimated annual prevalence of 3%. The experience of women with recurrent UTIs is not well understood and is likely to be different to those without recurrent UTIs. To enhance shared decision-making around recurrent UTI management it is important to understand patients' experiences and perspectives.This qualitative evidence synthesis aims to understand the experiences of women with recurrent UTIs.

APPROACH A qualitative evidence synthesis was performed that included primary qualitative studies involving patients with recurrent UTI. We systematically searched MEDLINE, Embase, CINAHL, PsychInfo, ASSIA, Web of Science and the grey literature from inception to June 2022. Meta-ethnography was conducted to synthesise the studies using reciprocal translation and a line of argument synthesis. A conceptual model was then developed. The 'Confidence in the Evidence from Reviews of Qualitative research' (GRADE-CERQual) APPROACH was used to appraise the confidence in the review findings.

FINDINGS Ten primary qualitative studies published from 2005 to 2022 and conducted in Europe and the USA were included. Studies involved patients from primary care, secondary care outpatients or online postings.We had moderate confidence in the seven review findings based on the GRADE-CERQual assessment. Our review demonstrates that women with recurrent UTIs have a unique experience but it is generally of a chronic condition with significant impacts on numerous aspects of their lives. Several factors are described as triggers for recurrent UTIs and patients commonly use self-help, lifestyle measures and complementary and alternative medicine to try and manage their

recurrent UTIs. Antibiotics can be 'transformative', but patients have serious concerns about their use and feel non-antibiotic options need further research and discussion. Patients seek healthcare for most but not all UTI recurrences and are frustrated with healthcare in terms of antibiotic use and an underestimation of the impact of recurrent UTIs.

CONSEQUENCES This is the first qualitative evidence synthesis on the experiences of women with recurrent UTIs and has significant clinical implications. Patients require information on antibiotic alternative acute and preventative treatments for recurrent UTI and this is not currently being addressed. There are communication gaps around the impact of recurrent UTI on patients. Further research and development of a patient decision aid could help address some of these issues.

Funding acknowledgement: This project is funded by the Welsh Government through Health and Care Research Wales (NIHR-FS-2021-LS).

1B.6

What are the knowledge, needs, and practices of GPs in the diagnosis and management of urinary tract infections?

Presenter: Eefje de Bont

Co-Authors: Stefan Cox, Wesley Giorgi, Maud Vleeming, Jochen Cals

Author Institutions: CAPHRI, Department of Family Medicine, Maastricht University

Abstract

PROBLEM Urinary tract infections are among the most common infections in primary care. Previous research showed that GPs frequently divert from guidelines in their diagnostics and antibiotics management. Perspectives of GPs are crucial when designing effective interventions that change their behavior and that of patients. We therefore aimed to investigate knowledge, needs, and practice of Dutch GPs towards UTIs during out-of-hours and regular hours care.

APPROACH We conducted a cross-sectional internet-based survey among Dutch GPs between December 2021 and February 2022, using Qualtrics software. GPs were contacted profession affiliated newsletters and various social media platforms. Descriptive statistics and regression analyses were used to analyze the results in SPSS.

FINDINGS A total of 200 GPs were included. We asked GPs to choose two symptoms out of a list of nine that are most likely to indicate a UTI. Of all respondents, only nine GPs (4.5%) were able to choose the correct combination of dysuria and absence of vaginal complaints in women. One in three GPs would diagnose a UTI based on a-specific complaints and a positive leukocyte and erythrocyte test. Looking at current needs GPs indicated that improved diagnostics are most abundant during regular hours (48.6%) and out-of-hours (40.1%). Seven out of ten GPs indicated that better point-of-care diagnostics would aid them in prescribing antibiotics in a more justified manner (71%) and that it would conserve time during daily practice (69.5%). A positive test result is also the most important factor (55.5%) according to GPs to prescribe antibiotics while strikingly patients' expectation is least important (86.5%). In addition, 65% of the GPs indicated they are more likely to prescribe antibiotics during out-of-hours care because of a lacking long-term relationship with patients.

CONSEQUENCES Diverting from guidelines in diagnoses and management of UTIs in general practice can likely be explained by a lack of knowledge among GPs. Only one out of twenty GPs knew the correct combination of symptoms that have the highest predictive value for having a UTI in women. In addition, there is an urgent need for better point-of-

care diagnostics thereby saving time but also because a positive test finding is the most important factor for GPs to prescribe antibiotics. Despite of the fact that current dipstick tests have a very limited diagnostic value. More in depth research is needed to explore what makes GPs more prone to apply a wait-and-see policy. It should also focus on how we can improve informed decision-making since this will likely improve adherence to therapy and willingness to consider non-antibiotic treatment. Although UTIs are among the most common infections in primary care, there is still major need for improvement.

Funding acknowledgement: This study was funded by The Netherlands Organisation for Health Research and Development (ref 10150511910060).

1C.1

Can digital health interventions assist with patient support in primary care settings?: Exploring enablers and barriers.

Presenter: Mel Ramasawmy

Co-Authors: Mel Ramasawmy, David Sunkersing, Amitava Banerjee, Nushrat Khan

Author Institutions: University College London, The UCL Institute of Health Informatics

Abstract

PROBLEM The use of digital health interventions (DHI), such as apps, websites and wearable devices are becoming more common in health and care services, to help people prevent and manage diabetes and heart disease (cardiometabolic disease). However, there are currently several challenges with DHIs, including cost, accessibility and willingness to use them. We wanted to bring together evidence on how DHIs for cardiometabolic disease are used among South Asian populations, who have a higher risk of these diseases. This can help us understand how to best design DHIs, and introduce and support people to use them, so that they can get the most benefit from them.

APPROACH We recruited 45 individuals from a South Asian background with cardiometabolic disease to participate in online or in-person focus groups or interviews, which were audio recorded. The audio recordings were transcribed and coded using reflexive thematic analysis. findings were categorised using a framework of four potential levels of action for digital health inequalities: individuals, provider or healthcare systems, population or society, and intervention.

FINDINGS Participants often had varied understanding and awareness of available DHIs. Engagement with the NHS app, remote consultations, self-measurement or monitoring tools and lifestyle management apps have become more common, with the impact of COVID-19 restrictions forcing change or creating new opportunities for digital engagement. Barriers to using DHIs include: general fear of technology; lack of trust in digital tools, such as concerns of being tracked; lack of reliability or accuracy of data; and uncertainty about interpretation of results and whether they were designed for healthcare professionals or patients. Many participants preferred the improved communication in face-to-face consultations with their GPs, but recognised the usefulness and convenience of remote consultation. Digital communication from the providers offered reassurance and reduced patient anxiety. Participants suggested that DHIs should be offered with explanation and support on how to use it; beyond reliance on family members. Healthcare providers and community organisations can play an integral role in providing such services to improve access to DHIs and raise awareness and trust in such tools.

CONSEQUENCES Digital health technology can improve patient outcomes, engagement,

provide better access to care, and reduce costs to both the patient and provider. Our study suggests that primary healthcare providers should focus on patient education, providing clear and concise information on digital health options to increase uptake and understanding. Our FINDINGS additionally suggest that primary healthcare providers should ensure that digital health services are tailored to the needs of marginalised patients and aligned with their preferences.

Funding acknowledgement: National Institute of Health Research (NIHR200937). The funding source made no contribution to the design; collection, analysis, and interpretation of data; in the writing of the report; and in the decision to submit the abstract to this conference.

1C.2

How are staff and patients supported to access and use digital services in primary care? Interview study with stakeholders

Presenter: Dr Bethan Treadgold

Co-Authors: Ms Rachel Winder, Associate Professor Helen Atherton, Dr Carol Bryce, Professor John Campbell, Dr Jenny Newbould, Dr Stephanie Stockwell, Dr Emma Pitchforth

Author Institutions: University of Exeter, University of Warwick, RAND Europe

Abstract

PROBLEM The adoption of NHS digital primary care services has been encouraged in England for some time. Whilst some services, including online repeat prescription ordering, online booking and accessing your patient record online are well established, uptake has been variable. With concerns around digital exclusion and inequalities, it is unclear what is actively being done to support patients or staff in using these services (i.e., 'digital facilitation'). The aim of this study was to explore the views of national, regional, and local stakeholders around the drivers, priorities and policy context influencing digital facilitation.

APPROACH As part of the Di-Facto study, online semi-structured qualitative interviews were conducted with stakeholders, including those in the NHS England infrastructure, third sector organisations, providers of digital services and patient representative groups. Interviews sought to explore the policy context, drivers, enablers, and challenges to digital facilitation. Interviews were audio recorded, transcribed in verbatim and analysed using an inductive thematic approach.

FINDINGS Nineteen stakeholders were interviewed. Stakeholders articulated an ambitious vision for online primary care services that may align patient experience to that experienced in other sectors such as retail and banking. Current key drivers for digital services were identified as the need for efficiency within general practice, and rising patient demand for access. In terms of digital facilitation, stakeholders were aware of the concept, but could not easily identify policies designed to support in practice. There were varied views on who should be responsible for digital facilitation and for priority groups needing support. Barriers to the use of online services were seen to vary by patient group, which included affording internet and handsets for homeless groups, managing evolving technology for the elderly, and confidentiality for those with mental illness. In some cases, barriers to accessing digital services felt to be beyond the remit of the healthcare system to address.

CONSEQUENCES The study indicates a perceived need for support in the use of online services in primary care, but a lack of clear guidelines to drive this, and differing views on where responsibility lies. Well-developed digital facilitation requires investment, support, resources and training, which are not consistently available in primary

care. Some patient groups, particularly marginalised groups, may require targeted digital facilitation approaches which are tailored to their needs. Together with other FINDINGS from the Di-Facto study, our recommendations will guide the future development and implementation of promising approaches to digital facilitation.

Funding acknowledgement: This study is funded by the NIHR [NIHR Health Services and Delivery Research Programme 128268]. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

1C.3

What are the differences between telephone and face-to-face consultations when discussing emotional symptoms/concerns? FINDINGS from a mixed methods qualitative study.

Presenter: Catherine Woods

Co-Authors: John McGavin, Bryan Palmer, Michael Moore, Adam Geraghty, Geraldine Leydon & Tony Kendrick

Author Institutions: University of Southampton

Abstract

PROBLEM The COVID-19 pandemic had a major impact on mental health and disrupted clinical routines for both patients and clinicians due to the rapid shift to an increased use of remote telephone consultations. While the move to more remote consultations offers several benefits to primary care, there are also several risks associated with this modality, such as missing cues associated with various medical issues, including emotional symptoms/concerns related to possible mental health problems. The REMOTION Study aims to explore how adult patients present new emotional symptoms and concerns, and compare whether and how they are discussed and managed by clinicians (both GPs and NPs), in telephone compared to face-to-face primary care consultations.

APPROACH Semi-structured interviews were first conducted with 20 participating clinicians (10 General Practitioners and 10 Advanced Nurse Practitioners) across the South of England between January to October 2022. All interviews were transcribed verbatim and analysed thematically. We also conducted a communication study at the same time, which involved collecting audio and video-recordings of 12 telephone and 15 face-to-face consultations. 27 patients and 3 GPs have taken part (so far). All recordings are being coded and analysed using conversation analytic methods.

FINDINGS NB: Interim findings (all will be completed by the time of the conference).Within the interviews, clinicians described a range of visual cues associated with being able to pick up emotional symptoms/concerns that made it easier to carry out a mental health assessment. Telephone consulting, with the absence of these cues, was described as riskier for this reason, as it placed a greater emphasis on a patient being a 'good historian' of their condition, and a greater reliance on a clinician knowing to ask the 'right' questions. Clinicians reported that a large proportion of their daily consultations involve a mental health component, which is reflected in the consultation data so far (17/27 recordings have been coded as involving the expression or management of possible emotional concerns). In terms of communication, emotional symptoms/concerns were presented or elicited in more face-to-face consultations (11/15), compared to telephone (6/12). Patients often volunteered these concerns after the presentation of a physical problem, and clinicians usually asked questions related to the physical PROBLEM first.

CONSEQUENCES Clinicians reported being able to pick-up emotional symptoms/concerns more easily in face-to-face consultations compared to on the telephone. As general practices are still offering a high proportion of telephone consultations, it is important that communication about these concerns is considered, to ensure patients are afforded with opportunities to discuss these concerns across both modalities.

Funding acknowledgement: NIHR School for Primary Care Research

1C.4

Going digital: evolution of the general practice receptionist role

Presenter: Stephanie Stockwell

Co-Authors: Stephanie Stockwell, Helen Atherton, Carol Bryce, John Campbell, Emma Pitchforth, Laura Sheard, Bethan Treadgold, Rachel Winder, and Jennifer Newbould

Author Institutions: RAND Europe, University of Exeter, University of Warwick

Abstract

PROBLEM General practice receptionists have one of the most visible roles within the primary care workforce, are often perceived as the 'gatekeepers' to primary care services and are central to managing patient demand and facilitating patient care. Whilst 50 years ago the receptionist role was centred around answering telephone calls, booking appointments, and greeting patients, this role has evolved and become increasingly complex. For instance, in recent years this role may now include the triaging of patients to identify appointments that are most appropriate for the patients concern. These developments have happened alongside technological advancements and the impact of National Health Service (NHS) systems and services becoming increasingly digital.

APPROACH Data were collected as part of a large multi-method study on Digital Facilitation in primary care (Di-Facto). Focussed ethnographic case studies and interviews were conducted. Ethnographic data were collected from 8 practices in three regions across England (South West, East, and North West), which involved non-participant observation, document analysis, and interviews with 33 patients and 36 staff (including receptionists, managers, administrative and clinical staff). Interviews were also conducted with 19 stakeholders who held senior roles within the NHS, patient group charities, local Clinical Commissioning Groups or Integrated Care Systems, primary care online consultation platforms, and senior academics.

FINDINGS General practice is undergoing an extended period of transformation from paper towards digital systems, with the current transition period requiring both to be used. This involves changes to systems used by practice staff and also patients, both of which impact the receptionist role and their responsibilities. In some cases the digital transition reduces workload for receptionists (e.g. patients being able to order repeat prescriptions online, book appointments themselves, sending mass communications to patients by text), but in others it increases the workload (e.g. inputting data from paper into digital systems, answering queries from patients about the digital systems, obtaining further information from patients about their conditions for health professionals to triage). This is also largely navigated by the receptionists without any formal training and staff are mostly expected to learn on the job from other receptionists.

CONSEQUENCES The digitalisation of healthcare services has implications for workflow, consistency in task completion, job satisfaction and potentially retention of general practice receptionist staff. In addition, the knowledge and skills required to fulfil this

role are evolving and therefore may have recruitment and training implications.

Funding acknowledgement: This work was funded by NHIR (NIHR128268).

1C.5

Di-Facto patient survey: Digital facilitation to support patient access to online services in primary care

Presenter: Gary Abel

Co-Authors: Jeff Lambert, Abodunrin Aminu, John Campbell, Carol Bryce, Chris Clark, Mayam Gomez-Cano, Nada Khan, Nurunnahar Akter, Caroline Jenkinson, Helen Atherton, Rachel Winder

Author Institutions: University of Exeter, University of Bath, University of Warwick

Abstract

PROBLEM Adoption of online services by general practices accelerated especially rapidly during the Covid pandemic. While welcomed by some, engaging with services online may be difficult for others. Little is known about what processes, procedures, and personnel are employed in general practice to support NHS patients in using online services (what we have termed digital facilitation) and patient's views regarding this support. Here we explore digital facilitation from the patient's perspective.

APPROACH A patient survey was developed through iterative workshops. 12,822 patients were invited from 62 practices who had already responded to a practice staff survey. Practices with higher deprivation were requested to invite more patients than those with medium or low deprivation (285, 220 and 150 patients respectively). Logistic regression models were used to investigate the association between awareness and use of digital facilitation efforts and various patient factors.

FINDINGS 3,054 (23.8%) patients responded. Low percentages (≤17%) of responders were aware of practices' digital facilitation efforts for all modes of facilitation except for emails/text messages (28%), with fewer patients making use of those efforts. Only 30% of patients reported being told about online services and 13% report being helped to use them. Adjusted logistic regression models show that older patients are less likely to be aware of or use digital facilitation, and are also less likely to be told about/helped to use online services. However, the opposite was true for non-white patients, those for whom English was not their first language and those in receipt of repeat prescriptions.

CONSEQUENCES Most patients are not aware of their general practices efforts to support them in the use of online services. Whilst it may be concerning that this support is not reaching older patients in particular, it is welcome that other potentially vulnerable groups are more likely to be supported.

Funding acknowledgement: This study is funded by the National Institute for Health and Care Research (NIHR) Health and Social Care Delivery Research Programme 128268. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

1C.6

Exploring perceptions about the potential deployment of Artificial Intelligence within the English NHS Diabetic Eye Screening Programme

Presenter: Lakshmi Chandrasekaran

Co-Authors: Lakshmi Chandrasekaran, Kathryn Willis, Umar Chaudhry, Charlotte Wahlich, Chris Owen, Alicja Rudnicka

Author Institutions: Population Health Research Institute, St George's, University of London

Abstract

PROBLEM The English NHS Diabetic Eye Screening Programme (DESP) performs approximately 2.2 million eye screening appointments each year, generating over 10 million retinal images that are graded for the presence or severity of diabetic retinopathy. Currently, human graders perform this task within the DESP; however, this is expensive and time-consuming, and their expertise could be applied elsewhere.Previous research has shown that Artificial Intelligence (AI) systems can identify images with no disease from those with retinopathy as equally well as human graders, and could help significantly reduce the workload for human graders.There is a need to examine the perceptions, concerns and views of AI-assisted eye-screening among people living with diabetes and NHS staff, if AI were to be introduced into the DESP. This will help to identify factors that may influence acceptance of this technology by NHS staff and people living with diabetes.

APPROACH The aim of this PPIE work is to create two surveys to explore the perceptions, concerns and views among people living with diabetes and NHS staff about the implementation of AI within the DESP.Potential questions for each survey were initially developed from recently published research which had used surveys to investigate perceptions and acceptance of AI in healthcare. Staff working at the North East London NHS DESP and people living with diabetes from the local community were then invited to participate in focus groups to co-design two separate online surveys to examine their perceptions, concerns and views on potential implications of AI within the DESP.

FINDINGS Each survey was developed through an iterative process, with focus group discussions and post meeting feedback informing question development, domains captured and the overall format and structure of each survey. The two surveys are comparable in content, and the survey for NHS staff additionally examines issues with workforce planning.Surveys will be piloted at the North East London NHS DESP followed by qualitative semi-structured interviews to assess accessibility and usability, and to validate the surveys. Following review, the surveys will be distributed via other NHS DESP sites and via relevant charities to ensure greater participation and representation from a diverse population. Differences in survey responses by population subgroups, including by age and ethnicity, will be examined.

CONSEQUENCES The process of survey development has highlighted the importance of patient and public involvement in research. These questionnaires will identify factors that may influence acceptance of AI within the NHS DESP by staff and people living with diabetes, which will assist planning outreach activities to facilitate implementation of this technology. The FINDINGS may also highlight the potential for greater use of AI within healthcare, and also impact on screening approaches within the NHS.

Funding acknowledgement: The research project is funded by the NHS Transformation Directorate and The Health Foundation and it is managed by the National Institute for Health Research [AI_HI200008].

1D.1

Intersection of ethnicity and physical multimorbidity on incidence of mental health conditions – retrospective cohort study from superdiverse south London

Presenter: Jamie Scuffell

Co-Authors: Peter Schofield, Mark Ashworth

Author Institutions: King's College London

Abstract

PROBLEM Over half of GP consultations in the UK involve patients with multimorbidity.

Incidence of anxiety, depression and serious mental illness (SMI) vary substantially by ethnic group, which is relevant to create equitable health services that adequately address multimorbidity clusters. It is not known whether physical long-term conditions (LTCs) may increase ethnic disparities in mental LTCs. Aim: Does the presence of a physical LTC exacerbate ethnic disparities in incidence of mental health diagnoses?.

APPROACH Retrospective cohort study of Lambeth DataNet, a pseudonymised database of adult patients registered to GP practices from the borough of Lambeth from 2005-2022. Patients without mental health LTCs were followed up with increasing age until diagnosis of a mental health LTC (anxiety, depression or SMI), death, deregistration or the end of follow-up. Two cohorts were derived: those with, and those without, comorbid physical LTCs. Upon diagnosis of a physical LTC, individuals were censored and entered the physical LTC cohort. For each cohort, cumulative incidence curves and mixed-effects multivariable Cox regression estimated the effect of ethnic group on mental health LTC diagnosis after adjustment for year of follow-up (modelled as a restricted cubic spline); sex; local-area deprivation; smoking status; substance use and practice-level variation in diagnosis.

FINDINGS 658,500 individuals with a recorded ethnic group were followed up for a median 3.5 years. Cumulative incidence of anxiety, depression and SMI was 7.6%, 4.7% and 0.5%, respectively. Cumulative incidence of mental LTCs was higher for those with physical LTCs compared to those without physical LTCs for anxiety (12.9% vs 6.9%), depression (10% vs 4%) and SMI (0.9% vs 0.4%). Ethnic disparities in incident depression were greater amongst those with physical LTCs, particularly comparing the Black African, Black Caribbean and Black Other groups which showed lower incidence rates compared with the White British population (adjusted hazard ratio (aHR) for those with physical LTCs 0.5, 0.74, 0.63 respectively; without physical LTCs 0.62, 0.99, 0.84 respectively). The presence of a physical LTC diagnosis was not associated with greater ethnic disparities in anxiety diagnoses. Physical LTC diagnoses were associated with substantial attenuation of ethnic disparities in SMI incidence (aHRs compared to White British group for other ethnic groups without physical LTCs 0.78–3.12, with physical LTCs 0.88–1.82).

CONSEQUENCES Physical LTCs are associated with a higher incidence of anxiety, depression and SMI. Ethnic disparities in anxiety diagnosis remain constant regardless of physical LTC status, whereas ethnic disparities in depression diagnosis tend to increase for those with physical LTCs. This is most pronounced for the Black ethnic groups, which may represent underdiagnosis of mental LTCs in those with physical LTCs. Non-significant ethnic disparities in SMI diagnosis for those with physical LTCs may represent differential engagement with care for those with and without physical LTCs.

Funding acknowledgement: JS is supported by an NIHR Academic Clinical Fellowship.

1D.2

Patient-reported outcome measures for monitoring depression in primary care: cluster randomised controlled trial

Presenter: Tony Kendrick

Co-Authors: C Dowrick, G Lewis, M Moore, G Leydon, A Geraghty, G Griffiths, S Zhu, G Yao, C May, M Gabbay, R Dewar-Haggart, S Williams, L Bui, N Thompson, L Bridewell, E Trapasso, T Patel, M McCarthy, N Khan, H Page, E Corcoran, J Hahn, M Bird, M Logan, B Ching, R Ti

Author Institutions: Universities of Southampton, Liverpool, University College London, Leicester, LSHTM, and QMUL.

Abstract

PROBLEM Guidelines recommend practitioners consider using validated patient-reported outcome measures (PROMs) to inform treatment at diagnosis and follow-up of people with depression, but there is insufficient evidence that they improve depression management and outcomes for patients in primary care.The aim of the study was to answer the research question: What is the effectiveness and cost-effectiveness of assessing primary care patients with depression or low mood soon after diagnosis and again at follow-up 10-35 days later, using the PHQ-9 questionnaire combined with patient feedback and practitioner guidance on treatment?

APPROACH Design: Prospective pragmatic cluster-randomised superiority trial using remote computerised randomisation with minimisation by recruiting university; small/large practice; and urban/rural location. Blinding of participants was not possible given the pragmatic design, but self-report outcome measures minimised observer bias and analysis was blind to allocation. Setting: UK primary care (141 group general practices in England and Wales). Participants: 529 patients aged 18 years or older with a new episode of depression, recruited through medical record searches and in consultations. Exclusions: dementia; psychosis; substance misuse; suicide risk. Intervention: Administration of the PHQ-9 questionnaire with patient feedback soon after diagnosis, and at follow-up 10-35 days later, compared to usual care. Practitioners were trained in interpreting PHQ-9 scores and giving patients feedback on the implications for treatment.Main outcome measures: Beck Depression Inventory (BDI-II) symptom scores at 12 weeks (primary outcome) and 26 weeks; social functioning (Work and Social Adjustment Scale) and quality of life (EuroQol EQ-5D-5L) at 12 and 26 weeks; antidepressant drug treatment, mental health service contacts, adverse events, and patient satisfaction (Medical Informant Satisfaction Scale) over 26 weeks.

FINDINGS Results: 302 patients were recruited in intervention arm practices and 227 in control practices. Primary outcome data were collected for 252 (83.4%) and 195 (85.9%) respectively. The study found no significant difference in BDI-II score at 12 weeks (mean difference -0.46; 95% CI -2.16 to 1.26; p=0.60, adjusted for baseline depression, baseline anxiety, sociodemographic factors, and clustering including practice as a random effect). No significant differences were found either in BDI-II score at 26 weeks, social functioning, antidepressant drug treatment, contact with mental health services, adverse events, or patient satisfaction. EQ-5D quality of life scores favoured the intervention arm at 26 weeks (adjusted mean difference 0.053; 95% CI 0.093 to 0.013; p=0.01), with more participants in the intervention arm reporting no problem on the Anxiety/Depression subscale (50/221 (22.6%) versus 25/185 (13.5%) in the control arm).

CONSEQUENCES Conclusions: This study found no evidence of improved depression management or outcome at 12 weeks from feedback monitoring with the PHQ-9 in primary care. A small benefit in the outcome of depression at 26 weeks could not be ruled out. Future research on feedback monitoring should include measures of anxiety as well as depression.

Funding acknowledgement: This project was funded by the National Institute for Health and Social Care Research (NIHR) Health Technology Assessment programme. The views expressed in this publication are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

1D.3

How can service users and practitioners collaborate to optimise medication in people living with severe mental illness (SMI)?

Presenter: Ian Maidment

Co-Authors: Jo Howe, Geoffrey Wong, Claire Duddy, Sheri Oduola, Maura MacPhee, Katherine Allen, Simon Jacklin, Rachel Upthegrove, Hafsah Habib.

Author Institutions: Keele University, Oxford University, University of Birmingham, UEA, University of British Columbia, Birmingham and Solihull Mental Health NHS Foundation Trust, Aston University

Abstract

PROBLEM Medication is a key treatment for people living with SMI. Medication optimisation can be challenging and failing to optimise the regimen can have devastating consequences both untreated mental illness and medication-related side-effects which increases the risk of relapse and non-adherence. MEDIATE, an NIHR Programme Development Grant, used a realist APPROACH to understand the complexities and identify potential solutions.The overall aim was to understand what works, for whom, in what circumstances, to optimise medication use with people living with SMI.

APPROACH Medication optimisation with people living with SMI was conceptualised as a complex process with outcomes that vary by individual and context. Realist research is well suited to make sense of complexity. The review was supported by key stakeholder engagement via Lived Experience and Practitioner Group meetings (n=6 and n=5 respectively) to help contextualise

FINDINGS and identify gaps in the evidence.The review was conducted over five stages: 1: Developing Initial Programme Theories: An explanation for what needs to be done, by whom, how and why, and in what contexts was developed. 2: Developing Search Strategy: The programme theory was refined with input from stakeholders. 3: Selection/Appraisal: Documents were screened against inclusion and exclusion criteria. 4: Data Extraction and Analysis/Synthesis: Data were analysed with a realist logic with contexts, mechanisms and outcomes identified. 5: Programme Theory Development: Refined programme theories were based on: key outcomes and strategies required to trigger outcomes.

FINDINGS Medication optimisation is possible, in SMI, within the context of shared decision-making between service users and practitioners. Early and ongoing positive experiences can help service users form trusting therapeutic relationships, openly discuss medication concerns with practitioners including honest conversations about the level of adherence and negotiate changes to medications based on the lifestyle needs of the service user. Conversely, negative contacts with healthcare services, such as coercive treatment practices, adversely influence future therapeutic relationships, and ultimately, impact medication optimisation. Service users frequently access additional sources of information about medication and their mental illness from the internet, family, friends and peer support workers. Peer support workers are an important, and untapped resource, to service users in relation to medication, given their lived experience with SMI.

CONSEQUENCES Shared decision-making is critical to medication optimisation with people living with SMI. Positive early and continuing encounters with healthcare services and practitioners are key to achieving this goal. Most service users are cared for in community settings by primary care. GPs, community pharmacists and others may not have the knowledge or skills to deal with complex queries or change medications. This can impact the therapeutic relationship potentially prompting service users to manage their medication in the absence of practitioner input which could increase the risk of withdrawal effects and relapse.

Funding acknowledgement: This study/project is funded by the National Institute for Health Research (NIHR; Programme Development Grant: 203683). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

1D.4

Improving GP delivered cross-cultural mental health care: A qualitative study.

Presenter: Aaron Poppleton

Co-Authors: Lisa Dikomitis, Caroline Sanders, Tom Kingstone, Carolyn A. Chew-Graham

Author Institutions: (AP, TK, CCG) School of Medicine, Keele University; (LD) Kent and Medway Medical School, University of Kent and Canterbury Christ Church University; (CS) School of Health Sciences, The University of Manchester

Abstract

PROBLEM Over 2 million Central and Eastern Europeans (CEEs) live in the United Kingdom (UK). Published literature suggests UK-CEEs have high levels of unmet physical and mental health needs, and low levels of general practice (GP) service use. Central and Eastern Europeans have described challenges in access to, and frustration at care received from, general practice in the UK. This has been affected by Brexit, the COVID-19 pandemic, and the conflict in Ukraine. We explored: 1. Central and Eastern Europeans' perspectives of accessing primary care, perceived quality of care, and mental health; and 2. General practice staff members' experiences of providing healthcare for CEEs within the UK.

APPROACH A qualitative study, conducted with patient and public involvement of UK-CEE individuals and primary care staff (GPs, nurses, AHP, receptionist, others). CEEs and general practice staff were invited to be interviewed through community organisations, social media and snowballing, with purposive sampling to support diverse representation. Semi-structured interviews were in-person, by telephone or video call, using a literature-informed topic guide. Accredited translation was offered (if required). Data were analysed thematically using a constant comparison approach. University research ethics approval (MH-210208).

FINDINGS Recruitment and analysis are ongoing. Preliminary themes include: CEE concerns around quality and relevance of primary care services; GP consultation availability/format. Primary care staff members' describe difficulties developing therapeutic partnerships with CEE individuals and managing their expectations. Data are being mapped onto a health beliefs framework which will be presented, with discussion of its potential role in culturally adapting general practice service provision and consultation styles for people from Central and Eastern Europe living in the UK.

CONSEQUENCES We present a culturally-informed framework to adapt primary care for Central and Eastern Europeans within the UK. This is intended to improve access to, and quality of, primary care mental health for Central and Eastern Europeans within the UK.

Funding acknowledgement: I gratefully acknowledge funding received from the Wellcome Trust for the above project

1D.5

Community Outpatient Psychotherapy Engagement Service for Self-harm (COPESS): A feasibility trial

Presenter: Pooja Saini

Co-Authors: Dr Pooja Saini, Anna Hunt, Dr Peter Taylor, Catherine Mills, Dr Caroline Clements, Helen Mulholland, Dr Cecil Kullu, Dr Mark Hann, Dr Rui Duarte, Dr Felicity Mattocks, Dr Else Gurthie, Dr Mark Gabbay

Author Institutions: Liverpool John Moores University

Abstract

PROBLEM People who self-harm (SH) are at high risk for future suicide and often suffer considerable emotional distress. Depression is common among people who SH and may be an underlying driver of SH behaviour. Readily accessible brief talking therapies show promise in helping people who SH, but further evaluation of these approaches is needed. The Community Outpatient Psychological Engagement Service for Self-Harm (COPESS) is a brief talking therapy intervention for depression and SH. This study aims assess the feasibility of conducting a trial of the COPESS intervention in a community setting in relation to participant recruitment and retention.

APPROACH This study was a mixed-method evaluation of a single-blind randomised controlled trial (RCT) will determine the acceptability and safety of the COPESS intervention, for people with depression who self-harm. People were randomised 1:1 to receive either COPESS plus treatment-as-usual (TAU) or TAU alone. Individuals aged >16 years who had depression and self-harmed in previous six months were included. Recruitment took place via GP practices.

FINDINGS 57 participants were randomised to receiving the COPESS intervention and TAU (n=28) or TAU only (n=27). The trial was not designed or powered to calculate effect sizes. However, the levels of change reported for participants with frequency and intensity of urges to self-injure over the past seven days (-2.9 vs -1.2), levels of depression (-10.8 vs -2.4) and psychological distress (-8.3 vs -2.4) all decreased more for those in the intervention group compared to those in the TAU group.

FINDINGS indicated that COPESS was both acceptable and feasible to deliver within community settings. Primary care and COPESS therapists based in a mental health trust reported the intervention fitted and complemented existing services, and patients reported that they favoured the rapid, self-harm focused, person-centred APPROACH of the intervention. Qualitative interviews were completed with participants, therapists, and primary care staff.

CONSEQUENCES All progression criteria were met supporting further evaluation of the intervention in a full-scale clinical effectiveness trial. The FINDINGS of this trial support further evaluation of the COPESS intervention to reduce urges and frequency of self-harming behaviours, depression, general distress and to help improve emotional regulation. Given the encouraging FINDINGS from recent reviews of brief psychological interventions for self-harm, a full trial of COPESS is an urgent priority.

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1D.6

Are there gender-based mental health inequalities in primary care in England?

Presenter: Ruth Watkinson

Co-Authors: Igor Francetic, Jack Elliott, Sam Khavandi, Joe Dodd, Luke Munford

Author Institutions: The University of Manchester

Abstract

PROBLEM Existing evidence suggests a high prevalence of mental health conditions amongst trans and gender diverse (TGD)

populations. The leading explanation for worse mental health outcomes is minority stress theory, with TGD populations experiencing structural invalidation of identity, prejudice, and discrimination. For some TGD people, gender dysphoria may also increase the risk of poor mental health. TGD patients may also face barriers to appropriate mental health care. However, poor recording of gender in medical records and most surveys limits research into gender-based health inequalities.

APPROACH We worked with four LGBTQ+ and mental health charities to refine the research questions, analysis, framing, and language. We made use of changes to gender recording in the 2021 and 2022 GP Patient Survey (GPPS) to estimate gender-based inequalities in mental health in England. We focused on two GPPS outcomes: reporting a long-term mental health condition, and reporting that mental health needs were not recognised or understood at a GP appointment. We used age-adjusted logistic regression with gender (female/male/non-binary/prefer to self-describe/prefer not to say) interacted with cis/trans identity (cisgender/transgender/prefer not to say), then computed predicted probabilities for each gender group within each cis/trans group. We added groups of potential mediators as covariates, including variables capturing health, socioeconomic status, appointment factors, and healthcare professional (HCP)-patient communication.

FINDINGS Of 1,533,478 respondents, 2,687 (0.2%) were non-binary, 2,353 (0.2%) self-described their gender, and 9,524 (0.6%) preferred not to say. 7,994 (0.5%) respondents were transgender and 12,611 (0.8%) preferred not to say their cis/trans identity. We found wide age-adjusted inequalities in the probability of reporting a long-term mental health condition, ranging from 8-12% amongst male and female patients who were cisgender or preferred not to say their cis/trans identity, to 48% amongst non-binary transgender patients. Probabilities tended to be higher amongst transgender groups, with the worst outcomes for non-binary trans patients. Mediation analysis suggested these inequalities may be partially explained by socioeconomic and other health inequalities, but remained mostly unexplained by these factors. Male and female cisgender patients had the lowest age-adjusted probability (17%) of not having their mental health needs met. The probability was significantly higher amongst all other groups, reaching 28-30% amongst groups who preferred not to say their cis/trans identity and trans patients who self-described their gender. Mediation analysis suggested inequalities may be largely explained by differences in the quality of communication and relationships between HCPs and TGD patients.

CONSEQUENCES Our results provide the first national estimates of mental health inequalities for TGD groups in England. We find evidence of wide inequalities, consistent with previous targeted surveys and qualitative evidence. Results from mediation analysis suggest training primary care staff to improve HCP-patient communication and relationships could reduce inequalities in unmet mental health needs for TGD patients.

Funding acknowledgement: National Institute for Health and Care Research

1E.1

What is the perceived impact of paramedics working in primary care teams on the working practices of other professionals in primary care and the experiences of patients?

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 As paramedics' transition into roles within primary care, their knowledge and skill set will undoubtedly change (National Institute for Health and Care Excellence, 2017a, 2017b; Primary Care Workforce Commission, 2015). In order to contribute to patients and the NHS primary care agenda, the current employment of paramedics in primary care requires careful evaluation.

APPROACH Focussed 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 We found a lack of standardisation regarding the deployment of the paramedic role across the UK. Whilst paramedics we observed and interviewed were clear in their scope of role and contribution to the primary care team, General Practitioners generally reported a lack of knowledge regarding what the paramedic contributed to the practice team. All administrative staff interviews felt that the paramedic role was fundamental to freeing up time for GPs (versus any other health care professional), and other health care professionals felt paramedics were well integrated in the team, even if their role was not clear. Patients were positive in their encounters with paramedics, though they were not clear on why paramedics were seeing them instead of their usual GP.

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 is the first to present empirical evidence of the perspective 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: National Institute for Health Research - NIHR300681 Health Education England - 190121

1E.2

Supporting and retaining new to practice GPs through training in advanced generalist medicine: An evaluation of the Catalyst programme

Presenter: Myriam Dell'Olio

Co-Authors: Joanne Reeve

Author Institutions: Academy of Primary Care, Hull York Medical School

Abstract

PROBLEM A workforce crisis in general practice is currently associated with both recruitment and retention issues as more and more GPs in the UK report low morale and intention to leave the job. In this context, new to practice (NTP) GPs are feeling unmotivated as they want a fulfilling career, yet describe gaps in their training. Catalyst, a one year pilot professional development programme, was designed to address this crisis by upskilling NTP GPs in advanced generalist practice while building capacity for the complex work of primary care. This study aims to evaluate Catalyst and describe aspects of the programme that contributed to the participants' learning experience.

APPROACH In order to examine the participants' understanding and application of the principles of generalist medicine we referred to Normalization Process Theory, which explains how new techniques and approaches are embedded and sustained in everyday practice. We designed a qualitative study and conducted 36 interviews (19 at the start and 17 at the end of the first year) and 6 focus groups (conducted once halfway through the year) with enrolled NTP GPs. Data were analysed using Framework Analysis.

FINDINGS By establishing a shared language and reframing GP roles, GPs were able to understand and define generalist approaches while affirming their own professional identity in an empowering way. Discussions of both scientific evidence and applied knowledge (e.g., clinical scenarios and experiences) through facilitated interactive learning further legitimised such approaches when GPs had to deviate from clinical guidelines. Finally, structured reflection and monitoring of quality improvement projects improved the participants' awareness of the system in which they worked.

CONSEQUENCES The importance of building a community of practice was evident as the participants valued the peer support they got throughout the programme, along with the opportunities to share and learn from a variety of clinical experiences. This way, and by using evidence to stimulate discussions on generalist medicine, Catalyst enabled knowledge creation activities that led the enrolled GPs to develop confidence in their own generalist skills. Finally, involvement in research informed, comprehensive quality improvement projects, allowed for the reflexive analysis of PROBLEM s and solutions, improving the participating GPs' sense of agency and motivation to shape the primary care context.

Funding acknowledgement: Catalyst has been funded by NHS England

1E.3

Developing a Framework for 'Community Paramedicine' in Ireland

Presenter: Tomas Barry

Co-Authors: On behalf of the PHECC Community Paramedicine Sub-Group

Author Institutions: University College Dublin

Abstract

PROBLEM 'Sláintecare' is Ireland's ten-year strategy to transform health and social care services in Ireland. Sláintecare reorients the Irish health system towards developing primary and community health services, with new models of care that allow people to stay healthy in their homes and communities for as long as possible . 'Community Paramedicine' is a concept that provides community-centred healthcare services that bridge primary, unscheduled and emergency care. 'Community Paramedicine' is aligned to the principles of 'Sláintecare'. It has been widely implemented in Australasia, Canada, Finland, the UK, and USA. It is however a novel concept in Ireland.

APPROACH Our working group developed a framework to allow national expansion of community paramedicine in Ireland. Our group had wide stakeholder representation and adopted an iterative consensus-based approach. To inform the development process we commissioned an international 'community paramedicine' scoping survey and a rapid systematic review that considered scope of practice, education, governance and outcomes. We engaged with local and international stakeholders, subject matter experts and the public.

FINDINGS The framework considers roles and professional responsibilities, scope of practice, education and training, governance, and research. The framework incorporates a scope of practice taxonomy that is relevant to the Irish context. The framework also incorporates

one of the first published 'models of community paramedicine' that we are aware of.

CONSEQUENCES Our final framework will facilitate the development and expansion of 'Community Paramedicine' at national level in Ireland. Our model of practice can further contribute to the international understanding of 'Community Paramedicine.

Funding acknowledgement: Pre-Hospital Emergency Care Council

1E.5

Recognising health inequalities within the Additional Roles Reimbursement Scheme in primary care

Presenter: Nicola Walsh

Co-Authors: Beth Jones, Sarah Voss, Nicola Walsh

Author Institutions: University of the West of England

Abstract

PROBLEM The Additional Roles Reimbursement Scheme (ARRS) introduces non-medical healthcare professionals (e.g., clinical pharmacists, first contact physiotherapists, personalised care workers) into primary care to: expand and enhance the workforce; reduce pressure on GPs; and facilitate a more multidisciplinary approach to enhance patient outcomes. This research explored the barriers and enablers to implementation of ARRS staff within primary care. Specifically, we explored whether the ARRS has been used to increase workforce capacity in areas of greatest need, and whether the type of professionals employed is aligned to the population requirements. The FINDINGS of this project will accelerate the evaluation of a significant area of primary care workforce innovation for which there is currently a limited evidence base.

APPROACH This qualitative study involved individual or paired interviews with a range of stakeholders related to the scheme. Thirty-seven participants were recruited within the ARC West footprint across three Integrated Care Boards, whose populations included pockets of significant deprivation. Participants included workforce leads, Primary Care Network (PCN) managers, representatives from primary care training hubs, and a range of ARRS staff. Data were analysed using Framework Analysis with the initial framework derived from ARRS literature and the Advanced Practice Framework.

FINDINGS The framework analysis identified nine categories present in the data that were related to ARRS implementation. One category in particular that identified health inequalities within the scheme was 'Scheme Inflexibility'. This category describes several inflexibilities that prevented less wealthy PCNs and practices, or those in more deprived areas, in making effective use of the scheme. These inflexibilities included unanticipated additional costs for recruiting and retaining staff (i.e., cost of living pay uplifts, supervision cover costs, estates costs, engagement of third parties) and rigid salary scales that can limit success with recruiting for posts. Participants reported that if the full funding could not be used by a PCN, it was often reallocated to be bid for by PCNs with the means to use the funding. Additionally, PCNs sometimes needed to recruit pragmatically based on who they were able to recruit rather than hiring the roles they needed to meet their populations' needs. In general, PCNs in areas of higher deprivation struggled more to recruit staff. The inflexibility of the scheme's funding can exacerbate health inequalities in areas of deprivation. Patients in these areas are potentially prevented from accessing the broad skill mix that can be provided by ARRS staff.

CONSEQUENCES These findings suggest that the ARRS is not currently being used effectively to increase workforce capacity in

areas of greatest need. Practical recommendations concerning greater flexibility around funding, banding and capped payments to staff recruitment companies within the scheme are suggested to inform operational and strategic decision making to address these inequities within primary care.

Funding acknowledgement: This study is funded by the NHS Insights Prioritisation Programme.

1E.6

Being boundaried: The costs of saying no and the costs of saying yes

Presenter: Dr Rachel Barnard

Co-Authors: Professor Deborah Swinglehurst

Author Institutions: Queen Mary University of London

Abstract

PROBLEM Non-patient facing work makes a substantial contribution to the workload pressures of GPs. This work can be considered 'hidden'; work that is opaque to patients and often the organisation as well. Existing evidence indicates that UK GPs have responded to workload pressures by reducing their hours or leaving the profession, exacerbating difficulties for patients in accessing GP services. Identifying the nature of behind-the-scenes work and exploring how this could be made more manageable can contribute to GP wellbeing and retention, which may in turn improve patient care and reduce health inequalities. The aims of this study were: 1) to increase understanding of the nature, extent and impact of 'hidden' work, and potential for change, and 2) to explore the feasibility of using qualitative methods to conduct such research in GP practices in the current landscape of stretched primary care services.

APPROACH Four months of ethnographic research was conducted in two urban GP practices in England, one North and one South. Data comprised fieldnotes documenting over 100 hours of observation, semi-structured interviews with eight GPs and eight other members of practice staff and a workshop towards the end of fieldwork at each site. There are two key stages to the analysis. The first stage is based on interview and workshop data and uses the Listening Guide (Voice Centred Relational Method) to facilitate in-depth understanding of individual perspectives of 'hidden' work. The second stage will involve gerund (action) coding of the full data set with the aim of identifying the various 'practices' that create and sustain hidden work. Meanings will be explored through the lens of Practice Theory.

FINDINGS Preliminary findings indicate that GPs experience tensions in managing their work outside of patient consultations. Conflicts were identified between (a) providing safe, continuous, caring, care and wanting to finish at a reasonable hour, (b) wanting to be accessible to clinical queries from colleagues and trainees and getting through non-patient facing tasks without interruption, (c) wanting to meet patient's need for timely referrals and navigating the vagaries of secondary care, (d) recognising the health impact of patient's social care needs and questioning acceptance of work beyond their medical remit. GP discretion for how they manage behind-the-scenes tasks carries risks; saying no can threaten their identity as the kind of GP they want to be, whilst saying yes can reduce service capacity for other patients and lead to feelings of burn-out. Inconsistency of response within and amongst GPs has implications for how work within a Practice is distributed, within a context in which overwork is normalised.

CONSEQUENCES The findings generate new understanding of tensions associated with non-patient facing work. Naming these tensions can support teams in exploring how

Practices may be amenable to changes in working .patterns.

Funding acknowledgement: NIHR School for Primary Care Research

1F.1 (Workshop)

Overcoming challenges and facilitating research in Multiple Long-Term Conditions

Presenter: Dr Jane Masoli

Co-Authors:

Author Institutions:

Abstract

CONTEXT Multiple Long-Term Conditions (MLTC) research fits within the conference theme of informed and inclusive primary care, as people with co-morbidity or multiple long-term conditions have traditionally been excluded from research. There is a pressing need to develop an informed evidence base for MLTC. There is funding and an appetite to develop resources for MLTC research, but funded groups need to know what the challenges are to target resource development to meaningfully support and grow research in MLTC.

AIM To identify challenges in research in Multiple Long-Term Conditions (MLTC) and develop goals for resources to facilitate MLTC research.

INTENDED OUTCOME To identify challenges and barriers to MLTC research experienced/anticipated by SAPC workshop attendees To develop key components to inform development of resources to facilitate and support the growth of research in MLTC FORMAT/CONTENT The session will be facilitated by representatives from the MRC/NIHR funded communities of practice in clinical pathways, statistical methods, qualitative methods and patient and public involvement and the NIHR funded Artificial Intelligence Multimorbidity Research Support Facility. On the way into the session attendees will be asked to select a small group to work with during the workshop depending on their experience and interest. A brief initial presentation (5 minutes) will outline the context of MLTC research from a Strategic Priorities Fund perspective, the existing NIHR/MRC funded communities of practice and the aims of the session. This will then be a dynamic workshop, responding to the attendee number and skill mix in the room on the day. Discussion points for small groups will be introduced at 10 minute intervals to keep the session to time. The facilitator for each small group will collate views presented during the session across 4 topics: Challenges and barriers in MLTC research Utility and key components of networks/communities of practice Key components of a useful online resource for MLTC research Wish list of tools/resources specific to small group focus topic (clinical pathways, statistical methods, qualitative, PPIE). The last 10 minutes will consist of brief feedback from facilitators and conclusions. A summary document will be prepared following the workshop, to inform ongoing work developing resources for MLTC research based on the views expressed.

INTENDED AUDIENCE Researchers, clinicians, PPIE representatives and other conference attendees with an interest in MLTC research.

Funding acknowledgement:

2A.1

What interventions have addressed the Inverse Care Law in general practice in Scotland over the last 20 years? A systematic scoping review

Presenter: James Bogie / Cara Bezzina

Co-Authors: James Bogie, Cara Bezzina, Alessio Albanese, David Henderson, Carey Lunan, Stewart Mercer, David Blane

Author Institutions: University of Glasgow, University of Edinburgh

Abstract

PROBLEM In 1971, Julian Tudor Hart defined the inverse care law (ICL) as: "the availability of good medical care tends to vary inversely with the need for it in the population served [1]. Recent evidence has demonstrated the persistence of the ICL in general practice in the UK, with fewer GPs, less funding and poorer consultation quality in more deprived areas [2]. The aims of this study were: 1) to map out interventions and the rationale behind them, and 2) to review evidence of the impact and sustainability of these interventions – what has worked, for whom and why?

APPROACH Systematic scoping review. We searched EMBASE, Web of Science, MEDLINE, CINAHL, Cochrane and BASE from 2000 to current, to retrieve papers describing interventions or policies which aimed to address the inverse care law in general practice in Scotland. In addition, we performed a systematic grey literature search, of government, NHS and third sector websites. All papers were double screened for inclusion. We included quantitative and qualitative studies. Our primary outcome was any intervention or policy in General Practice which aimed to address health inequalities. Conference proceedings, poster abstracts and discussion papers were excluded. We did not include other aspects of primary care such as dental or pharmacy.

FINDINGS There were 72 included papers (32 papers from the database search and 40 from the grey literature) reporting on 24 interventions. Preliminary findings demonstrate a range of intervention types addressing a) increasing supply of health care in deprived areas (e.g. staffing, financial resources), b) the quality of care (e.g. training, peer support, etc.), and/or c) the organisation of care (e.g. multi-disciplinary team (MDT) meetings, referral pathways, improving access, etc.) Six interventions accounted for 43% of all included papers: the link worker programme (n=16), Keep Well (n=7), welfare advice services embedded in practices (n=6), the CARE Plus study (n=4), the Govan SHIP (n=4), and the Scottish Deep End Project (n=4). Approximately one third of included papers are qualitative studies. Evidence of impact and sustainability was variable, but often absent.

CONSEQUENCES This research provides further evidence of the persistence of the inverse care law in general practice in Scotland, replicating FINDINGS from similar work (also funded by the Health Foundation) in England. Recommendations arising from this work will be relevant to all levels of General Practice, from local service delivery national policy making. References1) Hart JT. The inverse care law. Lancet. 1971 Feb 27;1(7696):405-12. doi: 10.1016/s0140-6736(71)92410-x. PMID: 4100731.2) McLean G, Guthrie B, Mercer SW, et al. General practice funding underpins the persistence of the inverse care law: cross-sectional study in Scotland. Br J Gen Pract. 2015; 65: e799-e805.

Funding acknowledgement: This work was funded by the Health Foundation.

2A.2

A Realist Evaluation of the Clinical- and Cost-effectiveness of Paramedics Working in General Practice

Presenter: Matthew Booker

Co-Authors: Sarah Voss, Nicky Harris, Justin Jagosh, Nouf Jeynes, Hazel Taylor, Helen Baxter, Jonathan Benger, Kirsty Garfield, Andy Gibson, Trudy Goodenough, William Hollingworth, Kim Kirby, Cathy Liddiard, Alyesha Proctor, Sarah Purdy, Behnaz Schofield, Grace Scrim

Author Institutions: University of Bristol, University of the West of England, University Hospitals Bristol NHSFT

Abstract

PROBLEM General Practice (GP) services are responding to demand by increasing the non-medical workforce supporting service delivery. Paramedics are increasingly working in GP, as their generalist skillset for undifferentiated PROBLEM s may be well-suited. Paramedics carry out a range of tasks including home visits, routine and same-day appointments, and telephone triage. There is significant variation in the types of patients that paramedics manage, their models of working and their contractual engagement. To date, no research investigates the variation in paramedic models in GP and the associated impacts on patient safety, clinical- or cost-effectiveness. Implementation guidance struggles to reflect this variation, making it difficult to make contextually-informed decisions around how to successfully implement the paramedic role.

APPROACH We describe a mixed-methods, Realist Evaluation of different models of paramedics in GP, to understand how they: achieve good clinical outcomes for patients; provide safe care; improve patient experience; relieve GP workload; influence the workload of other staff; make efficient use of healthcare resources.34 case study sites (practices with or without paramedics) were recruited across England using a sampling frame to ensure variation in site demographics (size, geography, urbanity, deprivation). Informed by Initial programme theories (IPTs) developed in previous work, sites were classified into models based on key domains of variation such as level of paramedic integration with the GP team and types of task undertaken.Semi-structured realist interviews were conducted with patient participants (or their adult carers), paramedics, GPs, and other general practice staff, to elicit information about how paramedic and non-paramedic models work, for whom and under which circumstances. Interview data was focussed on understanding the mechanisms through which the intervention, in a given context, results in intended and unintended outcomes.Quantitative data were collected from a sample of adult patients via questionnaires, at both paramedic and control sites. Domains captured assessed patient reported experience, safety and outcomes of the consultation. Additionally, routine clinical data were extracted from general practice systems including: re-consultations, investigations, medications and referrals during a 30 day (care episode) after the initial consultation (index visit).

FINDINGS At the time of abstract submission, the study has closed to recruitment. Qualitative, quantitative and health economic data analysis is underway. Complete baseline questionnaire data has been collected from 722 participants, 69 interviews have been conducted and routine data has been extracted for over 18,000 patients across paramedic and non-paramedic sites. Qualitative and quantitative data triangulation will be completed to present a comprehensive set of programme theories to support evaluation of the impact of different models of paramedic care on individual and system wide costs and outcomes.

CONSEQUENCES The final programme theories (constructed as statements) will be used to inform the initiation and implementation of paramedics in general practice according to variation in local need and circumstances.

Funding acknowledgement: This study is funded by the NIHR Health and Social Care Delivery Research programme (NIHR132736). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

2A.3

How does continuity of care work when patients are seen outside their regular general practice? A theory based on two case studies of extended access providers.

Presenter: Patrick Burch

Co-Authors: Kath Checkland

Author Institutions: University of Manchester, THIS Institute

Abstract

PROBLEM Longitudinal continuity of care (patients seeing the same GP) is associated with multiple benefits to patients, clinicians, and health care systems. This form of continuity is declining in British general practice. However, continuity in the modern healthcare system consists of more than just consulting the same clinician. Theoretical models of continuity recognise concepts such as information sharing and coherent, joined up, seamless management of care across care boundaries. There is some theoretical work on the potential mechanisms that underlie the benefits of longitudinal continuity. This previous work is based on little empirical data and does not consider the interplay of other aspects of continuity. This study seeks to understand how the different elements of continuity interact when patients are seen away from their regular general practice and how this may affect potential health outcomes. This is important as there often appears to be an unwritten assumption by some primary care policy makers that good informational and management continuity can make up for a lack of longitudinal continuity.

APPROACH Qualitative comparative case studies of two contrasting large-scale providers of extended access hubs were carried out based on a methodological APPROACH described by Stake. The focus of the work was on extended access appointments for patients with undifferentiated medical PROBLEM s. Data collected included clinician-patient observations and semi-structured interviews with hub staff, managers, commissioners, and patients. Analysis ran concurrently with data gathering and facilitated the iterative adaptation of data collection. The model of continuity described by Haggerty et al was a sensitising concept underlying data collection and analysis.

FINDINGS Observations suggested that, whilst informational continuity is important, it alone cannot ensure that patients experience joined up coherent care (management continuity). There are multiple linked patient, system and clinician factors that contribute to the patient experience of continuity. These factors also influence health outcomes but often in ways that a patient may be unaware. The positive effects of longitudinal continuity, including its contribution to positive health outcomes, cannot be fully replaced by other methods.

CONSEQUENCES The theory developed in this work provides a framework for policy makers and those designing services to consider when trying to provide patients with the experience of continuity when they are being seen by more than one clinician. The factors described in this theory should be optimised to try and maximise the patient experience of continuity and improve health outcomes. However, even with maximal optimisation of these factors, the benefits of longitudinal continuity cannot be replaced. Primarily, we should be seeking to improve longitudinal continuity, especially for patients with complex health needs.

Funding acknowledgement: This research was part of a PhD Fellowship funded by The Healthcare Improvement Studies Institute.

2A.4

Access to General Practice: Which systems have been tried? – A Scoping Review

Presenter: Abi Eccles

Co-Authors: Carol Bryce, Annelieke Driessen, Catherine Pope, Jennifer MacLellan, Toto Gronlund, Brian Nicholson, Sue Ziebland, Helen Atherton

Author Institutions: University of Warwick, University of Oxford

Abstract

PROBLEM Access to GP appointments is becoming increasingly challenging in many high-income countries, with an overstretched workforce and rising patient demand. Various systems to manage demand have been developed and evaluated in the UK and elsewhere. The Covid-19 pandemic saw disruption of established approaches within practices. It is timely to examine the varied general practice access systems that have been studied and to describe their components and the rationales behind them. This scoping review aimed to systematically consolidate and understand the current international evidence base related to different types of GP access systems.

APPROACH Literature searches were run across relevant databases in May 2022. Title, abstract and full text screening was carried out for each reference independently by two researchers. Data from included studies were extracted, collated and mapped to synthesise and represent the types of GP access systems, their components and aims.

FINDINGS After screening 11,326 records, 49 studies were included in the review. The majority of these were set in the UK. Some access systems featured heavily in the literature, such as Advanced Access, telephone triage and online consultations, and others less so. There were two key strategies adopted by systems which related to either changing appointment capacity or modifying patient pathways. Components related to these strategies are summarised and illustrated as a schematic representation in the paper. Most rationales behind access systems were practice-focused (e.g., reducing GP workload, managing demand) rather than patient-focused. 'Add on' systems and aims for efficiency became more popular in recent years, reflecting the advent of digital alternatives and recognition of efficiency in appointment allocation as an approach to manage demand.

CONSEQUENCES This scoping review provides a comprehensive synthesis of the various components that make up GP access systems. Most of the studies included were set in the UK, reflecting a strong field of academic primary care research. This makes the FINDINGS particularly relevant and applicable to current day British general practice and the challenges of access, whilst being potentially transferable elsewhere. The synthesis and schematic representation provide a useful tool for GPs, academics, policy makers and patients interested in understanding more about access systems' aims, design, and implementation, as well as offering a comparison tool to identify gaps in the evidence base. Patient-focused outcomes appear to be under investigated and therefore are at danger of being overlooked in the design and implementation of such systems. In recent years, digital services have been promoted as offering patient choice and convenience. However, this rhetoric contrasts with those access systems that aim to alleviate increasing demand by limiting appointment availability. A context where demand outweighs resources challenges the premise that extending choice is possible, without significantly more GP resource.

Funding acknowledgement: This study is funded by the NIHR HS&DR Programme (NIHR133620). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

2A.5

How does equitable general practice look like? A realist review and action framework

Presenter: Anna Gkiouleka

Co-Authors: Geoff Wong, Sarah Sowden, Isla Kuhn, Annie Moseley, Sukaina Manji, Rebecca Harmston, Rikke Siersbaek, Clare Bambra, John Ford

Author Institutions: University of Cambridge, University of Oxford, Newcastle University, University of Cambridge Medical Library, PPI Representative, PPI Representative, PPI Representative, Trinity College Dublin, Queen Mary University of London

Abstract

PROBLEM Health inequalities have been in the public agenda for decades. Researchers and public health bodies agree that these are driven by the circumstances in which people are born and live. However, there is an increasing consensus that healthcare services and especially general practice can play a significant role in reducing health inequalities. Still, what is missing is effective and transferable guidance regarding how this can be achieved. In this study, we synthesised the evidence on interventions and routine care in general practice that decrease or increase inequalities. Our aim was to produce a series of guiding principles and an action framework for equitable general practice for healthcare professionals and decision makers.

APPROACH We conducted a realist review based on Pawson's five steps. We searched MEDLINE, EMBASE, CINAHL, PsychINFO, the Web of Science, and the Cochrane Library for systematic reviews of health inequalities interventions in general practice from 2010 to March 2022. We focused on studies on cancer, diabetes, cardiovascular or chronic obstructive pulmonary disease as the main drivers of inequalities in mortality. We screened the primary studies in the included systematic reviews and included those that reported on clinical or care related outcomes by socio-economic status or other PROGRESS-Plus categories.

FINDINGS 325 studies met the inclusion criteria and 159 were included in the evidence synthesis. Robust evidence on the impact of general practice on health inequalities is limited. Inequalities in general practice result from complex processes that involve structures, ideas, everyday bureaucracies, and interpersonal relationships. Focusing on common qualities of effective interventions, we found that to reduce inequalities in health and healthcare, general practice needs to be:

- Connected so that interventions are coordinated across the system.
- Intersectional to account for differences within groups of (disadvantaged) patients.
- Flexible to meet patients' different needs and preferences.
- Inclusive so that it does not exclude people because of who they are.
- Community-centred so that everyone involved in general practice engages with its design and delivery.

CONSEQUENCES A vision of equitable general practice involves coordinated action and care that is connected, intersectional, flexible, inclusive, and community-centred. Future work should focus on how these five principles can be better used to shape the organisational development of future general practice.

Funding acknowledgement: This project was funded by the National Institute for Health Research (NIHR) Health and Social Care Delivery Research programme.

2A.6

What is the Impact of remote consultations on workload, work practices and staff

wellbeing? A primary care qualitative interview study (RECON Study)

Presenter: Jeremy Horwood

Co-Authors: Anne Scott, Christalla Pithara-McKeown, Chris Salisbury, Paula Smith, Frankie Brown, John Macleod

Author Institutions: Centre for Academic Primary Care (CAPC), Bristol Medical School, University of Bristol, National Institute for Health Research, Applied Research Collaboration West (NIHR ARC West), Department of Psychology, University of Bath

Abstract

PROBLEM Primary care is facing unprecedented levels of demand exacerbated by issues with workforce recruitment and retention and issues of 'burnout' are widely reported. Since the start of the COVID-19 pandemic remote consultations have become a key part of primary healthcare delivery. This study aimed investigated the impact of remote consultations on working practices, health care service delivery and staff wellbeing.

APPROACH Semi-structured interviews with 22 primary care clinicians in 14 practices in the Southwest of England, between February and May 2022. Thematic analysis was used to analyse the data using NVivo 11 software for data management.

FINDINGS Three main themes are reported: 'Managing workload', 'Decision-making and risk' and 'The impact of changing working practices on staff wellbeing'. 1) 'Managing workload' There was considerable variation between and within practices in the way that patient appointments were managed. This included initial triage, navigation systems, clinician preferences, patient preferences and choices, and the balance between face-to-face and remote consultations. There was variation in capacity to improve systems and in the employment of additional healthcare professionals to support GPs. 2) 'Decision-making and risk' Variation in thresholds for face-to-face consultations and tolerance of risk were factors that had an impact on some staff.3) 'The impact of changing working practices on staff well-being' Some clinicians valued the flexibility, increased autonomy, and the variety associated with remote consultations. However, some aspects of remote consultations were viewed as inefficient, exacerbated workload and were potentially implicated in retention issues.We found variation in the reported delivery of remote consultations with a diversity of opinion and experiences expressed from primary care clinicians. The reported increase in workload was a challenge for all practices and could be exacerbated by inefficiencies in remote consultations. The impact of remote consultations was intertwined with the pressures of workload and led to staff 'burnout' for some staff particularly early career GPs. Early career GPs found remote decision-making an additional challenge compared with face-to-face consultation. Repeat consultations exacerbated workload issues which had a particular impact on less experienced staff.

CONSEQUENCES Some aspects of remote consultations delivery are inefficient and coupled with the intensity of workload can have adverse effects on clinicians. Better systems, as well as the provision of support and training around decision-making would mitigate some of these adverse effects. Acknowledging the importance of staff wellbeing and finding ways to lessen the adverse effects of high intensity workloads may have an impact on job retention. For example, providing additional support for early career GPs may mitigate some of the adverse impacts on workforce retention. Involving staff in system improvements and the importance of sharing best practice was a key theme running through the findings.

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2A.7

'It's not just about seeing patients as a GP' : the need to acknowledge, make visible and allocate time for hidden work in general practice

Presenter: Dr Sharon Spooner

Co-Authors: Michaela Hubmann

Author Institutions: University of Manchester

Abstract

PROBLEM Popular media and scholarly work highlight the ever-increasing workload of GPs in the UK. Providing safe and co-ordinated care for patients involves substantial behind-the-scenes 'hidden' work whose component parts are often not recorded and remain invisible even within the organisation. Making the invisible visible by logging this work could contribute to understanding its nature and scale and support development of changes that would enhance GP well-being and retention, support patient care and reduce health inequalities. The aims of this study were: 1) to increase understanding of the nature, extent and impact of 'hidden' work, and the potential for change, and 2) to explore the feasibility of using qualitative methods to conduct such research in GP practices in the current landscape of overstretched primary care services.

APPROACH Researchers conducted four months of ethnographic research in two urban GP practices in England, one North and one South. Data comprised fieldnotes documenting over 100 hours of observation, semi-structured interviews with eight GPs and eight other members of practice staff and a workshop towards the end of fieldwork at each site. There are two key stages to the analysis. The first stage is based on interview and workshop data and uses the Listening Guide (Voice Centred Relational Method) to facilitate in-depth understanding of individual perspectives of 'hidden' work. The second stage will involve gerund (action) coding of the full data set to identify the various 'practices' that create and sustain hidden work. Meanings will be explored through the lens of Practice Theory.

FINDINGS Preliminary analysis of interview and workshop data suggests that tasks relating to indirect patient care are less acknowledged in general practice than patient-facing work or time spent teaching trainees. While the latter are carefully scheduled and recorded, by contrast, time allocated to undertake other tasks is generally not associated with specific work or adjusted to fit actual workloads. As a result, much of the background work undertaken by GPs is invisible to practice staff, GP colleagues, and patients, and cannot be accurately measured. Making hidden work visible by, for example, explicitly 'booking' tasks that arise from checking test results or responding to hospital specialists' recommendations, etc., provides an opportunity for staff to recognise the importance and impact of this work, and, by examining their processes and practices, to devise and implement more sustainable and effective ways of working.

CONSEQUENCES This paper generates new understanding of tensions associated with recognition and performance of non-patient facing work. Naming these tensions can support teams in exploring how practices may be amenable to and benefit from change.

Funding acknowledgement:

2A.8

What are the characteristics of effective 'research active' general practices from the perspective of staff, patients and stakeholders?

Presenter: Peter Bower

Co-Authors: James Jamison, Jennifer Jones, Sophie Park, Juliet Usher-Smith, Peter Bower, Cassandra Kenning

Author Institutions: University of Manchester, University of Cambridge, University College London

Abstract

PROBLEM Research is fundamental to improving quality of care and is part of the NHS constitution. Recent policy has highlighted the need to expand participation in research, and to ensure that research is conducted in an inclusive fashion aligned with population burden. Greater participation has the potential to increase the amount, scope and quality of research and reduce 'research waste'. Whilst participation is increasing, only around half of GP practices in the UK have recruited participants to NIHR CRN supported studies. We aimed to explore what factors were thought to be important for general practices to do research well and to sustain it over time.

APPROACH General practices in Greater Manchester, Morecambe, Cambridge, Peterborough and London were recruited to a qualitative study between December 2021-September 2022. A total of ninety interviews were conducted with: clinical and administrative staff (n=41); patients either with or without direct experience of research at their general practice (n=28); and other stakeholders in primary care research such as NIHR Local Clinical Research Networks (LCRNs), local Clinical Commissioning Groups (CCGs), Primary Care Networks (PCNs) and other supporting bodies (n=21). Interviews were audio recorded, transcribed and coded by three researchers across the sites. Interviews were coded independently by researchers to an agreed coding frame. Analysis was inductive and themes were discussed regularly with the wider team to reach consensus.

FINDINGS Respondents reported a number of characteristics of effective 'research active' practices. These included those related to: practice structure and organisation, in particular the existence of a research champion, practice size and full complements of staff; ways of working, including effective time management and teamworking with a culture of valuing research; availability of wider support including an engaged patient group and external support from the Clinical Research Network and other professional groups such as academic and commercial research teams. However, there remained a lack of stability for research participation. Whilst some practices had a dedicated research team, if they were not well integrated with the main practice team this negatively impacted research activity. The variable levels of research activity (available studies) year on year and the reliance on a champion to drive research within the practices, worked to make the whole system fragile.

CONSEQUENCES We identified a number of characteristics for effective 'research active' practices from the perspective of patients and professionals. Understanding the characteristics may help assess practice suitability for research prior to a practice becoming research active, gage what support would be required to help practices become effective research practices, and help us to better communicate research activity in general practice to patients and the public. This is a secondary complementary piece, the main results from the ARAPAHO study have also been submitted for presentation.

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2A.9

Determinants of lipid clinic referral and attendance in a multi-ethnic adult population in South London

Presenter: Aya Ayoub

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Abstract

PROBLEM Genetic or primary dyslipidaemias are a collection of inherited disorders of lipoprotein metabolism characterised by high circulating blood lipids early in life, covering hypercholesterolaemias (including familial hypercholesterolaemia, FH), hypertriglyceridaemias and combined hyperlipidaemias. Primary dyslipidaemias are thought to account for 60% of all premature cardiovascular disease. However, early diagnosis can significantly reduce cardiovascular risk with lipid-lowering medicines. Patients identified with high risk primary dyslipidaemia are recommended for lipid clinic referral to inform patient management. Improving FH identification (currently greatly underdiagnosed), and addressing ethnic disparities in dyslipidaemia management, is a current NHS priority.

APPROACH Aim: To assess determinants of lipid clinic referral or attendance in ethnically diverse adults.Retrospective cross-sectional study using the Lambeth DataNet primary care database, containing anonymised adult patient data (≥ 18 years) from 41 general practices (312,359 adult patients) in South London. The odds of lipid clinic referral was the main outcome variable, and this was assessed across ten ethnic groups and other patient-level factors: demographic (age and gender); socio-economic indicators (non-English speakers, income quintile); lifestyle factors (obesity and smoking); co-morbidities (type 2 diabetes, hypertension, ischaemic heart disease, chronic kidney disease, CKD); and practice factors (consultation frequency and practice list size). Stata 17 was used to run sequential models of logistic regression which were adjusted for practice effects using multi-level modelling.

FINDINGS A total of 312,359 adult patients were included in the analysis, of which 1001 (0.3%) were coded as either referred to or seen in lipid clinic. The fully adjusted model for odds of lipid clinic referral or attendance, OR (95% CI, p-value) showed the following associations: age (years) OR 1.03 (1.02-1.03, p<0.001), male gender OR 1.17 (1.03-1.33, p<0.001), Black African ethnicity OR 0.67 (0.54-0.84, p=0.001), Black Caribbean ethnicity OR 0.72 (0.57-0.89, p=0.003), obesity 1.53 (1.32-1.76, p<0.001), ex-smoker 1.55 (1.34-1.84, p<0.001), current smoker 1.25 (1.05-1.50, p=0.01), hypertension OR 1.21 (1.02-1.44, p=0.03), diabetes OR 1.63 (1.37-1.94, p<0.001), CKD OR 0.68 (0.51-0.90, p=0.008) and frequency of GP attendance ≥7 visits/last 12-months OR 2.14 (1.83-2.52, p<0.001). Sensitivity analyses restricted to FH coded patients showed a non-significant increased likelihood of lipid clinic referral for Indian OR 2.64 (0.69-10.17, p=0.16), Black Caribbean OR 1.79 (0.70-4.55, p=0.22) OR and Black African OR 1.76 (0.75-4.11, p=0.19) individuals, compared to White ethnic groups.

CONSEQUENCES Factors associated with a higher likelihood of lipid clinic referral or attendance included older age, male gender, obesity, ex or current smokers, hypertension,

diabetes and high frequency attenders to primary care. Individuals recorded as being of Black African and Black Caribbean ethnicity, and individuals with CKD were less likely to have a coded lipid clinic referral or attendance, after adjusting for other determinants including deprivation measures, suggesting large inequalities in health care access in these groups.

Funding acknowledgement: NIHR In Practice Fellowship: Dr Aya Ayoub - NIHR302809 NHS Race & Health Observatory

2B.1

Amitriptyline at Low-dose and Titrated for Irritable Bowel Syndrome as Second-line Treatment in Primary Care(The ATLANTIS study): A Double-blind Placebo-controlled Trial

Presenter: Hazel Everitt

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Abstract

PROBLEM Irritable bowel syndrome (IBS) is a common chronic bowel disorder causing abdominal pain, bloating and changes in bowel habit that can considerably impact patients' quality of life and have substantial societal and health care resource costs. NICE Guidelines recommend considering low dose amitriptyline if first line treatments are ineffective, however evidence for patients in primary care is unclear and few GPs currently prescribe amitriptyline for IBS.

APPROACH A NIHR HTA funded double-blind randomised placebo-controlled superiority trial of low dose amitriptyline (10-30mg self-titrated by participants) for adults with IBS in primary care. Eligibility: Adults 18 years and over with ongoing troublesome IBS symptoms despite trying first-line IBS treatments. Normal screening bloods including FBC, CRP and TTG for coeliac screening. Exclusion criteria: meeting NICE 2-week referral criteria for suspected lower gastrointestinal cancer, coeliac disease or inflammatory bowel disease, colorectal cancer, pregnancy, breastfeeding, or current use of, allergy to, or contraindications to amitriptyline or tricyclic antidepressants. Recruitment was via GP letter invite and opportunistic recruitment in GP surgeries in England through 3 recruitment hubs in Wessex, West of England, West Yorkshire. Participants randomised 1:1 to amitriptyline or matched placebo for 6 months by an automated system at Leeds CTRU. Participants had the option to continue trial medication until 12 months. Participants, investigators, and study personnel were masked to treatment allocation. Study drugs were dispensed by a central pharmacy at Leeds Teaching Hospitals NHS Trust. Study drug appearance, packaging, and labelling were identical in both the active treatment and placebo arms. Participant-completed assessments online or on paper at baseline and 3, 6, and 12 months post-randomisation. Primary outcome: Global symptoms of IBS at 6 months (using the IBS Symptom Severity Score). Secondary outcomes: relief of IBS symptoms, effect on IBS-associated somatic symptoms (Patient Health Questionnaire-12), anxiety and depression (Hospital Anxiety and Depression Scale), ability to work and participate in other activities (Work and Social Adjustment Scale), acceptability and

tolerability of treatment, self-reported health care use, health-related quality of life (EQ-5D-3L), and cost-effectiveness. A nested, qualitative study (to be presented separately) explored patient and GP experiences of treatments and trial participation, including acceptability, adherence, unanticipated effects, and implications for wider use of amitriptyline for IBS in primary care.

FINDINGS 463 patients were recruited from 55 GP surgeries between December 2019 and April 2022 with the support of Clinical Research Networks. This is the largest trial of amitriptyline for IBS worldwide. Follow up is complete and data analysis is underway. Results will be available at the conference.

CONSEQUENCES Determining the clinical effectiveness of low-dose amitriptyline for IBS in primary care will provide robust evidence to enable patients and clinicians to make better informed treatment decisions. Trial registration: ISRCTN48075063.

Funding acknowledgement: NIHR HTA

2B.2

Low-dose amitriptyline for irritable bowel syndrome (IBS): patients' and GPs' views on barriers and facilitators of prescribing and uptake

Presenter: Emma Teasdale

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Author Institutions: University of Southampton, University of Leeds, University of Bristol, University of Exeter

Abstract

PROBLEM Irritable bowel syndrome (IBS) is a common, chronic, functional bowel disorder characterised by abdominal pain and altered bowel habit. It impacts patients' quality of life and incurs considerable health service resource use. Many patients have ongoing troublesome symptoms. NICE Guidelines suggest considering low-dose amitriptyline if first line treatments are ineffective but currently amitriptyline is infrequently prescribed for IBS in primary care.

APPROACH A qualitative interview study conducted with 42 people with IBS and 16 GPs in England to explore their views on barriers and facilitators of prescribing and uptake of low dose amitriptyline for IBS. This study was nested within the ATLANTIS trial (an NIHR HTA funded double-blind randomised placebo-controlled superiority trial of low dose amitriptyline for adults with IBS in primary care). ATLANTIS trial participants (adults 18 years and over with ongoing troublesome IBS symptoms) were recruited via GP surgeries in Wessex, West of England, West Yorkshire and were also invited to consent to be contacted about the nested qualitative study. Between April 2020 and March 2022, 140 qualitative study invitations were sent to participants who had consented to be contacted about the qualitative study. Semi-structured telephone interviews were conducted with participants at 6-months (n=42) and repeated 12-month post-randomisation (n=19). Between October 2020 and March 2022, 42 out of 55 GP practices were contacted about the qualitative study. Semi-structured telephone interviews were conducted with 16 GPs. Reflexive thematic analysis, incorporating techniques from grounded theory was used to analyse the qualitative data. Patient (6 and 12 month) and GP interview data were analysed separately. Themes from different groups of participants were then compared and contrasted with each other to identify any group-specific and overarching themes. Although analysis was primarily inductive, the common-sense model of illness perception and normalisation process theory informed

the development of the interview topic guides and aided data interpretation.

FINDINGS Patients and GPs highlighted key factors likely to facilitate prescribing and uptake of low dose amitriptyline for IBS including addressing patient concerns about amitriptyline being an antidepressant by emphasising the low and flexible dose, potential benefits beyond IBS symptom relief and ease of treatment and addressing GP concerns around medicalising IBS by acknowledging the familiarity of amitriptyline. GPs were keen to offer more options for IBS and patients sought a cure for their symptoms.

CONSEQUENCES Patients and GPs felt the potential benefits from trying low dose amitriptyline for IBS outweighed their concerns. Depending on the trial results, GPs could offer low dose amitriptyline for IBS where appropriate. When offering low dose amitriptyline for IBS, GPs should consider addressing patient concerns about taking an antidepressant for IBS as well as highlighting the low and flexible dosage and other potential benefits of amitriptyline.

Funding acknowledgement:

2B.3

Unblinding to treatment allocation in randomised placebo-controlled trials: A new process and analysis of patient perspectives from a trial of low-dose amitriptyline for irritable bowel syndrome (IBS) in primary care

Presenter: Felicity Bishop

Co-Authors: Teasdale E, Everitt HA, Ford AC, Alderson SL, Hanney J, Chaddock M, Guthrie E, Wright-Hughes A, Ow P, Farrin A, Ridd M, Foy R, Cook H, Cooper D, Fernandez C , Thornton R, Herbert A, Newman S, Hartley S, ATLANTIS Trial Team

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Abstract

PROBLEM Double-blinded trials typically maintain blinding of patient participants until trial completion. The associated delays can be challenging for ongoing clinical management and patients wanting to make sense of their lived experience. We addressed this issue within the ATLANTIS double-blind randomised placebo-controlled superiority trial of low dose amitriptyline for adults with IBS in primary care. We worked with patient partners and used qualitative methods to explore participants' perspectives on unblinding at the point at which they personally finished the trial and to develop patient-facing information to support the unblinding process.

APPROACH Patient participants (adults with ongoing troublesome IBS symptoms) were recruited first to the ATLANTIS trial and then to the qualitative study via GP surgeries in Wessex, West of England, West Yorkshire. 140 patients were invited to take part in a semi-structured audio-recorded telephone interview; all 42 who consented and were available were interviewed approximately 6 months post-randomisation, 19 were interviewed again approximately 12 months post-randomisation. Interviews broadly explored patients' experiences; this paper focuses on patients' perspectives on treatment allocation and unblinding, analysed inductively using thematic analysis. Interviews in the pilot phase (April - June 2020; n=16) informed the need for and development of the patient-facing leaflet. Interviews in the later phase (July 2020 – March 22; n=26)

further explored participants' experiences of treatment allocation, blinding and unblinding.

FINDINGS Patient partners and trial participants wanted and expected to be told about their treatment allocation in a timely manner. Trial participants constructed common-sense narratives about their treatment arm allocation based on perceived symptom improvement and side effects. Those who believed they were receiving amitriptyline based that on experiencing fewer/less severe IBS symptoms and/or experiencing side-effects commonly associated with amitriptyline e.g., drowsiness, dry mouth. Those who believed they were receiving placebo based that on experiencing no noticeable change in their IBS ('no worse, no better') and no side-effects. Patients expressed concerns about what would happen if their beliefs about their treatment turned out to be incorrect. Patients worried about feeling disappointed if they were actually on amitriptyline having thought it was placebo (putting them "back to square one" in their search for effective IBS treatment). Patients worried about feeling foolish if they were actually on placebo having thought they were on amitriptyline (because they did not understand how a placebo could change their symptoms).

CONSEQUENCES Because patients' narratives were firmly embedded in the context of this particular trial, we worked with patient partners to develop trial-specific evidence-based resources to support patient unblinding at the end of their personal involvement in the trial. Written leaflets for patients and research staff clearly communicated the implications of the treatment allocation for future IBS management and for making sense of experiences in the trial.

Funding acknowledgement: 16/162/01/Health Technology Assessment Programme

2B.4

A Cohort Study in the Clinical Practice Research Datalink to explore whether potentially inappropriate prescribing (PIP) in middle-aged adults is associated with increased healthcare utilisation and mortality

Presenter: Michael Naughton

Co-Authors: Patrick Redmond, Mariam Molokhia, Ian Douglas, Rohini Mathuras

Author Institutions: Queen Mary University of London, Royal College of Surgeons in Ireland, King's College London, London School of Hygiene and Tropical Medicine

Abstract

PROBLEM Potentially inappropriate prescribing (PIP) is the prescribing of medication where the risks are likely to outweigh the benefits. It is common in middle-aged adults (45-64 years), with a recent systematic review and meta-analysis showing that 38% of middle-aged adults are exposed to PIP annually. However, all studies included were conducted in Ireland, so PIP prevalence in the UK population is yet to be established. PIP has been shown to be associated with Adverse Drug Events (ADEs) in hospitalised middle-aged adults, but associations with healthcare utilisation or other adverse clinical outcomes have yet to be explored.

APPROACH A retrospective cohort study will be carried out, routinely collected data from patient records of adults aged 45-64 (N=1,100,000), using Clinical Practice Research Datalink (CPRD) Aurum, will be examined. The cohort will include all adults registered on Jan 1st 2019 with at least 12 months prior registration. PIP will be defined using the Prescribing Optimally in Middle-aged People's Treatment (PROMPT) criteria, exposure to PIP will be established in the period 1st Jan 2018-31st December 2018. Covariates for analysis will be established including, gender, age, number of repeat medications in the previous year (2018), ethnicity, multimorbidity (defined

using Cambridge Multimorbidity Score), socio-economic status (Index of Multiple Deprivation), and the number of GP clinic attendances in previous year. Outcomes will be examined for the period 1st Jan 2019-31st December 2019. These will include the number of GP attendances, number of hospitalisations, and all-cause mortality. A multi-level Poisson regression model will be used to assess association between PIP and count outcomes (e.g., number of GP attendances, hospital admissions). A Cox proportional hazard model will be used to assess the association between PIP exposure and all-cause mortality. Appropriate methods will be used to account for missing data.

FINDINGS The number and percentage of those participants experiencing PIP in the exposure period will be reported. The number of patients experiencing the pre-specified outcomes will be reported, as well as the association of PIP with each outcome. We will report hazard ratios/risk ratios, 95% confidence intervals and p-values.

CONSEQUENCES The use of PIP criteria in RCTs for medicines optimisation in the elderly has been shown to reduce PIP prevalence, falls, length of hospital stays, care-visits, and medication costs. Understanding the relationship between PIP in middle-aged adults and important clinical outcomes (e.g. healthcare utilisation, mortality) will facilitate the development of medicines optimisation interventions in this middle aged group where polypharmacy and multimorbidity are increasingly common.

Funding acknowledgement: My time has been funded by the Clinical Effectiveness Group at QMUL, where I am employed as a Clinical Lead.

2B.5

Improving Medicines use in People with Polypharmacy in Primary Care (IMPPP): Delivery of a multicentre cluster randomised trial evaluating a complex intervention for medication optimisation

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 increasingly common, and associated with undesirable. consequences Polypharmacy management necessitates balancing therapeutic benefits and risks, and varying clinical and patient priorities. Current guidance for managing polypharmacy is not supported by high quality evidence. The aim of the Improving Medicines use in People with Polypharmacy in Primary Care (IMPPP) trial is to evaluate the effectiveness of an intervention to optimise medication use for patients with polypharmacy in a general practice setting.

APPROACH The IMPPP trial is a multicentre, open-label, cluster-randomised trial, with two parallel groups. Practices have been randomised to a complex intervention comprising structured medication review (including interprofessional GP/pharmacist treatment planning and patient-facing review) supported by performance feedback, financial incentivisation, clinician training and a bespoke clinical informatic tool (intervention), or usual care (control). Patients with multiple medications (5+) and triggering at least one potentially inappropriate prescribing (PIP) indicator have been recruited in each practice using a computerised search of health

records, aiming for 50 patients per practice. The intervention is being delivered over a 26-week period. The primary outcome is mean number of PIP indicators triggered per patient at 26 weeks follow-up, determined objectively from coded GP electronic health records. Secondary outcomes include patient reported outcome measures, and health and care service use. A nested process evaluation is exploring implementation of the intervention.

FINDINGS The study is ongoing, with intervention delivery expected to end by April 2023. 37 practices (19 intervention) have been recruited from the South-West and West Midlands regions. Median list size is 10800 (range 4650-49000), with median practice deprivation decile of 6 (range 2 (more deprived) to 10). Median percentage of patients meeting inclusion criteria was 7.3% (range 3.2%-12.1%) across practices. Of these, a total of 1956 patients consented (median acceptance rate 21%, range 11%-30%). The informatics tool has been successfully rolled out across all practices. In intervention practices, initial clinical training and regular practice feedback have been implemented. Practices in the intervention arm have been able to successfully meet delivery targets for the intervention; in general over 80% of recruited patients have received completed reviews to date, and over 90% in those practices that have completed the intervention delivery period.

CONSEQUENCES The IMPPP trial has demonstrated that it is possible to implement and evaluate a complex intervention for patient-centred medication optimisation for polypharmacy within primary care, with good engagement by GPs, pharmacists and patients. We will report provisional FINDINGS on baseline population characteristics and completed intervention delivery. The study is highly relevant to current primary care practice and policy, with the potential to inform improved delivery of medication optimisation for people experiencing polypharmacy.

Funding acknowledgement: This project is 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.

2B.6

Exploring Polypharmacy: A Storytelling-Based Co-Design APPROACH to Creating Patient-Centered Solutions

Presenter: Alison Thomson

Co-Authors: Nina Fudge, Deborah Swinglehurst

Author Institutions: Queen Mary University of London

Abstract

PROBLEM Current health policy calls on primary care clinicians to conduct structured medication reviews to address polypharmacy, with a particular focus on PROBLEM atic or 'higher risk' polypharmacy (e.g. the prescription of 10+ medications).

APPROACH We used a co-design APPROACH , the Storytelling Group technique, to re-imagine the medication review and its potential for addressing polypharmacy. Three workshops were facilitated by a design researcher, two qualitative researchers, and a live illustrator. They involved seven participants (aged 65+), all interested in reducing the medication burden for older adults. Participants engaged in collaborative fictional scenario-building, drawing on their lived experience of polypharmacy. They created characters, timelines, contexts and plots. Facilitators aided story development by introducing provocative 'what if?' prompts, based on insights from their wider ethnographic study of polypharmacy.

FINDINGS Six fictional character profiles were created. Descriptors included age, gender, ethnicity, occupation, residence, and multiple long-term conditions. Participants constructed rich and imaginative narratives about healthcare interactions with different professionals in different contexts. Given the remit of the co-design project, we anticipated storylines would conclude (at least in some instances) with characters positively addressing polypharmacy, thus opening up ideas for service re-design and interventions that might be evaluated in practice. Despite participants' investment in reducing medication burden and their enthusiastic engagement with the Group Storytelling APPROACH , none of the narratives they co-constructed involved the successful reduction of medications. Participants displayed a wide range of assumptions concerning the roles occupied by health professionals and the complexities of relationships between patients, clinicians and medicines and the health system at large. They had difficulty imagining the possibility of addressing polypharmacy, even within a deliberate speculative exercise designed to loosen them from any attachments to conventional logics of medical care.

CONSEQUENCES Polypharmacy is a 'wicked' problem with no 'quick fix'. Tackling it is likely to require a multifaceted APPROACH and collaboration involving healthcare professionals, patients, caregivers and information providers. Our work provides insights into the strengths and limitations of co-design when the phenomenon being examined is sufficiently complex as to escape articulation. We have collated insights from our ethnographic research and reflections on Group Storytelling to curate a series of seven fictional short stories, collectively known as "Let's Talk Differently About Medicines". This is a patient-centred tool, including stories that range from the highly plausible to the highly speculative. We invite readers to consider how patients and professionals are positioned within the health system, reflect on normative assumptions, recognise emotive responses, identify care priorities, grapple with paradox and explore possibilities for change. Most of all we hope that it will cultivate courage amongst patients and clinicians to talk about a topic that our research shows is very difficult to talk about.

Funding acknowledgement: The APOLLO-MM study is funded by an NIHR Clinician Scientist Award.

2B.7

Interim FINDINGS from a multicentre pilot randomised controlled trial (RCT): Community Pharmacy Homeless Outreach Engagement Non-medical Independent prescribing Rx (Community Pharmacy PHOENIx)

Presenter: Richard Lowrie

Co-Authors: Vibhu Paudyal (joint lead author), Andrew McPherson, Jane Moir, Helena Heath, Versha Cheed, Shabana Akhtar, Sarah Tearne, Adnan Araf, Steven Ross, Cian Lombard, Frances Mair, Lee Middleton, Frank Reilly, Andrea Williamson.

Author Institutions: University of Birmingham, General Practice and Primary Care, School of Health and Wellbeing, University of Glasgow; NHS Greater Glasgow and Clyde; Simon Community Scotland, Birmingham and Solihull Mental Health NHS Foundation Trust.

Abstract

PROBLEM Homelessness confers a higher risk for all cause premature death and hospitalisation. Lower levels of: access to care; treatment uptake; medicines adherence; and fragmented primary health and social care systems contribute to poor outcomes. Evidence is lacking for holistic interventions to improve health outcomes in this patient population. Thus, community pharmacy based holistic health and social care intervention has

the potential to improve access and care but remains untested.

APPROACH Multicentre pilot RCT of PHOENIx in Glasgow and Birmingham with parallel qualitative and economic evaluation testing: patient recruitment; data collection; retention; intervention fidelity; and a range of outcomes in preparation for a definitive RCT. Participants are homeless adults recruited from community pharmacies by independent researchers who collect comprehensive baseline data (physical, mental, drug use, medicines, healthcare utilisation, housing, benefits, quality of life) then randomise (1:1) to PHOENIx plus Usual Care (UC) or UC. PHOENIx intervention delivered by NHS employee independent prescribing pharmacists working in pairs with third sector homelessness outreach street workers, offering weekly consultations in the patient's choice of venue, for 6 months. Pharmacists clinically assess, prescribe, refer, embedded in existing clinical teams and with full remote access to NHS clinical information systems in primary and acute care. Third sector workers offer social prescribing, welfare benefits assessment and application, housing options and all round advocacy, collaborating with wider street outreach networks. PHOENIx let patients prioritise which, if any, problems they want to address while building strong therapeutic relationships. UC is existing primary and secondary care driven by patient demand and presentation including routine health and social care worker input. 3 and 6 month follow up visits by researchers assess achievement of a-priori progression criteria (recruitment, retention, data collection) and scheduled/unscheduled healthcare utilisation, costs, prescribing, quality of life, housing tenure, criminal justice contacts.

FINDINGS Recruitment from community pharmacies is ongoing; 86 from a target 100 participants recruited from Nov 22-Feb 23. Full baseline data collected for all participants; 43 randomised to PHOENIx; 43 UC. Intervention delivery underway in Glasgow (ends June 2023) and Birmingham (ends Sep 2023). 3 month follow up in progress. Full baseline characteristics will be available for presentation at conference.

CONSEQUENCES Baseline characteristics provide comprehensive contemporary health and social care phenotyping of a sample of the UK's most destitute citizens while describing their unmet health needs. If recruitment and other a-priori progression criteria are achieved alongside signal of improved outcomes, and favourable process evaluation, PHOENIx intervention merits testing in a definitive RCT.

Funding acknowledgement: NIHR; NHS Greater Glasgow and Clyde.

2B.8

Evaluating a social prescribing initiative to support international medical graduates

Presenter: Nicholas Broadwell

Co-Authors: Puja Verma, Joanne Reeve

Author Institutions: Hull University Teaching Hospitals NHS Trust, Hull York Medical School

Abstract

PROBLEM Across England, there is a GP workforce crisis. Training schemes increasingly rely on international medical graduates (IMGs) to fill places. Within Yorkshire and Humber (Y&H), most GP trainees are IMGs. We know IMGs have distinct educational and professional developmental needs. However, less is understood about the challenges IMGs face outside of work that may act as barriers to them settling and remaining in the region. This project seeks to answer two questions regarding GP trainees within Y&H. What are the reported non-work related challenges and barriers to settlement that IMGs experience when moving to the Y&H region? Does a local social prescribing scheme (SPS) set up start to address these challenges?

APPROACH This project is a retrospective evaluation and analysis of interventions put in place by Health Education England (HEE) to identify and address the non-workplace needs of GP trainee IMGs. HEE Y&H introduced two initiatives to support IMGs: a survey of trainees' current needs, and a local SPS to help IMGs settle. HEE designed a survey 'Hello my story' which was distributed to three cohorts of new GP trainees in 2021/2022. The survey covered a broad range of topics both within and outside of work. The SPS allowed trainees to self-refer and receive personalised support. They were informed of the SPS shortly after receiving training offers.Data available for evaluation and analysis included: 403 questionnaires across cohorts, a data set describing referral reasons to the SPS. A review of the survey dataset identified two questions which explicitly addressed the evaluation aims. The responses were analysed using thematic analysis (Braun and Clarke) to describe the perceived non-work challenges. We plan to compare with the SPS referrals to provide data triangulation and highlight any gaps.As an evaluation of local interventions and not research, ethical approval was not required.

FINDINGS Data analysis is ongoing and will be concluded in March. Three main challenges have been described.Firstly, the social isolation faced by IMGs: being separated from family/friends, loneliness, difficulty making friends, and home sickness. One trainee felt 'living without family in the UK makes things stressful'. Secondly, addressing basic needs and services: accommodation, finances, childcare/schooling, and visa issues. A trainee advised 'I haven't been able to arrange permanent accommodation yet'.Thirdly, poorly managed expectations: weather and culture adjustment. Initial analysis shows the SPS referral data broadly supports the challenges described.

CONSEQUENCES This evaluation supports HEEs assumption that IMGs require additional support outside work. Early indications suggest SPS may address some of the challenges described. The FINDINGS will inform the ongoing development and delivery of extra support within GP training programmes targeted towards IMGs allowing them to feel best supported and settled.

Funding acknowledgement:

2B.9

Recruitment to Talking in Practice (TIP): Randomised controlled trial testing the effects of communication skills e-learning for primary care practitioners on patients' musculoskeletal pain and enablement.

Presenter: Hazel Everitt

Co-Authors: H. Everitt, N. Cross, R. Dewar-Haggart, E. Teasdale, A. Herbert, M. Robinson, S. Pollet, M. Ridd, C. Mallen, L. Clarson, J. Bostock, T.Becque, B. Stuart, K. Garfield, L. Morrison, J. Vennik, H. Atherton, J. Howick, G. Leydon, P.Little, F. Bishop

Author Institutions: Primary Care Research Centre, University of Southampton, Centre for Academic Primary Care, University of Bristol, School of Medicine, Keele University, Pragmatic Clinical Trials Unit QMUL, Warwick Academic Primary Care, University of Warwick, Stoneygate Centre for Empathic Health Care, University of Leicester, School of Psychology, University of Southampton

Abstract

PROBLEM Previous research indicates that effective communication between patients and primary care practitioners (for example GPs, nurses and physiotherapists) can help to optimise healthcare interactions, improve self-management and patient outcomes such as pain. Previous development and feasibility work conducted in the NIHR SPCR Empathica study rigorously developed and feasibility tested a brief e-learning tool for practitioners to deliver positive empathic care 'EMPathicO'. APPROACH The aim is to determine the

effectiveness and cost-effectiveness of EMPathicO communication training for practitioners in improving patient outcomes in those with Musculoskeletal (MSK) pain and 'All comers'. TIP is a cluster randomised controlled trial in GP surgeries across England and Wales. Practitioners in approximately 42 GP surgeries serving patients from diverse geographic, socio-economic, and ethnic backgrounds are being randomised to receive the e-learning package immediately or at the end of the trial. Agile flexible recruitment methods are being used to optimise recruitment and minimise clinician time needed to participate. This is particularly important currently when clinical workload pressures mean research time is limited. Practitioners consult as usual and do not need to identify or consent patient participants within the consultation. The recruitment target is 840 adult patients with MSK pain and 840 with other conditions, consulting face to face, by telephone or video. Reception staff invite patients prior to the consultation to complete consent and a brief baseline questionnaire online. Post-consultation questionnaires are at 1 week, and 1, 3 and 6 months online. Interpreters are available if needed.

FINDINGS Patient-reported outcome measures are completed online or by paper questionnaire. Patient representatives were involved in determining which outcomes are most important for patients. Two Co-Primary outcomes are being collected - Pain intensity using the 4-item pain intensity subscale from the Brief pain Inventory and Patient Enablement using the Patient Enablement Index. Secondary outcomes include: symptom severity, quality of life, patient satisfaction, health economic costs. Practitioner and patient-reported process measures assess empathy, expectancies, anxiety/depression and continuity of care. Qualitative interviews are being undertaken with a purposive sample of patients and practitioners. A mixed methods analysis aims to evaluate EMPathicO's potential impact post-trial using the RE-AIM framework which involves addressing an intervention's Reach, Effectiveness, Adoption, Implementation, and Maintenance. Practice and patient recruitment is ongoing.

CONSEQUENCES Flexible recruitment strategies are needed to enable recruitment to clinical trials in primary care the current environment. The challenges and range of strategies being employed will be discussed. If found to be successful, this e-learning communication training could quickly be made available at low cost to primary care practices across the country.

Funding acknowledgement: NIHR SPCR

2C.1

How do researchers select usual care comparators when designing primary care trials of complex interventions?

Presenter: Shoba Dawson

Co-Authors: Prof Katrina Turner, Dr Alyson Huntley

Author Institutions: Centre for Academic Primary Care, University of Bristol

Abstract

PROBLEM Primary care trials assessing complex health interventions often evaluate new or modified interventions against "usual care". Typically, usual care refers to the care provided in everyday clinical practice. However, usual care can differ for the same condition and across clinical sites, countries and over time. This variability may raise ethical concerns in terms of the care trial participants allocated to usual care will receive, and can affect the design of a trial, e.g. what sample size is needed to detect clinically significant differences between treatments. Where usual care for a specific condition is highly variable, researchers may

choose to specify at the start of their trial what usual care will entail. This, however, may affect the trial's overall design and delivery, and reduce its relevance to clinical practice.The impact the content of usual care can have on a trial's design has led to researchers and reporting guidelines, such as TIDieR, requesting that researchers fully detail both the intervention and the comparator arm when designing a trial. To establish whether primary care researchers are doing this, and to identify on what basis they decide its content, we conducted a systematic review of recent trial protocols describing primary care trials of complex interventions.

APPROACH We searched MEDLINE, Embase, the Cochrane Library and PsycINFO from 1 July 2020 to 20 June 2022. We identified 6063 records from searching databases. After de-duplication, 4077 records were screened. 293 articles were included for full-text screening and 87 were included in the review. Data were analysed using a narrative synthesis approach.

FINDINGS Majority of the included studies were from the UK (n=15), USA (n=11), Australia (n=7), Netherlands (n=7) and Canada (n=5). Majority of the included studies (n=45) used the term usual care/care as usual/usual treatment. Other studies commonly used treatment as usual (n=11), standard care/practice/standard of care (n=11) and control arm/control group/condition (n=9). Only 37 studies provided justification of choosing usual care as comparator. Nearly all the included studies provided some definition or description of usual care. However, the information on the content and delivery of usual care including who delivered it and where was often vague and patchy. Only 14 of the 87 studies provided a justification of choice of usual care content including some information on actions that informed this.

CONSEQUENCES While the importance of describing usual care prior to a trial starting has been highlighted within the literature and by reporting checklists, such details continue to be missing from published trial protocols.

Funding acknowledgement: NIHR School for Primary Care Research

2C.2

What is the effectiveness and safety of an extended-role GP "Symptoms Clinic"? Results of Multiple Symptoms Study 3

Presenter: Chris Burton

Co-Authors: Cara Mooney, David White, Laura Sutton, Jeremy Dawson, Kate Fryer, Tom Sanders, Monica Greco, Vincent Deary

Author Institutions: University of Sheffield, Northumbria University, Goldsmiths University of London

Abstract

PROBLEM Persistent physical symptoms occur in all areas of healthcare. They are present in up to 40% of GP consultations and account for at least one third of specialist referrals. Approximately 2% of the population have multiple or recurrent physical symptoms which are disproportionate to currently evidenced pathology. Historically persistent physical symptoms have been regarded as psychogenic or as "medically unexplained". Current evidence suggests that persistent physical symptoms can be explained in ways which patients find helpful and lead to self-management. We aimed to test the effectiveness of an extended role GP "Symptoms Clinic" for patients with multiple persistent physical symptoms.

APPROACH Multiple Symptoms Study 3 is a large multicentre RCT conducted in 4 regions of the UK. Participants were individually randomised to either an extended-role GP "Symptoms Clinic" or usual care. The Symptoms Clinic intervention comprised 4 consultations, one of 50 minutes and three of 20 minutes at approximately 2-week intervals.

The intervention drew on expert generalist skills and was delivered by 6 extended-role GPs who had received 10 sessions of additional training. The treatment model was manualised but designed to be delivered flexibly. It had four core components: Recognition, Explanation, Action, and Learning. Participants had multiple symptoms and ongoing healthcare use with eligibility based on electronic record search and PHQ-15 symptoms score between 10 and 20.The primary outcome is the PHQ-15 at 12 months after randomisation. Additional outcomes include PHQ-15 at 3 and 6 months and healthcare use in both primary and secondary care.

FINDINGS Enrolment was between November 2018 and December 2021 with follow-up completed in January 2023. The trial was paused for 6 months in 2020 then switched to online delivery due to Covid-19. Participants were recruited from 108 GP practices in Yorkshire, Gateshead, Greater Manchester and North West London: 37% of practices were in the highest quintile of socioeconomic deprivation. 354 patients were randomised and data for the primary outcome was available from 276 (78%). Process evaluation indicated that the intervention was delivered as intended and qualitative analysis of a sample of consultations and patient interviews shortly after the intervention indicated generally high satisfaction with the intervention and meaningful changes for some individuals.Statistical analysis is now underway. We expect to present data relating to the primary outcome results at the conference.

CONSEQUENCES If MSS3 is shown to be safe and effective, either in improving symptoms or reducing subsequent healthcare use without worsening symptoms, then it provides a model for enhanced generalist care of an important group of patients who currently use substantial healthcare resources with little benefit.

Funding acknowledgement: The trial is funded by NIHR (HS&DR 1513607)

2C.3

Navigating the interface between 'normal' and 'medical' in adolescent dysmenorrhoea in general practice: why research and terminology discrepancies matter.

Presenter: Sharon Dixon

Co-Authors: Claire Duddy, Neda Taghinejadi, Katy Vincent, Sue Ziebland

Author Institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford (SD, CD, NT, SZ), Nuffield Department of Women's and Reproductive Health, University of Oxford (KV)

Abstract

PROBLEM Dysmenorrhoea affects up to 94% of adolescents who menstruate, with a third reporting severe pain, and has adverse impacts on education, social, and work activities. Treatments are available, but, despite the prevalence and significant impacts, no more than a third of young women access healthcare for menstrual pain. Dysmenorrhoea is typically characterised into primary (no known underlying pelvic pathology) or secondary (in association with pelvic pathology). Although previously considered rare, the commonest cause of secondary dysmenorrhoea in adolescence is endometriosis. Distinguishing between primary and secondary dysmenorrhoea in adolescence is a pivotal clinical and academic challenge, and an area of care where GPs would like better evidence and resources. Delays in diagnosis of the most common cause of secondary dysmenorrhoea (endometriosis) highlight the complexity of this task.

APPROACH We undertook a narrative mixed-methods synthesis exploring what is known about adolescent dysmenorrhoea in community health settings (PROSPERO

CRD42021256458), including 323 full text papers. One review aim was to develop guidance to help clinicians navigate between symptoms and possible diagnoses in adolescents presenting to general practice with menstrual pain. Towards this aim, we have identified and collated how primary and secondary dysmenorrhoea are characterised in studies reporting evidence about primary dysmenorrhoea and present this using the lens of the sociology of diagnosis.

FINDINGS There are marked inconsistencies in how primary dysmenorrhoea is operationalised within inclusion criteria for research, ranging from (singly or in combination); self-report, exclusion of 'known' conditions, examination, exclusion of those on hormonal contraception, or having an ultrasound scan. None of these will reliably exclude all cases of adolescent endometriosis. We identify discrepancies of language including whether primary dysmenorrhoea is positioned as medical/organic or functional. We also identify discrepancies in the relationships between onset of pain after menarche and the proposed likelihood of pathology (secondary dysmenorrhoea), discrepancies in the relationship between regular/ovulatory cycles and pain, and inconsistencies in both descriptions of causality for primary dysmenorrhoea, and response to treatment.

CONSEQUENCES The inconsistencies in defining primary dysmenorrhoea suggest that most studies are reporting undifferentiated dysmenorrhoea, as a symptom, rather than primary dysmenorrhoea, which is arguably a 'diagnosis' with an understood etiology (no underlying structural cause). We argue that conflating symptoms with diagnosis risks constraining clinical reasoning and may contribute to delays in diagnosis. Delays in diagnosis of endometriosis are testament to the complexity of differentiating primary from secondary dysmenorrhoea: it might be better to call dysmenorrhoea just that, treating and validating all dysmenorrhoea, while keeping our doors and minds open.

Funding acknowledgement: This study was funded as part of Sharon Dixon's NIHR Doctoral research fellowship NIHR301787. There is no other relevant funding to declare. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

2C.4

How do patients and their relatives experience the ReSPECT process? A qualitative study in primary care contexts

Presenter: Jenny Harlock

Co-Authors: Caroline Huxley, Anne-Marie Slowther, Karin Eli

Author Institutions: University of Warwick

Abstract

PROBLEM The Recommended Summary Plan for Emergency Care and Treatment (ReSPECT) was developed in the UK in 2016. ReSPECT is designed to support conversations between healthcare professionals (HCPs), patients and their family about treatment preferences in situations where the patient is acutely ill and cannot make decisions for themselves. ReSPECT has been adopted across NHS Trusts and primary care practices in many areas of the UK. However, little is known about how patients and their relatives experience the ResPECT process, and no study has examined patients' and relatives' experiences of ReSPECT in primary care.

APPROACH Conducted as part of a larger study exploring the use of ReSPECT in primary care, this interview-based study explores patients' and relatives' experiences of ReSPECT. General practice surgeries in three areas in England identified patients who had a ReSPECT form. Either the patients or their

relatives (if patients lacked capacity) were recruited. Semi-structured interviews were conducted in-person or over the telephone, depending on participant preference. The interviews focused on how participants experienced and understood the ReSPECT process and form. Data were analysed using inductive thematic analysis, taking both semantic and latent approaches. Three researchers analysed the data, with one analysing the complete dataset and two analysing a subset for intercoder reliability.

FINDINGS Thirteen interviews took place (six with patients, four with relatives, and three with patient and relative pairs). Nine participants or participant pairs had a ReSPECT conversation with an HCP, while four did not recall having a ReSPECT conversation; however, all had a ReSPECT form in place. Four themes were developed: (1) ReSPECT records a patient's wishes, but is entangled in wider familial and HCP-patient relationships; (2) HCP framings of ReSPECT influence patients' and relatives' understandings and experiences, both positively and negatively; (3) patients and relatives describe ReSPECT as a do-not-resuscitate or end-of-life form; (4) patients' and relatives' engagements with the ReSPECT form vary considerably, reflecting HCP explanations of how the form might be used.

CONSEQUENCES Co-developing a ReSPECT record of treatment preferences and recommendations with an HCP can be a reassuring experience for patients and their relatives. This is achieved when HCPs take time to explain the ReSPECT process and form, allow an open discussion of patients' preferences, and provide clear and empathetic explanations of treatment recommendations. However, when this does not occur, patients and families can be left confused about the form or frustrated about how the ReSPECT process had been conducted. Research should explore how to overcome constraints which may lead to the uneven implementation of ReSPECT in primary care settings.

Funding acknowledgement: The study is funded by the National Institute for Health Research - Health Services and Delivery Research Programme (NIHR HS&DR) (registration number: NIHR131316).

2C.5

Learning from co-production methods to improve participation of people with learning disability from ethnic minority populations in healthcare research

Presenter: Nicola Cooper-Moss

Co-Authors: Katie Umpleby, Christina Roberts, Umesh Chauhan

Author Institutions: University of Manchester and University of Central Lancashire

Abstract

PROBLEM People with a learning disability experience significant inequalities in terms of access to healthcare, experiences of care, and health outcomes. The authors share their reflections on co-production methods, as part of a wider mixed-methods project commissioned by the Race Equality Foundation, aimed at understanding barriers to healthcare for people with a learning disability from an ethnic minority background. Given the underrepresentation of this population in previous research, co-production methods were fundamental for enabling participation and building collaboration with a diverse range of stakeholders.

APPROACH A Working Group (WG) was formed during project development, consisting of 10 people with lived experience, either as a self-advocate, family member or supporter. The meetings were co-chaired by a member of the WG. Members for this group were identified through their connections

with the Race Equality Foundation (REF) and/or Learning Disability England (LDE). Both REF and LDE provided the support necessary for the WG meetings (e.g., provision of training and information in an accessible format). The WG met monthly over a 9-month period, shaping the design and implementation of different aspects of the project. This informed the focus and methods of a systematic review, policy review, and the delivery of a series of experience-based co-design (EBCD) workshops.

FINDINGS The co-production methods adopted throughout this project ensured that our methods and FINDINGS were centred around people with a learning disability from an ethnic minority background. The WG highlighted several gaps in the existing literature from our systematic review, which were explored further as themes in the EBCD workshops (e.g., digital access, impact of COVID-19). Comprehensive consideration was given to ensure that the workshop sessions were inclusive and welcoming for a wide range of people. The WG also discussed the challenges raised by the ethics committee, giving the research team feedback from their lived experience on recruitment approaches, workshop organisation, methods for consent and the way this project described the inequalities and early deaths of people with a learning disability from ethnic minority populations. Practical tips on navigating ethics committees will be provided.

CONSEQUENCES The authors share five main learning points from the co-production elements of the project, which are widely applicable to research projects involving underserved groups. 1) the value of establishing and involving a WG of people with lived experience throughout all stages (including the early stages) of the project; 2) partnership with third sector/charity organisations to support participation of people with special communication needs and addressing potential barriers for involvement; 3) embracing flexibility in research methods (e.g., options for consent; different workshop formats); 4) clearly recording and addressing WG contributions during each stage of the project; 5) importance of building on shared learning to shape continuing project development, such as the refinement of workshop materials.

Funding acknowledgement: This project was commissioned by the Race Equality Foundation

2C.6

Can treatment burden be assessed in routine General Practice using a brief measure which is valid and reliable?

Presenter: Anastasiia Kovalenko

Co-Authors: Polly Duncan, Simon Fraser, Thomas Blakeman, Michael Lawton, Maria Panagioti, Shoba Dawson, Chris Salisbury, Jose Valderas, Rachel Johnson

Author Institutions: University of Bristol, University of Manchester, University of Southampton, National University of Singapore

Abstract

PROBLEM Re-designing the delivery of care to improve outcomes for people living with multiple long-term conditions (MLTC) is a global priority. One major but overlooked issue is understanding and addressing the treatment burden that people with MLTC experience. Treatment burden represents the effort that patients put into looking after their MLTC, and the impact of that workload on them. The existing measures to identify those at high risk of being overburdened are too time consuming to easily incorporate into routine clinical practice. Single-question screening measures for treatment burden have been previously explored and have had limited sensitivity and positive predictive value. This study seeks to assess the face validity of a novel short treatment burden

screening questionnaire for routine clinical practice use.

APPROACH Up to 15 think-aloud interviews will be conducted in March-May 2023. People with MLTC aged 18-65 years, registered in 6-8 primary care practices in/around Bristol and Greater Manchester area, will be invited. We seek to engage people from minority ethnic groups and in areas of socio-economic deprivation. Interviews will be either in-person or by telephone / video-call. Topic guide has been developed with input from the PPI group and is informed by existing literature. Participants will be asked to think aloud as they complete a short treatment burden screening questionnaire (STBQ). STBQ was developed building on previous work and patient and public involvement. The measure includes a single question to screen for high treatment burden, and an additional question allowing people to select what they find difficult from a range of options. Interview participants will be asked to comment on the layout, introduction of the question and general wording, to answer the questionnaire and discuss the reasoning behind their answers.Audio-recorded interview data will be anonymised and transcribed verbatim. Framework analysis will be conducted. Two members of the PPI group will be invited to contribute to the analysis, to ground the analysis in the lived experience of people with MLTC.

FINDINGS The results of the framework analysis will inform further modification of the STBQ, and will help to understand its potential usefulness in clinical practice.

CONSEQUENCES The validity of the STBQ will be explored further in an ongoing cross-sectional survey study exploring primary care factors associated with treatment burden. A short screening questionnaire for treatment burden, suitable for use in clinical practice, has the potential to enable targeted support to people identified as at risk of high treatment burden.

Funding acknowledgement: This research is funded by the NIHR School for Primary Care Research.

2C.7

Does a practice-level educational intervention improve the timely assessment of adults with shingles? Cluster randomised trial with nested qualitative study.

Presenter: Elizabeth Lovegrove

Co-Authors: Dr Stephanie MacNeill, Ms Yumeng Liu, Dr Sophie Rees, Dr Jonathan Banks, Mr Seamus Gate, Dr Robert Johnson, Professor Matthew Ridd, on behalf of the ATHENA trial team

Author Institutions: Primary Care Research Centre, University of Southampton, Centre for Academic Primary Care University of Bristol, Bristol Population Health Science Institute University of Bristol

Abstract

PROBLEM Herpes zoster (shingles) is normally diagnosed in primary care on the basis of symptoms and it's characteristic rash. Antiviral treatment is recommended if the patient is diagnosed within 3-7 days of rash onset. The majority of appointments with primary care clinicians are made via receptionists, who commonly ask about the reason for the appointment. Due to the unique nature of shingles presentation and the time-sensitive nature of treatment, we sought to explore whether the timeliness of shingles diagnosis can be improved by a practice wide educational intervention.

APPROACH Aim: To assess whether a practice level educational intervention, aimed at non-clinical patient-facing staff, improves the timely assessment of patients with shingles. Methods: A cluster (GP surgery level) randomised study within a trial (SWAT), with nested qualitative study was undertaken, hosted by the AmiTriptyline for the prevention

of post-Herpetic NeuralgiA (ATHENA) trial (NIHR HTA reference 129720). Participating SWAT surgeries were randomised (1:1), stratified by centre and minimised by practice list size and index of multiple deprivation score. Intervention surgeries were sent an educational poster, desktop background and one-minute animation video highlighting the common symptoms and signs of shingles, the importance of early recognition and action to take. The primary and secondary outcomes were the mean proportion of patients seen within 72 hours and 144 of rash onset, respectively. Comparison between groups was conducted using linear regression, adjusting for randomisation variables. This SWAT was registered with the Northern Ireland Hub for Trials Methodology Research SWAT repository, reference 173.

FINDINGS The mean difference in proportion of patients seen within 72 and 144 hours was -0.132 (95% CI -0.308, 0.043) and -0.039 (95% CI -0.158, 0.080) respectively. 12 participants were interviewed, and the poster component of the intervention was reported to be easiest to implement. There were some difficulties reported in employing the desktop background and this was less frequently used. 76.5% of intervention practices viewed the educational video.

CONSEQUENCES Our educational intervention did not improve the timely assessment of patients with shingles. Further analyses regarding the implementation of the intervention are underway and will be presented. In particular, the challenges of running this SWAT within the host ATHENA trial will be highlighted. Furthermore, learning for future interventions designed to improve timely diagnosis of acute conditions, and or also improve recruitment into clinical trials of treatments for these conditions, will be presented.

Funding acknowledgement: The ATHENA clinical trial is being funded by the “research arm” of the NHS, the National Institute for Health Research Health Technology Assessment programme (NIHR HTA reference 129720).

2C.8

Tackling ‘inverse representation’ through trial, error and triumph across ten research case studies: reflective research practice and autoethnography in the Deep End

Presenter: Caroline Mitchell

Co-Authors: Kate Fryer, Habiba Aminu, Ben Jackson, Rebecca Mawson, Qizhi Huang, Josie Reynolds, Emma Linton, Anna Gordon

Author Institutions: Universty of Sheffield

Abstract

PROBLEM Underserved groups, including those living in poverty and those from ethnic minorities, spend more years with chronic conditions and have worse health outcomes. Socio-cultural characteristics of participants in recent clinical trials demonstrate under-representation of underserved populations. So how did ‘inverse representation’ in research become the norm? A metrices-driven recruitment agenda has dominated research delivery. Funders and research-active organisations may have prioritised efficiency (easier recruitment, low dropout), over rigor (generalisable, representative sampling). Inclusive research, at scale was an emergent field in 2016. A collaboration of patients, community groups, general practices and academics formed a Deep End (DE) Research Collaborative comprising a (DE) Cluster Research network (DECRN) and a DE PPI group (DEPPI)and situated in deprived localities (IMD => 40) serving a 68,000+ ethnically diverse patient population and homeless persons. We hoped to bring inclusive research to the DE, however the external studies offered were culturally incompetent in their approach, ignored health literacy and PPI was tokenistic at best. We therefore started a programme of

inclusive research to change the prevailing nihilistic narrative about research with and by underserved communities.

APPROACH Reflective research practice was embedded in DERA research, with respectful, facilitated conversations during integrated practitioner-researcher-patient/ public meetings, and supportive near peer co-supervision to support individual and group reflexivity. Our 5-year inclusive research journey allowed iterative adaptations to research approaches to embed power redistribution, participation and tailoring of standard methods to reach patient groups easily ignored. Applying an autoethnographic approach and documentary analysis (research protocols, policy papers) we elicited experiential evidence through collective sense making of what did and didn't work.

FINDINGS A DE 'roadmap' of methodological approaches to inclusion across ten case studies (qualitative, quantitative, a clinical trial) illustrate the evolution of our practitioner-patient-researcher partnership through attention to positionality, resources, co-design and power imbalance within research teams and the research cycle. Adapting Arnstein's 'Ladder of participation' we reframed public participation and supported researchers to shift all parts of the research cycle towards greater citizen control. We worked with community groups to build trust with racialised minorities and, with humility, learned how to challenge racism and exclusion in research. By ceding power and reallocating research resources we have empowered and trained a socio-culturally diverse cohort of researchers, public contributors, community and early career researchers, to co-create inclusive, accessible research in the Deep End.

CONSEQUENCES Using a theory-driven, empowering participatory approach can widen representation of underserved populations. Reflective research practice can shift positionality and create an inclusive methodological paradigm in primary care. Our research group's mission is to co-create high quality, rigorous research that enables inclusion, diversity, is accessible and relevant to people with lived experience and their practitioners.

Funding acknowledgement: NIHR Strategic Business Case funding to the Deep End Research Alliance

2C.9

The Hard Evidence Play: A Process Evaluation of the Use of Creative Methods as a Tool for Research Dissemination

Presenter: Cat Papastavrou Brooks

Co-Authors: Noreen Hopewell- Kelly, Natalia V. Lewis

Author Institutions: University of Bristol, University of the West of England, Sussex Partnership NHS Foundation Trust

Abstract

PROBLEM Disseminating research findings is an important activity on the pathway to impact. However, traditional dissemination methods can create a barrier towards the public being informed about and engaging with new research. The coMforT feasibility study developed and trialled a community-based trauma-informed mindfulness intervention for women who had experienced domestic abuse. Following completion, two members of the coMforT public advisory group, with a history of domestic abuse, worked with a community theatre to create and perform a play 'Hard Evidence'. The purpose was to develop an innovative way of disseminating messages around domestic abuse and the effect of public involvement in research. This study aimed to explore if a play co-created with study public contributors is an acceptable method for involving members of the public in research and disseminating research findings.

APPROACH We conducted a mixed methods study comprising of play observations (n=2), questionnaire survey (n=20) and qualitative feedback forms (n=56) from play audiences, and semi-structured qualitative interviews with the project team and audiences (n=15). Quantitative data were analysed descriptively. We utilised the framework method to analyse qualitative data, basing on deductive coding on the theoretical framework of acceptability of healthcare interventions (TFA). We carried out quantitative and qualitative analyses in parallel and integrated findings using the 'follow the thread' method, mapping integrated 'threads' onto TFA constructs.

FINDINGS We developed twelve themes categorised by the TFA constructs: 1) Affective Attitude: both the audience and the project team experienced a range of strong emotions whilst engaging with the play (including anxiety, pride, hope and enjoyment). 2) Burden: practical burdens to the project team were minimized with adequate resources. Care was needed to prevent people from being re-traumatized by the play. 3) Ethicality: all interviewees felt the values expressed by Hard Evidence aligned with their own ethical views, which motivated involvement. 4) Intervention Coherence: a play was felt to be an accessible and engaging way of disseminating research, the community theatre aspect was particularly powerful for domestic abuse survivors. 5) Opportunity Costs: public contributors had to give up other activities to engage with the play, but audiences did not. 6) Perceived Effectiveness: the quality and depth of engagement were valued over breadth. The play was felt to be effective both at raising awareness of domestic abuse and public involvement in research. 7) Self-efficacy: trusting relationships were reported to be key to how confident people felt in their roles.

CONSEQUENCES FINDINGS indicate that co-creating a play with study public contributors is an acceptable tool for research dissemination and involving members of the public in research. Results of this study will be used to inform a 'how-to-guide' for researchers thinking about using creative methods for disseminating FINDINGS and promoting public involvement in research.

Funding acknowledgement: This study was funded by the National Institute for Health and Care Research Bristol Biomedical Research Centre (NIHR Bristol BRC) Director's Fund.

2D.1

How do older people with Multiple Long-Term Conditions engage with behaviour change interventions? A qualitative study

Presenter: Jessica Catchpole

Co-Authors: Jessica Catchpole1, Rachael Frost1, Yolanda Barrado-Martin1, Tasmin Rookes1, Sarah Gibson2, Jane Hopkins3, Rashmi Kumar3; Claire Jowett3, Christina Avgerinou1, Benjamin Gardner4, Paul Chadwick1, Rebecca Gould1, Louise Marston1, Kalpa Kharicha5, Rekha Elas

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Abstract

PROBLEM In England, the proportion of people living with multiple long-term health conditions (MLTCs) and frailty is increasing as its population ages. Both lead to higher costs for the health service and reduce quality of life for those affected. Often health services focus on individual LTCs, however approaches focussed on tailored goal setting across health and social domains to enable independence and better functioning may be a way of providing more holistic support. Conversely

living with MLTCs could also lead to greater barriers to setting and achieving goals.

APPROACH The aim of this study is to understand how living with MLTCs impacts engagement with and benefiting from a holistic behaviour change intervention targeted at older people, to inform future similar interventions. We carried out this study in the context of the process evaluation of the HomeHealth randomised controlled trial (n=388) evaluating a 6-month, person-centred intervention that seeks to empower people aged over 65 with mild frailty to make positive changes in their lives to maintain their independence. Participants are assisted by HomeHealth voluntary sector workers to choose goals and find ways to achieve and maintain these, using behaviour change techniques tailored to their circumstances. Using purposive sampling to maximise diversity in socioeconomic status, number and type of long-term health conditions (LTCs), demographics and intervention engagement, we are interviewing 35-45 participants and 7 HomeHealth workers in their home, over telephone, or virtually, depending upon their preference. Semi-structured interviews explore participants' experiences of living with MLTCs or working with people with MLTCs and how these affect their motivation, goal choices, progress, maintenance, habit formation, and overall benefits. To date, 30 interviews have been conducted. Transcripts are being analysed using reflexive thematic analysis.

FINDINGS Preliminary findings suggest that while some older people view the health-related difficulties of older age fatalistically, symptoms associated with MLTCs such as physical pain, hearing loss, anxiety, and breathlessness, hinder goal progress and affect maintenance of positive behaviour changes. Bladder problems, gastrointestinal problems, mobility issues due to arthritis or neurological conditions, and breathing PROBLEM s e.g. due to heart disease or emphysema limit access to public spaces, and consequently social interactions. Most participants interviewed viewed the intervention positively, and where failure to reach or maintain goals was mentioned, some blamed themselves for "not doing better" because of the limitations of their health.

CONSEQUENCES Understanding what changes and approaches are required to adapt behaviour change interventions such as HomeHealth to people living with MLTCs could improve how the services are delivered, maximise benefits to the individuals involved, and provide a helpful way to support people with MLTCs live life with dignity.

Funding acknowledgement: This study is funded by the National Institute for Health Research (NIHR) Health Technology Assessment (NIHR128334). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

2D.2

Visualising and understanding post discharge management of older people in general practice

Presenter: Rachel Spencer

Co-Authors: Zakia Shariff

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

Abstract

PROBLEM Discharge from hospital is a critical part of the patient journey, particularly for older patients with multi-morbidity and polypharmacy. Clear communication via discharge summaries is essential to a safer discharge experience. While national standards for discharge summary creation in secondary care exist, there are no agreed standards or interventions for primary care management after discharge. Furthermore, despite the speed of discharge summary

processing in primary care, omissions and errors are occurring. To address this issue, there is a need to first understand and visualise the current processes in place for the post discharge management of older people in general practice. The present study aims to understand and visualise practices' systems for post-discharge management of older patients and therefore what types of intervention will work well.

APPROACH Purposeful sampling was used to select ten practices based on size, geography (rural/urban) ethnic diversity, and socioeconomic status. Systems information was gathered from fieldwork at the practices, including informal discussions with administrative and clinical staff during the initial site visit. Function Resonance Analysis Method (FRAM), a technique used successfully for complex systems in primary care, was used to illustrate practices' systems and points of variability.

FINDINGS We present novel process map summaries of our ethnography (FRAM diagrams) which allow unique insight into GP systems. We found evidence of innovative use of administrative and clinical staff in managing discharge summaries. There is a focus on the actions section of discharge letters and a strong focus on safety. A range of different staff members are involved in the post discharge care process, with new PCN roles, especially pharmacists in primary care, playing an increasingly active role. Some core functions are common across all practices but in other functions there is a high degree of variability. With the dissolution of DES funding for the post-discharge space, there is currently no standard (proactive) appointment offered to older patients following discharge and more reactive care is being offered..

CONSEQUENCES There is currently a large degree of variability in the general practice care offered to patients following discharge. While there is no one-size-fits-all APPROACH , it is useful to understand commonalities and variances in care because it has the potential to enhance access for patients following discharge, especially for frail and vulnerable patients.

Funding acknowledgement: This study is funded by the National Institute for Health Research Advanced Fellowship (Award number 301328).

2D.3

Community-dwelling frail older people's views of frailty and frailty services: a qualitative study

Presenter: Catherine Aicken, Una Kerin

Co-Authors: Karen Harrison Dening, Sheila Brooks, Nita Muir, Kay De Vries, Fiona Cowdell, Kathleen Galvin

Author Institutions: University of Brighton, Birmingham City University, De Montfort University, University of Chichester

Abstract

PROBLEM As the population ages, growing numbers of older people may be considered 'frail'. Many continue to live at home, and may experience significant need for health and social care. Despite the many clinical measures of frailty, there is no consensus on its clinical measurement. Furthermore, frail older people's own experiences and perspectives are seldom heard. We need to understand how frail older people view 'frailty' so that we can develop services that meet their needs.

APPROACH We conducted in-depth interviews with 14 community-dwelling older people (aged 75+) who receive frailty services and/or had been assessed as being frail. Qualitative methodology enabled a rich and detailed exploration of their views and experiences. Interviews took place at home or in community hospital, in diverse localities:

Sussex, Birmingham, Leicestershire. Thematic analysis was conducted.

FINDINGS Four themes were identified. (1) 'Living in an ageing body'. Ageing was experienced as gradual changes which were relatively easy to cope with, punctuated by falls and illnesses which posed threats to confidence, ability and independence. (2) 'Adapting to preserve what is meaningful'. Our interviewees described how they had altered their routines and environments to keep doing what they enjoyed for as long as possible, and to maintain their independence. They adopted positive and/or determined mindsets, which served them well as they aged, and seemed to help them remain resilient through severe illness, injury, or bereavement. However, frequent falls and illnesses ('one thing after another') could be overwhelming. As health- and age-related changes occurred, their social relationships also altered: some family members, friends and neighbours became carers, and social circles typically shrank. (3) 'Rejecting a frail, old identity'. To these 'frail' older people, 'frailty' conferred helplessness, (mental) weakness, and loss of dignity. Frailty was readily identified in others, but not so readily in oneself. Several interviewees described how they still felt young inside. People who we interviewed at home did not identify as frail, despite some being house- or bed-bound; whilst those interviewed in hospital sometimes reluctantly did. (4) 'The paradox of accepting care'. For these 'frail' older people, who were still living at home, formal and informal care was acknowledged as enabling them to remain at home and thus preserve some independence. However, accepting care could also signify an acceptance of a trajectory towards dependence and residential care, which they did not want.A 'frail' identity posed an existential threat to community-dwelling older people. Accepting frailty services could undermine the strong mindset and identity which had sustained older people thus far.

CONSEQUENCES Attention should be given to how 'frailty' services and interventions are presented and delivered, to ensure dignity and autonomy are protected alongside physical safety.

Funding acknowledgement: This study was funded by the Burdett Trust for Nursing

2D.4

What makes a multidisciplinary medication review and deprescribing intervention for older people work well in primary care? A realist review and synthesis

Presenter: Kinda Ibrahim

Co-Authors: Eloise Radcliffe, Alejandra Recio Saucedo, Renée Servin, Natalie Cox, Stephen Lim, Qian Yue Tan, Helen Roberts, Kinda Ibrahim

Author Institutions: University of Southampton

Abstract

PROBLEM A third of older people (aged 65 and over) take five or more regular medications (polypharmacy). This potentially increases the risk of side-effects, hospital admission and death, with higher risk among people living with frailty. Conducting regular structured medication reviews in primary care is key to identify and reduce or stop inappropriate medications (deprescribing). Recent recommendations for effective deprescribing include shared-decision making and a multidisciplinary approach for medication review. Our aims were to identify the mechanisms and context that could lead to a successful multidisciplinary medication review/deprescribing process in primary care, and to identify the role of different healthcare professionals in the process and any training needs.

APPROACH A realist review and synthesis was conducted to understand when, why, and how

interventions for medication review and deprescribing in primary care involving multidisciplinary teams (MDT) work (or do not work) for older people. The Realist review was conducted following the RAMESES (Realist And Meta-narrative Evidence Syntheses: Evolving Standards) guidelines. An initial scoping review of the literature informed the generation of initial programme theories, which were further developed in consultation with stakeholders, including 23 health care professionals working in primary care, 9 patients and 2 informal carers. Our search strategy, based on a Context, Mechanisms, Outcome (CMO) question framework was completed on Medline, EMBASE, CINAHL, Pubmed, Web of Science, PsycINFO and Cochrane Library, supplemented with citation tracking and grey literature searches (via google and google scholar). The quality of included documents was appraised based on assessments of relevance and rigour.

FINDINGS A total of 2821 abstracts and then 175 full-text articles were assessed for eligibility. A total of 26 documents were included. The analysis outlined 34 context-mechanism-outcome configurations categorised under four overarching themes: 1) healthcare professional (HCP) roles, responsibilities and relationships; 2) healthcare professional training and education; 3) the format and process of the medication review with three subthemes (efficiency of the multidisciplinary process, mode of communication and patient follow-up); 4) involvement and education of patients and informal carers. Different mechanisms have been identified that could potentially enhance implementation of MDT medication review. This includes integration of pharmacists, offering deprescribing as a trial off medication, taking into account patients' preferences and priorities, addressing patients' worries by starting with the 'quick wins', using deprescribing tools, prioritising and targeting high-risk patients, involving and using the expertise of other HCPs such as nurses and frailty practitioners.

CONSEQUENCES Our work highlights the complexity of deprescribing interventions and identified a number of mechanisms to support uptake and implementation of deprescribing recommendations. These findings could potentially support general practices to prioritise and implement deprescribing more efficiently, drawing on the expertise of the team members.

Funding acknowledgement: This study is funded by the National Institute for Health and Care Research ARC Wessex.

2D.5

A qualitative study of ambulance personnel, care staff and service users' experiences and perceptions of emergency care in care homes

Presenter: Despina Laparidou

Co-Authors: Viet-Hai Phung, Ffion Curtis, Gregory Whitley , Vanessa Botan, Joseph Akanuwe, Elise Rowan; Rachael Fothergill, Tracy McCranor, Susan Bowler, Maria Kordowicz , Nicoya Palastanga, Lissie Wilkins, Robert Spaight, Elizabeth Miller, Adam L. Gordon, Graham Law

Author Institutions: University of Lincoln, University of Leicester, Lincolnshire Partnership NHS Foundation Trust, University of Nottingham, Patient and Public Contributors, East Midlands Ambulance Service NHS Trust

Abstract

PROBLEM Medical emergencies in care homes are common and costly, often resulting in calls to emergency services, ambulance attendance, conveyance, and hospital admission. Studies suggest that over half the emergency transfers to hospital from care homes could be prevented with better ongoing care, staff training and access to

primary care. Our aim was to explore care home and ambulance staff, resident, and their relatives' experiences and perceptions of emergencies in care homes.

APPROACH We employed a qualitative design. The study involved semi-structured interviews with ambulance staff, care home staff, and family members of care home residents in the East Midlands, UK. Data were analysed thematically using a framework approach.

FINDINGS We interviewed 15 ambulance staff (including paramedics, technicians, urgent care assistants), four relatives of care home residents and one care home staff member with further interviews currently ongoing. Preliminary analysis showed that although good communication between ambulance, care home and hospital staff was considered vital, experiences were varied. Relatives felt that effective and respectful communication with ambulance and care home staff was also important but sometimes was lacking. The importance of crucial information about residents, ready for ambulance staff upon arrival, was highlighted. Participants emphasised the value of consulting with everyone involved (care home staff, residents, relatives) during the decision-making process, but some relatives felt that they weren't as involved as they would have liked. Final care decisions were based on the resident and their family's wishes, medical history, ReSPECT forms, alternative pathways to the Emergency Department, and what participants considered the most appropriate course of action for the resident. Participants also discussed care-home related issues that facilitated or impeded good quality emergency care, such as ease of access/egress, staff numbers and training, policies and procedures, and overall quality of care. Finally, Emergency Medical Services-related factors (e.g., current pressures on the service, better training needed caring for people with dementia, end-of-life care, and having access to an on-call geriatrician), which impacted those who experienced emergencies in care homes, were also considered important.

CONSEQUENCES This study highlighted the main structures and processes that facilitated or impeded emergency care in care homes. The findings will inform the development of interventions to improve outcomes and experiences of emergencies in care homes for everyone involved, including care home and ambulance staff, residents, and their relatives.

Funding acknowledgement: This project has been funded by NIHR Applied Research Collaboration East Midlands.

2D.6

What are the challenges of delivering tailored care for sleep disturbance among community-dwelling people living with dementia or mild cognitive impairment?

Presenter: Aidin Aryankhesal

Co-Authors: Aidin Aryankhesal, Jessica Blake, Molly Megson, Simon Briscoe, Geoff Wong, on be half of TIMES Programme Team

Author Institutions: University of East Anglia, University of Hall, University of Exeter Medical School, Oxford University

Abstract

PROBLEM Sleep disturbance (SD) is prevalent among people living with dementia (PLwD) or mild cognitive impairment (MCI) and is especially difficult to address in primary care, due to the challenges of diagnosis and management of SD within this population.

APPROACH A realist review of the literature was conducted to identify the causes behind the challenges and barriers to the diagnosis and management of SD among PLwD or MCI. We systematically searched MEDLINE, PsycINFO, CINAHL, ASSIA, and Health Management Information Consortium (HMIC) to identify challenges and barriers to the diagnosis and management of SD among

PLwD or MCI in primary care across the Organisation for Economic Co-operation and Development (OECD) member nations. A total of 60 documents were selected from 1869 hits, based on our eligibility criteria and citation tracking. The selected documents were analysed and challenges coded and iteratively refined into realist causal explanations (i.e. into context-mechanism-outcome-configurations) using data from included documents. A programme theory was developed to summarise causal relationships.

FINDINGS The findings highlight concerns about the use of long-term or inappropriate medication. Chronic use of medication often resulted from health care professionals' (HCP) time and resource constraints, limited awareness of other SD management options, the need for immediate results, and the absence of appropriate assessment tools. This resulted in late, inaccurate or no diagnosis of SD. When SD was diagnosed, medication was often inappropriately prescribed long-term. Further challenges to an accurate diagnosis and management of SD occurred when PLwD or MCI were unable to recognise SD or they lived alone. Primary care doctors regarded pharmaceutical interventions as the primary intervention for SD and usually did not re-assess their patients for de-prescribing. Comorbidities, which are prevalent among most PLwD or MCI, also hindered de-prescribing. Informal and paid carers were also reported to expect an ongoing prescription of sleep medication due to a fear of relapse or deterioration of the PLwD or MCI's sleep quality. Understaffed care homes, especially during night shifts, and rigid care routines also reinforced the use of chronic medication, which was often used to reduce the burden on staff workload. Where relevant, lack of insurance coverage for some non-pharmaceutical interventions was also reported to drive pharmacological interventions.

CONSEQUENCES Medicines are primarily, and often inappropriately, relied on to manage SD in PLwD or MCI. Improvements that aid the early diagnosis and subsequent management of SD, especially through non-pharmacological alternatives, are needed. This could be done by upskilling clinicians and HCP, improving assessment tools, and providing more support for informal and formal carers.

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2D.7

Supporting the management of mental health PROBLEMs among older adults: Where does the Fire and Rescue Service fit in an integrated world?

Presenter: Tamsin Fisher

Co-Authors: Carolyn A. Chew-Graham, Nadia Corp, Saeed Farooq, Paul Kingston, Ian Read, Jane Southam, Gary Spolander, Dean Stevens, Carmel Warren, Tom Kingstone

Author Institutions: Keele University, University of Chester, Robert Gordon University, Staffordshire Fire and Rescue Service, Midlands Partnership NHS Foundation Trust

Abstract

PROBLEM Depression and anxiety in older adults (aged 60 years and over) are often under-diagnosed and under-treated. Older adults may be excluded from mental health services due to perceived stigma, lack of awareness, fear of being a burden and lack of access to services. Non-traditional providers of healthcare, such as the Fire and Rescue Service (FRS), may provide one solution through existing outreach roles to support

early detection of mental health problems and facilitate help-seeking among older adults. The FRS has been utilised by primary and social care to support members of the public in times of emergency and/or crisis (e.g. Covid-19 vaccination programmes). We aimed to examine whether and how FRS 'Safe & Well' visits can be optimized to include detection of, and sign-posting for, anxiety and depression in older people.

APPROACH Multi-method qualitative study to establish an in-depth, contextual understanding of the role of the FRS in the integrated healthcare of older adults with anxiety and/or depression. 17 interviews were conducted with health and social care stakeholders (GPs, social workers and community matrons) across one UK region to understand perceptions about the potential role of the FRS in mental health care (specifically anxiety and depression), expanding current outreach activities to include identification of possible mental health problems and signposting or referring older adults who might be experiencing anxiety and/or depression. Data analysed using Braun and Clarke's thematic approach. The research has been informed by patient and public involvement contributors throughout. Ethical approval sought from Keele University.

FINDINGS Health and Social Care (HSC) stakeholders agreed that, whilst not traditionally associated with mental health care, the FRS could and should detect anxiety and depression in older adults and signpost as necessary. Analysis identified two overarching themes: Acceptability and Capacity. All HSC stakeholders felt it was acceptable, even expected, for the FRS to detect and signpost people who might have anxiety and depression; however, some emphasized the need for sufficient training. Through their existing roles, the FRS have the opportunity to access properties and work with members of the public that other services do not; they can provide an 'extra pair of eyes' on a potentially at risk population. Some HSC stakeholders raised concerns for a potential increase in FRS referrals into an already overwhelmed care system.

CONSEQUENCES It is acceptable for HSC stakeholders that FRS staff should identify and signpost vulnerable older adults living with anxiety and depression to support their access to other services. Stakeholders recognised that FRS need training for this role. The views of FRS and older adults have been sought in other data collection activities. Multi-stakeholder workshops are planned to support design and development of a new training intervention for FRS staff.

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2D.8

Predictors of conveyance of care home residents to hospital by ambulance services for medical emergencies

Presenter: Aloysius Siriwardena

Co-Authors: Aloysius Niroshan Siriwardena, Vanessa Botan, Graham Law, Despina Laparidou, Viet-Hai Phung, Ffion Curtis, Gregory Whitley, Joseph Akanuwe, Elise Rowan; Rachael Fothergill, Tracy McCranor, Susan Bowler, Maria Kordowicz, Nicoya Palastanga, Lissie Wilkins,

Author Institutions: University of Lincoln, East Midlands Ambulance Service NHS Trust, Lincolnshire Partnership NHS Foundation Trust, University of Leicester, University of Nottingham

Abstract

PROBLEM Residents of care homes may be affected by medical emergencies, resulting in

ambulance attendance and conveyance to hospital which add extra pressure and costs to an already strained emergency and healthcare system. The aim of this study was to determine the factors predicting care home resident conveyance to hospital by ambulance services.

APPROACH We used a cross-sectional study design analysing routine data from electronic clinical records from East Midlands Ambulance Service NHS Trust (EMAS) from 2018 to 2021. A multivariable multinominal regression model was used to identify the main predictors of conveyance to hospital or referral to community services.

FINDINGS The data included 170,612 attendances to care homes representing 7.5% of the total number of EMAS attendances between 2018-2021. The main predictors of conveyance to hospital were being male (Relative Risk Ratio [RRR] 1.07, 95% Confidence Interval [CI] 1.03-1.10, p<0.001), aged 70-79 years (RRR 1.09, 95%CI 1.03-1.17, p<0.001) or 80-89 years (RRR 1.10, 95%CI 1.03-1.17, p<0.001), situated in an area of higher deprivation (RRR 1.06, 95%CI 1.03-1.09, p<0.001), or having dispatch categories which included cardiovascular (RRR 11.29, 95%CI 10.43-12.22, p<0,001), trauma such as falls (RRR 9.50, 95%CI 8.97-10.05, p<0,001) or neurological conditions (RRR 9.06, 95%CI 8.42-9.75, p<0,001). Calls made to ambulance services on behalf of care home residents by health care professionals (HCPs) (RRR 15.37, 95%CI 13.41-17.62, p<0,001) or where they had a higher National Early Warning Score (NEWS2) (RRR 1.23, 95%CI 1.22-1.24, p<0,001) resulted in significantly higher rates of conveyance.

CONSEQUENCES A series of factors significantly predict conveyance of care home residents to hospital by ambulance. These include HCP referral and a higher NEWS2 score confirming that the severity of the clinical condition of the patient significantly increased conveyance. Future interventions to prevent or address certain acute conditions such as falls or provide enhanced care for long term conditions in care homes may prevent some emergencies or reduce the risk of conveyance to hospital.

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2D.9

Improving access to personalised care planning for people living with dementia: FINDINGS from the PriDem feasibility and implementation study

Presenter: Emily Spencer & Sarah Griffiths

Co-Authors: Sarah Griffiths, Jane Wilcock, Marie Poole, Aidan O'Keeffe, Katie Flanagan, Kate Walters, Louise Robinson, Greta Rait on behalf of the PriDem Study project team

Author Institutions: University College London, Newcastle University, University of Nottingham

Abstract

PROBLEM There are over 900,000 people living with dementia in the UK. Post-diagnosis, care is often inadequate and poorly integrated, despite NHS England's commitment to provision of personalised care planning that focusses on what matters to people living with dementia. Research and policy highlight the unaffordability and unsustainability of specialist-led post-diagnostic support, instead advocating a task-shared approach led by primary care. The PriDem research programme has evaluated an evidence-based intervention which aims to improve post-diagnostic care across four primary care networks (PCNs) in the northeast and southeast of England. Clinical Dementia Leads worked alongside general practice staff

to upskill the workforce and develop care systems, enabling them to provide tailored care and support to people living with dementia and their carers. A key focus of this intervention was delivery of holistic dementia annual reviews and care planning, with the aim of increasing adoption of personalised care planning by participating general practices.

APPROACH Seven general practices participated across four PCNs. Adoption of personalised care planning was assessed through a pre- and post-intervention audit of electronic care records. Based on a pilot audit, it was anticipated that a maximum of 40% of people living with dementia would be in receipt of a personalised care plan. Through the intervention, we aimed to increase the proportion of care plans to 50%. A sample of 215 would be sufficient to detect this change. To avoid disruptions to care related to the coronavirus pandemic, baseline audit year April 2018-March 2019 was compared with follow-up intervention year April 2022-March 2023. A stratified sampling strategy was used, based on numbers of patients registered with a dementia diagnosis at participating practices. Registered patients with a dementia diagnosis living at home at the beginning of the relevant audit period were eligible. A study-specific data extraction form, co-developed with key stakeholders, was used to record the presence/absence of care plans, the degree of personalisation based on NHS England criteria and patient and public involvement, and domains of care addressed.

FINDINGS Key findings will be presented, including proportions of patients with a care plan pre- and post-intervention, and the proportion of care plans judged to be personalised. Further details of care planning will be explored, including care domains covered, and degree to which care plans meet NHS England's definition of personalised care and support planning.

CONSEQUENCES The intervention aims to improve the proportion, quality and consistency of annual dementia reviews and care plans, with increased personalisation. Aspects of the intervention are already being adopted beyond the original PCNs involved. This has implications for future dementia service commissioning, with people living with dementia and their carers benefiting from holistic, patient-centred care, in turn improving quality of life.

Funding acknowledgement: This work was supported by Alzheimer's Society - Grant number AS-PR2-16-005.

2E.1

"Me figuring stuff out myself" – maternal vaccination uptake in socially and ethnically diverse areas in London in the Covid-19 context: a qualitative study

Presenter: Sima Berendes

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Abstract

PROBLEM Maternal vaccinations against influenza, pertussis and Covid-19 have been recommended in the UK since 2010, 2012 and 2021 respectively, with others likely to follow. Uptake, however, has been far below national targets, especially in socially and ethnically diverse areas. Qualitative studies on the reasons and possible responses are scarce, focus mostly on behavioural factors, were conducted before Covid-19 vaccinations

became available to pregnant women and/or did not include in-depth accounts from minority ethnic groups and from both service providers and users. Our study therefore aimed to understand the complex interplay between structural and behavioural factors contributing to low maternal vaccine uptake in socially and ethnically diverse areas in England in the Covid-19 context.

APPROACH We conducted semi-structured interviews and a focus group discussion (FGD) among a purposive sample of participants recruited via clinics and from the community, with support from the NIHR Clinical Research Network. We included health service providers and pregnant/post-partum women receiving health care in socially and ethnically diverse areas in South London. The FGD with pregnant/post-pregnant women was held via video-call and interviews were conducted face-to-face or remotely. We followed a critical realist paradigm and analysed data using a thematic analysis approach.

FINDINGS Between April and September 2022, a total of 38 pregnant/postpartum women and 20 health service providers including 12 midwives participated in the study. The sample purposively included those living in more socio-economically deprived areas and those describing themselves as from black/ black British, non-British white, mixed and other ethnic groups. Pregnant/post-partum women took all, some or none of the maternal vaccines, with some participants unsure whether they had taken/been offered the vaccines. Decision-making was passive or active, with a common expectation for pregnant women to do their 'own research'. Participants described various individual and social factors that influenced their decision-making as they navigated the antenatal care system and interacted with different providers. Missing or conflicting information from providers, especially regarding Covid-19 vaccines, meant knowledge gaps were sometimes filled with (mis-) information from unreliable sources that increased (pre-existing) uncertainties and mistrust. Both pregnant women and providers described structural and organisational factors that hindered access to information and vaccinations, including lack of training, time and resources, and shortcomings of electronic healthcare record systems and apps.

CONSEQUENCES Our study showed how structural factors and informational processes can compound uncertainties around maternal vaccination among socially and ethnically diverse populations. Results highlight the need for more reliable resources, streamlined workflows, improved electronic information systems and training in their use. Roles and responsibilities should be clarified and alternative modes of education and communication provided that consider individual (language/digital) skills and needs for information and reassurance. Further research should aim to co-produce solutions with service users and providers.

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2E.2

A longitudinal perspective on living with and accessing healthcare for long-COVID in Scotland: a qualitative study

Presenter: Susan Browne

Co-Authors: Susan Browne, David Blane, Kate O'Donnell, Claire Hastie, Jill Pell and the CISS team

Author Institutions: General Practice and Primary Care, University of Glasgow, Public Health, University of Glasgow

Abstract

PROBLEM There is limited research on the nature and impact of the long-term effects of COVID-19. We aim to explore the impact that ongoing symptoms have on people with long-COVID and their experience of health care at two time points six months apart.

APPROACH This work is part of a larger study, the long-COVID in Scotland study (CISS). Scottish adults who had a positive COVID-19 test received an SMS message inviting them to answer questions about their health before and after COVID-19. A group of survey participants were recruited to this qualitative sub-study and took part in an in-depth interview exploring the impact of ongoing symptoms on daily life. Forty-five people were interviewed and eighteen of these were reinterviewed 6 months later to provide a novel longitudinal perspective. This presentation focuses on the eighteen people who were interviewed at two time points.

FINDINGS Despite living with debilitating physical and cognitive symptoms, some people had not consulted any healthcare professional perceiving that little could be done to help. Those who did attempt to access healthcare describe a fragmented response: some felt 'dismissed' by GPs; others described an arduous cycle of undergoing various investigations, receiving normal test results, organising more consultations and more tests, and so on. Definitive diagnoses or effective treatments eluded most interviewees. The impact of long-COVID on people's lives was often devastating with catastrophic effects on finances, careers, relationships and mental health. The desire to have 'their life back' was universal. Six months later a diverse picture emerges: for some symptoms have gradually improved while others experience no improvement or worsening symptoms. Fatigue, breathlessness, and brain fog are common enduring symptoms. Brain fog proves most difficult to live with and accept. Worsening symptoms are sometimes attributed to a second COVID-19 infection. Mental health issues are more of a feature now with the long-term aspect of long-COVID, and frustrations about a lack of treatment options, fueling anxiety and depression. Effective treatment remains elusive - people are even more reluctant to consult after being previously dismissed by HCPs or because previous consultations and investigations proved fruitless. An exception to this is treatment from physiotherapists, in the form of breathing exercises and advice on pacing to manage fatigue, which is well received. People feel dismissed by their personal networks (as well as by HCPS) as they recount comments such as 'we've all had COVID' and 'maybe you've decided you don't want to work'. They describe a mismatch between their experience of life changing symptoms and people's understanding of long-COVID.

CONSEQUENCES GPs are well placed to support people with long-COVID. However, both patients and GPs need support, and other services to refer on to, to deal with this new, chronic condition.

Funding acknowledgement: The COVID in Scotland Study (CISS) is undertaken in collaboration with Public Health Scotland and the NHS in Scotland, and funded by the Scottish Government Chief Scientist Office.

2E.3

Research equity in the PRINCIPLE and PANORAMIC national community COVID-19 Clinical Trials

Presenter: Mahendra G Patel

Co-Authors: Mahendra G. Patel, Micheal Mckenna, Christopher C. Butler, Jienchi Dorward, Gail Hayward, Jean Balchin, Nicholas P.B. Thomas

Author Institutions: Nuffield Department of Primary Care Health Sciences University of Oxford, Royal College of General Practitioners

Abstract

PROBLEM Background: Underserved, and Black, Asian and Minority Ethnic (BAME) communities are often underrepresented in clinical trials – the very communities whom Covid-19 disproportionately and adversely affected. Lack of participation is often due to: Culturally inappropriate and ineffective communication. Minimal co-creation of messaging and engagement strategies. Lack of awareness. Difficulty in accessing research. Mistrust, influenced by faith, belief and previous experiences.

APPROACH Aim: To ensure recruitment into two national Covid-19 treatment trials, PRINCIPLE and PANORAMIC, were representative of the wider population in terms of deprivation and ethnicity, we: Appointed a national pharmacist expert to engage BAME and communities with high social deprivation about participation. Co-created community outreach programmes with national and regional religious and community organisations. Collaborated with universities and students in areas of high deprivation and concentrated BAME populations to engage their local communities. Developed and distributed, accessible, culturally appropriate and user-friendly materials in many languages. Engaged national professional and charitable healthcare institutions and organisations. Distributed materials and raised awareness through national pharmacy organisations and all major pharmacy multiples. Appeared on local and national social and other media channels, including Asian radio and national television platforms.

FINDINGS Outputs: PRINCIPLE became visible in > 8,500 community pharmacies. Places of worship (e.g. mosques and temples) and religious leaders encouraged people to join the trials (3-fold increase in website hits after one initiative). Students from the University of Bolton learned about the trial, and wearing trial hoodies, engaged local residents in malls, places of worship, and in other community organisation in a 3-year program. The azithromycin comparison included 55 (4·0%) South Asian and seven (0·5%) Black participants (vs. 3·7% Asian ethnicity and 1·6% Black ethnicity among people aged 50 + in England and Wales). Proportions of participants in Index of Multiple Deprivation (IMD) quintiles were: 352 (26%) of 1375 in IMD1 (least deprived); 267 (19%) of 1375 in IMD2; 270 (20%) of 1375 in IMD3; 241 (18%) of 1375 in IMD4, and 245 (17%) of 1375 in IMD5.

CONSEQUENCES Building on learnings from PRINCIPLE, PANORAMIC became the fastest recruiting trial ever of an acute therapeutic agent, with 26,411 randomised within 4 months, including 1507 from ethnic minority backgrounds in the sample from England and Wales (800 Asian (3.22%), 153 Black (0.62%), 389 Mixed (1.57%), and 165 Other (0.66%), exceeding national proportions for many key indices. Conclusion: The PRINCIPLE and PANORAMIC national UK trials achieved close to representative samples in relation to BAME and deprivation. Our outreach programs highlight the importance of research equity strategies that are multifaceted, flexible, co-created, and build upon previous experience and trusting relationships. Pragmatic clinical trials should embed inclusion strategies with dedicated investment early on.

Funding acknowledgement: The two trials have been funded by: UK National Institute for Health and Care Research (NIHR) - Panoramic trial UK Research and Innovation (UKRI) and UK National Institute for Health and Care Research (NIHR) - Principle Trial

2E.4

How do participants experience the work involved in the Remote Diet Intervention to REduce long-COVID symptoms Trial (ReDIRECT)?

Presenter: Yvonne Cunningham

Co-Authors: Laura Haag, Janice Richardson, Caroline Haig,, Heather Fraser, Naomi Brosnahan, Tracy Ibbotson, Jane Ormerod, Chris White, Emma McIntosh, Catherine A. O'Donnell, Naveed Sattar, Alex McConnachie, Michael E. J. Lean, Emilie Combet, David N. Blane

Author Institutions: University of Glasgow

Abstract

PROBLEM Long COVID (LC), a new condition, is the persistence of symptoms for ≥12 weeks after a COVID-19 infection. The pathophysiology of LC is complex and symptom improvement remains a critical treatment target for individuals. Persistent inflammation is one proposed mechanism underpinning LC and excess adiposity is an established risk factor. The aim of the study is to evaluate whether the digitally delivered, evidence-based, Counterweight-Plus weight management programme improves symptoms of LC in people living with overweight/obesity. Here we present the qualitative component of the process evaluation.

APPROACH Baseline randomised, non-blinded design with 240 participants allocated in a 1:1 ratio either to continue usual care or to add the remotely delivered weight management programme (Counterweight-Plus), including a dietitian-supported delivery of 12 weeks total diet replacement, followed by food reintroduction/weight loss maintenance (months 3-12). All aspects of the study are delivered remotely. We are using an innovative approach to outcome personalisation, with each participant selecting their most dominant LC symptom as their primary outcome assessed at six months after randomisation. Participants in the control arm enter the weight management programme six months after the intervention group.Process evaluation included qualitative methods to understand how the intervention was implemented and experienced. Semi-structured interviews were conducted at baseline (n=31) and at 6 months post randomization (n=16).Interviews focused on patient expectations, motivations, experiences of the intervention, impact on LC symptoms, and contextual factors that affect (and may be affected by) implementation, intervention mechanisms and outcomes.Analysis drew on Normalisation Process Theory (NPT) and Burden of Treatment Theory (BOTT) which focuses on the balance between 'work' (e.g. tasks of self-care or tasks given to patients by health care professionals), and 'capacity' (e.g. physical, mental, financial, or social ability) to perform these tasks.

FINDINGS Participants reported that the fully remote delivery, without any in-person study visits was helpful, as was simplified meal planning and decision-making, the offer of alternative options (e.g. low-fat, or low-carb), and being able to focus on diet without a requirement for exercise, as many were living with fatigue and/or post-exertional malaise. Interviewees reported more difficulty with the work involved in participating in the intervention at the food re-introduction phase. Using the BOTT framework, symptoms such as fatigue, post-exertional malaise and brain fog created a mismatch between the 'work' required to engage with the intervention and the 'capacity' of participants to do so.

CONSEQUENCES These FINDINGS could help us to design future interventions for other long-term conditions characterised by fatigue (such as CFS/ME). We have also learned transferrable lessons related to the fully remote delivery of this weight management intervention.

Funding acknowledgement: This study (COV-LT2-0059) is funded by the NIHR in response to the COVID-19 pandemic. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care. The authors would like to thank the NHS sponsor representatives, project management unit staff, Robertson Centre for Biostatistics and members of the ReDIRECT Trial Steering Committee for their support. We are also grateful to Long COVID Scotland, and patient representatives in the PPI group for constructive discussions around the protocol.

2E.5

What is the underlying pathophysiology of Long Covid?

Presenter: Prof Brendan Delaney

Co-Authors: Nawar Bakerly, Julie Darbyshire, Emily Bullock, Joseph Kwon, Nikki Smith.

Author Institutions: Imperial College London, Salford Royal NHS Trust, University of Oxford, patient co-investigator.

Abstract

PROBLEM As the COVID pandemic hit in March 2020 it quickly became apparent that very many patients were following a prolonged and relapsing course, regardless of the initial illness severity. Long Covid is a patient-adopted term for Post-COVID Condition, defined by the WHO in 2021. Symptoms are primarily fatigue, breathlessness, chest pain, cognitive dysfunction, especially executive skills and short-term memory and post-exertional symptom exacerbation, although every organ system can be affected to some extent. To identify potential investigations and therapies, we set out to conduct a systematic review of studies linking symptoms with pathophysiology.

APPROACH Two searches were conducted; a meta-review of published systematic reviews to July 2022 and a review of original papers July 21- October 2022, to capture new studies not included in the existing reviews. Searches were conducted on: CINAHL, Embase, Medline, Medrvix, PubMed and Emcare. Results of these searches were imported onto Covidence, and then screened using the criteria: confirmed diagnosis of Covid 19, hospital and community samples, a control group, and analyses that investigated the relationship between symptoms and pathophysiology.

FINDINGS For the meta-review 70 studies were assessed for eligibility (blinded dual review) and 26 systematic reviews included. In the second search, 441 references were identified and 47 studies with a total of 10676 participants included. Findings suggest that significant numbers of people with Long Covid demonstrate identifiable causes. The large number of symptoms are because common symptoms such as fatigue, breathlessness and cognitive problems may have a variety of upstream causes. Identified potential causes include:1. Persisting inflammatory pathways with depletion of CD4 and NK cells and persisting populations of SARS-Cov-2 specific CD8, evidence of raised IL6 and TNF Alpha, potentially linked to viral persistence in the gut and monocytes.2. Evidence for clotting abnormalities including VWF/Ag ratio being raised, amyloid micro-clots, activated platelets and endothelial damage, leading to impaired oxygen uptake in tissues, including skeletal muscle and the brain.3. Evidence of CNS inflammation with CSF oligoclonal bands and damage to astrocytes.4. Direct organ damage to the lung, myocardium, pancreas, and kidney, possibly mediated via endothelial dysfunction.Some suggestion of damage to cellular junctions affecting the gut and blood-brain barrier.5. Viral reactivation, including EBV.

CONSEQUENCES In the UK surveys have estimated more than 800,000 people unwell

for more than a year and unable to work or undertake social activities. This poses considerable challenges to those affected and their families, to healthcare planning and provision, to the workforce and to the economy. Currently the NHS is not testing Long Covid patients for the pathology identified in this review and no treatments have been proposed or studied for the abnormal processes found. Translational research and changes to clinical management are urgently required.

Funding acknowledgement: This work was produced by the authors under the terms of a commissioning contract issued by the Secretary of State for Health and Social Care for the NIHR LOCOMOTION project.

2E.6

Can themes be identified in United Kingdom Health Security Agency records of general practice COVID-19 case investigations to support minimisation of SARS-CoV-2 transmission?

Presenter: Lorna Duncan

Co-Authors: Jade Meadows, Jonathan Roberts

Author Institutions: University of Bristol, NHS England, United Kingdom Health Security Agency

Abstract

PROBLEM 64 COVID-19 outbreaks/ clusters (multiple cases with/ without identified epidemiological links respectively) or single cases were reported to the UK Health Security Agency (UKHSA) from south-west England general practice (GP) settings to July 2022.Understanding how to minimise COVID-19 spread in healthcare settings serving community-dwelling populations is important both for health and wellbeing of staff and patients and for maintenance of local services.This study aimed to determine whether UKHSA records of investigations into COVID-19 cases reported by general practice could provide learning to minimise transmission of the causative virus, SARS-CoV-2.

APPROACH Investigations of COVID-19 incidents are recorded on UKHSA's in-house database. All 64 linked to GP settings in south-west England were exported securely to an Excel spreadsheet. Data was then extracted and content analysis used to report on confirmed cases, case contacts, potential routes of transmission and impacts on health/service provision.

FINDINGS Two reports without direct links to general practice were excluded from analysis. The remaining 62 records comprised 42 outbreaks (with 2-20 cases each), 10 clusters (2-5 cases) and 10 single cases.219 confirmed cases were identified in 42 outbreak records. 206 were staff cases, four their family members and nine were unidentified. Staff roles were not always provided but those most commonly indicated were administrative/reception staff (n=64), nurses (n=32) and GPs (n=29).No lapses in Infection Prevention and Control (IPC) measures were indicated in ten outbreaks and in six there was insufficient data for analysis. In 26 outbreaks however, at least one IPC weakness was identified, most commonly related to social distancing or staff movement between sites. Staff IPC compliance was higher when with patients than with colleagues. Weaknesses could involve practical issues e.g. shared room dimensions and laptop availability for home working. Sharing of staff across different sites, and reduced use of Personal Protective Equipment/social distancing during breaks were also indicated.No deaths and two hospitalisations were recorded. Site closures (≤14 days) occurred in four outbreaks, with reduced service provision at a further six sites and staffing adjustments identified at another two. This was due to case numbers and/or self-isolation requirements. One 'cluster' site was also closed due to staff self-isolations.

Patients were infrequently considered case contacts due to good IPC compliance.

CONSEQUENCES UKHSA COVID-19 records hold data enabling analysis of cases, spread and IPC considerations in GP-linked COVID-19 incidents in south-west England. While good IPC was generally evident during staff-patient contact, local examination and strengthening of measures taken between staff may help contain COVID-19 cases, with potential impacts on both health and service provision. Further studies would be required to determine whether similar themes are common in other primary care health settings/regions, but local examination of possible issues identified in this study may nevertheless be helpful elsewhere.

Funding acknowledgement: This work was supported by the Elizabeth Blackwell Institute for Health Research, University of Bristol and the Wellcome Trust Institutional Strategic Support Fund

2E.7

How do patients view access to primary care since the start of the Covid-19 pandemic? A qualitative study

Presenter: Rebecca Goulding

Co-Authors: Jonathan Hammond, Jennifer Voorhees, Jessica Drinkwater, Lindsey Kent, Simon Bailey, Kath Checkland

Author Institutions: RG JH JV JD LK KC: Centre for Primary Care and Health Services Research, School of Health Sciences, University of Manchester. SB: Centre for Health Service Studies, University of Kent.

Abstract

PROBLEM Primary care is a key gateway to healthcare and access is of vital importance. Access to primary care is also a political issue and seen as a marker of performance for the NHS. In the early days of the pandemic, general practices switched to an online / telephone first approach to primary care, and many restricted physical access to their premises. For patients, this was a rapid and significant change to their experience of accessing care. Access to general practice has continued to change, in different ways in different places. As part of a larger study, we aimed to investigate patient's experience of access, their view of this since the start of the Covid-19 pandemic and how it may impact health inequalities.

APPROACH Qualitative semi-structured interviews and focus groups were used to explore 45 patients' experience of access to primary care (December 2021 – August 2022) in one area of Greater Manchester. Participants were recruited from Patient Participation Groups (N=6) and underserved populations (N=39), including people from ethnic minority groups with Limited English Proficiency, people with mental health conditions and people with developmental / learning disabilities. Using a rapid approach to qualitative analysis, summaries of transcripts were produced and themes identified. A community-based research team (including patients and patient representatives, healthcare staff and policymakers) supported recruitment, data collection and analysis.

FINDINGS When talking about access, patients focused on the challenge of getting an appointment: the difficulty in following practice systems (phoning first thing or completing online forms) and their frustration when these attempts ended in failure (no appointments left or no response). Patients from underserved groups reported a preference for face-to-face interactions, finding it easier to communicate in-person and experiencing these interactions as more personal and caring. Not being able to get an appointment or see people face-to-face led to some losing trust in healthcare services. Older people in particular reported feeling

abandoned and de-motivated to engage with their practice. Although some patients expressed empathy for staff, acknowledging their increased workload - including as a consequence of Covid-19, there was a sense that the pandemic was being used as an excuse and things should have gone back to 'normal'.

CONSEQUENCES Systems for accessing primary care, including the changes introduced in response to the Covid-19 pandemic, create not just physical but inter-personal distance between patients and staff, and have the potential to reinforce and further embed inequalities. These systems need to be reviewed from the perspective of patients and staff to find ways to reduce this distance and increase equity in the context of systemic pressures. Findings from this project will inform the development of a resource set to enable this and optimise access to primary care for all.

Funding acknowledgement: This project is funded by the NIHR Policy Research Programme (NIHR202311). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

2E.8

How well does a rapid multiplex diagnostic assay for SARS-CoV-2 and Influenza A/B perform in symptomatic patients in the community?

Presenter: Gail Hayward

Co-Authors: Philip Turner, Thomas Fanshawe, Sharon Tonner, Heather Kenyon, Rafael Perera, Kathryn Lucas, Alice Williams, Richard Hobbs, Brian Nicholson

Author Institutions: University of Oxford

Abstract

PROBLEM Point-of-care tests (POCTs) for viral respiratory pathogens have potential to inform immediate clinical decision making, including guiding test and treat strategies in community settings. Whilst there has been unprecedented development of POCTs for respiratory viruses during the pandemic, performance data from clinical settings has often been lacking.

APPROACH As part of the Rapid community point-of-care testing for COVID-19 (RAPTOR-C19) platform study, we performed a diagnostic accuracy evaluation of a SARS-CoV-2 & Flu A/B multiplex POCT in patients presenting with suspected SARS-CoV-2 in UK primary care. POCT procedures were carried out according to the manufacturer's instructions by clinical staff on site and not by specialist laboratory personnel. Samples were also collected for the reference standard multi-pathogen panel real-time RT-PCR assay.

FINDINGS Adulst and children (n=892) were recruited from May – Dec 2022, until 147 SARS-CoV-2 positive cases had been recruited, in line with sample size calculations. We estimated the performance of the index test for SARS-CoV-2 and Influenza and compared the SARS-CoV-2 estimate to the UK Medicines and Healthcare Products Regulatory Agency SARS-CoV-2 POCT Target Product Profile performance criteria. Data analysis is ongoing and full details of outcomes will be presented.

CONSEQUENCES Test performance will be discussed in the context of clinical utility, specifically of the capacity of this test to rule in/out SARS-CoV-2 or Flu infection in symptomatic patients in community healthcare settings and the implications for test utilisation to inform patient management, transmission control and for high-stakes applications, such as enabling access of individuals to vulnerable populations.

Funding acknowledgement: RAPTORC19 was funded by the NIHR (Urgent Public Health Priority study), University of Oxford and Asthma+ Lung UK

2E.9

Molnupiravir for early COVID-19 treatment in primary care: PANORAMIC platform trial

Presenter: Paul Little

Co-Authors: Paul Little1 ;Chris Butler2;Richard Hobbs2;Oghenekome Gbinigie2;Gail Hayward2;Jienchi Dorward2;Mark Lown1; Nick Francis1;Ly-Mee Yu 2; ; for the PANORAMIC Trial Collaborative Group

Author Institutions: 1University of Southmpton; 2 University of Oxford

Abstract

PROBLEM The pivotal MOVe-OUT trial (1) of the novel antiviral molnupiravir for COVID-19 documented reduced hospital admissions, but included mostly unvaccinated participants, in non-UK settings, and when the Omicron variant was not prevalent.

APPROACH Participants were aged ≥50, or ≥18 years with major comorbidities, symptomatic for ≤5 days with confirmed COVID-19 in the community, randomised to usual care alone or plus molnupiravir (800mg bd for 5 days). Primary outcome: all-cause hospitalisation/death within 28 days. Secondary outcomes: recovery, health service contacts.

FINDINGS Between 8.12.21and 27.4.22, 25708 participants (mean age 56.6 years), were randomised to molnupiravir plus usual care (n=12744) or usual care alone (n=12934). Hospitalisation and deaths were similar in both groups: (105/12529 (0·8%) for molnupiravir and 98/12525 (0·8%) for usual care (posterior probability of superiority 0·33; adjusted odds ratio 1·06 (95% Bayesian credible interval [BCI]) 0·81 to 1·41). There was an estimated benefit of 4·2 (95% BCI: 3·8–4·6) days in time to first recovery with molnupiravir (posterior probability of superiority >0·999). In the molnupiravir group there were fewer consultations in primary care (respectively2425/12401(20%), 2876/12135(24%)), and on day 7 more had SARS-CoV-2 virus below detection levels (respectively 7/34 (21%) and 1/39 (3%); p=0.039). Further virology FINDINGS and the health economic analysis (in progress) will also be presented.

CONSEQUENCES Molnupiravir is not effective in reducing hospitalisations/deaths among higher risk, vaccinated adults with COVID-19 in the community, but improves recovery time, reduces viral load, and modestly reduced consultations in primary care. The cost-effectiveness of molnupiravir will a major consideration in determining whether it should be widely used in the NHS.

Funding acknowledgement: NIHR

2F.1 (Workshop)

Sexual healthcare for trans, non-binary and gender-diverse people

Presenter: Julia Bailey

Co-Authors:

Author Institutions:

Abstract

Background: Trans, non binary and gender diverse people can be reluctant to access primary care because of (fear of) traumatic experiences within healthcare services. This workshop will address how we can ensure that trans, non-binary and gender diverse people feel welcomed and reassured, and are offered appropriate care at every stage of progression through primary care (by phone/online; at reception; in clinical encounters; on medical records).

Aim: To consolidate knowledge and confidence concerning sexual health care for trans, non-binary and gender-diverse people in primary care.

Educational objectives: To understand key terms and concepts concerning sex, gender and sexuality O To appreciate sexual health needs of gender minority populations in primary care. To discuss ways to make primary care welcoming and safe(r) for trans, non-binary and gender diverse people.

Format: Short video (if possible); Short presentation; Small and large group discussions.

Workshop content:Welcome. Agreements for a safe(r) space. Short video – Trans 101. 10 min presentation offering an overview of key concepts (regarding sex, gender and sexuality) and a brief overview of issues for trans and gender-diverse people wishing to access sexual health care in primary care. Discussion of a vignette in small groups (trans man and pregnancy choices). Large group discussion regarding ways to make primary care welcoming and safe(r) for trans, non-binary and gender diverse people. Comments, questions and sharing of experience will be welcomed throughout the session.

Intended audience: All are welcome (clinicians, educators, commissioners, researchers, students).

3A.1

Dietary advice for children with eczema and possible food allergy: A Delphi consensus study

Presenter: Ludivine Garside

Co-Authors: Robert Boyle, Rosan Meyer, Isabel Skypala, Sara Brown, Matthew J Ridd

Author Institutions: University of Bristol, Imperial College London, Royal Brompton & Harefield Hospitals, University of Edinburgh

Abstract

PROBLEM Atopic dermatitis (“eczema”) commonly appears in the first two years of life and it can be difficult to determine whether eczema symptoms are related to delayed food allergy. The use of food allergy tests to guide dietary exclusions for eczema control in young children is controversial. We conducted a consensus exercise on how dietary history and skin prick tests (SPTs) for four common food allergens (cow’s milk, hen’s egg, wheat and soya) should be used to guide dietary advice in children under 2 years of age with mild, moderate or severe eczema.

APPROACH Fourteen clinicians from general practice, paediatrics, paediatric dermatology, paediatric allergy and paediatric nutrition in UK and Ireland took part in an online Delphi study over 15 weeks in 2022. In three rounds, participants gave their anonymous opinions on relevant clinical symptoms, allergens, SPT thresholds and dietary advice according to dietary history and SPT results. Participants received individualised and group feedback from each round. The findings were discussed in a final online workshop, chaired by an independent academic outside the research team. Consensus was defined as agreement of 80% or above; items with agreement <80% were carried through to the next round, or for discussion at the final workshop. All participants were invited to comment on the minutes of the final workshop, including two survey respondents who had been unable to attend the workshop.

FINDINGS Aside from one dietitian being unable to take part in round two, participants engaged with all surveys. From an initial list of 14 symptoms, 12 were identified as relevant to immediate allergy and 7 for delayed allergy. Regarding allergens for SPT, consensus was reached for wheat and soya (to use commercial reagents) but not hen’s egg or cow’s milk. SPT wheal size for all study foods was determined negative at 0-1mm and sensitised at 5mm and above, but interpretation of wheals 2-4 mm in size varied. Agreement was reached at the final workshop on a flowchart of dietary advice to be given according to dietary history and SPT results. Dietary advice encompassed: food exclusion,

oral food challenge, home dietary trial, and food inclusion.

CONSEQUENCES We obtained expert consensus on what dietary advice should be offered to parents and carers of children under two years of age with eczema when SPTs are employed to guide dietary decision making. The resulting flowchart may be useful in clinical practice and will underpin advice given to participants in the intervention arm of our Trial of food allergy (IgE) tests for Eczema Relief (TIGER) trial (NIHR133464, ISRCTN52892540).

Funding acknowledgement: Funded by a grant from Rosetrees Trust and The Stoneygate Trust.

3A.2

Patient and Public Involvement in the development of an online intervention for young people with acne: novel APPROACHes to reach underserved groups

Presenter: Mary Steele

Co-Authors: Mary Steele, Rosie Essery, Sophie Dove, Kate Heneghan-Sykes, Irene Soulsby, Charlotte Cairns, Rebekah LeFeuvre, Nick Francis, Matt Ridd, Lucy Yardley, Paul Little, Ingrid Muller, Miriam Santer

Author Institutions: University of Southampton, University of Bristol,

Abstract

PROBLEM Acne is very common and can substantially affect quality of life. The Acne Care Online program is developing an intervention for young people to improve acne-related outcomes. PPI is vital in ensuring that the range of experiences and perceptions of target users are included, so that their needs can be met. In previous acne research people aged under 18 and from ethnic minority backgrounds have been underserved. To ensure we involved public contributors in a meaningful way we aimed to recruit an advisory group of young people with acne in addition to including three experienced public contributors in an intervention development group.

APPROACH To form an advisory group, young people were recruited through social media and school engagement. We used targeted social media advertising, and focused on areas of high ethnic and LGBTQIA+ diversity. In schools we delivered workshops and approached student leadership groups. We also attended in-person meetings of existing young people's PPI groups. Invitations to optional activities such as completing online questionnaires or discussion groups are shared when they become available. The group are paid for their time in gift vouchers at the NIHR recommended rates.

FINDINGS Social media advertising was particularly successful, and attracted diverse interest from young people with acne. School engagement to date has allowed us to gain feedback from pupils during an example activity but has attracted little interest in joining the advisory group. The group includes 24 people (13 white, 18 female, 17 aged under 18, 7 LGBTQIA+). The group have contributed to decisions about the study design. For example, by giving detailed feedback on possible outcome measures, or providing insight into which issues relating to acne are most important to young people. Challenges encountered include; automated algorithms affecting social media advertising, members joining the group using false details, members providing minimal detail in feedback forms and little interest in attending group events. This has been mitigated by seeking in-person feedback from established groups, such as schools/colleges and existing young people's PPI groups, and by engaging in more depth with members of our advisory panel who have already provided detailed feedback.

CONSEQUENCES Experienced public contributors provide longitudinal input to

intervention development. Our advisory group has provided input from people who may not have the confidence to speak in an academic setting or be willing to commit to regular or long-term involvement. Reporting difficulties encountered can help inform strategies for future involvement of young people.

Funding acknowledgement: This project is funded by the National Institute for Health and Care Research (NIHR) under its Programme Grants for Applied Research programme (grant ref No RP-PG-202852). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

3A.3

What are parents' perceptions and experiences of help-seeking for common infant symptoms? A qualitative interview study.

Presenter: Amy Dobson [1]

Co-Authors: Samantha Hornsey [1], Daniela Ghio [2], Kate Sykes [1], Sue Adams [3], Elizabeth Lovegrove [1], Anna Hardy [1], Miriam Santer [1] and Ingrid Muller [1]

Author Institutions: [1] University of Southampton, [2] University of Manchester, [3] Solent NHS Trust

Abstract

PROBLEM Parents commonly report infant symptoms such as excessive crying and vomiting. Although usually a normal infant behaviour, symptoms can cause parental distress and are often mislabelled as milk allergy or reflux. Mislabelling can lead to feeding changes (e.g., early breastfeeding cessation, dietary exclusion) and inappropriate specialist formula prescription and reflux medications. These are linked to a range of harms including risk of tooth decay, obesity, medication side effects and significant NHS cost. Previous infant crying research highlighted the emotional impact on parents, coping strategies, and the influence of parental uncertainty on diagnosis seeking. Further research is needed to explore parents' help-seeking for common infant symptoms, including their experiences with health professionals. This study aimed to explore parents' perceptions and experiences of help-seeking for common infant symptoms.

APPROACH Remote semi-structured qualitative interviews with parents of babies (age <12 months) who had experienced common infant symptoms (such as excessive crying, vomiting, rash and/or stool changes) in their first 4 months of life. Recruitment occurred via social media, GP practice database search and mail out (to parents of babies <12 months old), and opportunistic recruitment in GP practices and health visiting teams. Interviews were transcribed verbatim and analysed using reflexive thematic analysis.

FINDINGS 25 interviews were conducted. Participants were female, aged 24-39 years and from diverse backgrounds. Their infants ranged from 6 weeks to 11 months old. Five main themes were developed. Parents often feel desperate and seek help due to 'The need for answers' about suspected underlying causes of symptoms, and uncertainty about what baby behaviours are 'normal'. 'The importance of health professionals', for example different health professional roles and access to support, was highlighted. Often it was important to consult a primary care professional to make sense of symptoms or for management support. Often parents perceived access negatively, or felt their concerns were dismissed. 'Experiencing health professional advice' suggested that parents perceive and experience advice differently. Pharmacological and non-pharmacological strategies, testing/diagnosis, and normalisation were discussed, with mixed opinions about advice and health professional communication, depending on different situations. Perceptions of advice/support appeared to impact further help-seeking (e.g.,

seeking other opinions) and their perceptions and management of symptoms. 'The role of social support' and 'searching online' appeared a foundation to help-seeking, for validation of experiences and practical support from parents in similar situations..

CONSEQUENCES Many parents need support to manage infant symptoms and reduce uncertainties about 'normality' and possible underlying causes. Appropriate advice and support about management and when further intervention is required may help reduce over-medicalisation. FINDINGS will inform future development of an online intervention to support families (and professionals) managing symptoms.

Funding acknowledgement: National Institute for Health and Care Research (NIHR) School for Primary Care Research (project reference 536)

3A.4

Long-term CONSEQUENCES of urinary tract infection in Childhood (LUCI): Electronic population-based cohort study

Presenter: Kathryn Hughes

Co-Authors: Rebecca Cannings-John, Hywel Jones, Fiona V Lugg-Widger, Tin Man Mandy Lau, Shantini Paranjothy, Nick Francis, Alastair D Hay, Christopher C Butler, Lianna Angel, Judith Van der Voort, Kerenza Hood

Author Institutions: Cardiff University, University of Aberdeen, University of Southampton, University of Bristol, University of Oxford, Noah's Ark Children's Hospital for Wales

Abstract

PROBLEM Childhood urinary tract infection (UTI) can cause renal scarring and possibly long-term complications including hypertension, chronic kidney disease (CKD) and end-stage renal failure (ESRF). Previous studies are generally of selected populations, with severe illness or high rates of underlying risk factors, and rates of renal scarring vary widely. The risk of renal scarring for most children with UTI, without additional risk factors, and those commonly seen in primary care, is not known. The aims of this study were to examine the association between childhood urinary tract infection (UTI) and long-term adverse outcomes in an unselected population of children.

APPROACH This was a retrospective, population-based cohort study, linking primary care, hospital and microbiology records in Wales, using the Secure Anonymised Information Linkage Databank (SAIL). All children born in Wales between 2005 and 2009 were included in the study with a mean follow-up period of 10 years (until date of death or migration, or December 2017). The exposure was one or more microbiologically confirmed urinary tract infections (UTI) before the age of five years in any setting. The primary outcome was renal scarring and key secondary outcomes included hypertension, chronic kidney disease (CKD) and end-stage renal failure (ESRF). We adjusted for underlying risk factors including vesicoureteral reflux disease (VUR), congenital conditions and comorbidities.

FINDINGS Of the 159,201 children included in the study, 48·7% were female and 11,099 (7%) had one or more microbiologically confirmed UTI before age five. Of the 10,875 children with at least seven years follow-up, 135 (1·24%) were diagnosed with renal scarring by age seven (compared to 110/145,509 (0·08%) in children without UTI). Renal scarring was over four times higher in children with UTI (adjusted odds ratio 4·60, 95% CI: 3·33 to 6·35). There was no association between childhood UTI and hypertension, CKD or ESRF up to age ten after adjusting for underlying risk factors (adjusted hazard ratios (95% CI): hypertension 1·44 (0·84 to 2·46), CKD 1·67 (0·85 to 3·31) and ESRF 1·16 (0·56 to 2·37)).

CONSEQUENCES Childhood UTI is associated with a diagnosis of renal scarring in an unselected population of children, but the prevalence is low. UTI is not associated with CKD, hypertension or ESRF by age 10. Further research with systematic scanning of children's kidneys including those with less severe UTI and without UTI, is needed to increase certainty of the causal pathway, as most children without UTI are not scanned. Longer follow-up is needed to establish if UTI, without additional risk factors, is associated with hypertension, CKD or ESRF later in life.

Funding acknowledgement: This project was funded by the Welsh Government through Health and Care Research Wales.

3A.5

CHOOSE - CHildren and yOung peOple pSychiatric diagnoses before and during the Covid-19 pandEmic

Presenter: Carolyn Chew-Graham

Co-Authors: Emma Cockcroft, Pearl Mok, Alex Trafford, Roger Webb, Darren Ashcroft, Thomas Kabir, Emma Garavani, Rachel Temple, Alex Adams, Anabel Claro, Vidhi Bassi

Author Institutions: Keele University, University of Manchester, University of Exeter, McPin Foundation,

Abstract

PROBLEM Involving people with lived experience in health research is widely reported, particularly in mental health studies and those using qualitative methods. Published examples of PPIE (patient and public involvement and engagement) in systematic reviews and PhD studies are becoming increasingly common. The role and value of PPIE in health research involving examination of large electronic health record datasets, such as the Clinical Practice Research Datalink (CPRD), is not widely reported.

APPROACH The CHOOSE study (CHildren and yOung peOple pSychiatric diagnoses before and during the Covid-19 pandEmic) aimed to explore mental illness diagnoses and self-harm episodes among children and young people in UK primary care records before and during the COVID-19 pandemic. We sought to provide recommendations for young people, parents and for healthcare, social care and educational services. The study was informed by the involvement of two groups: Lived experience advisory group: members recruited by our collaborator McPinR (mental health research charity) that co-ordinated the involvement of young people and parents/carers. We held five advisory group meetings. Stakeholder group: teachers, healthcare professionals, third sector practitioners with an interest in young people's mental health. Two online meetings were held.The study aims, protocol, limitations of using CPRD, findings and their implications, and dissemination were discussed at all meetings. Members of both groups were invited to join a consensus group discussion to determine the key findings, messages and outputs to key audiences. A webinar, co-chaired by a young person, with contributions from young people and parents, was a key dissemination activity. Outputs were co-produced with young people and parents/carers.Researchers reflected on lay and stakeholder perspectives throughout the study, notes were made and distributed after meetings, including a "you said, we did" table. This approach helped to ensure integration of young person, parent and stakeholder perspectives, as well as providing transparency and feedback to the groups as to how researchers responded to discussions.

FINDINGS Involving young people, families and other stakeholders enhanced methodological rigour, interpretation of data and dissemination of findings. Challenges included the fixed nature of CPRD data, which often does not reflect what people perceive to be important – questions that could not be

responded to using CPRD were identified; time-related pressures, and the need for support for young people and parents/carers. The latter were managed with support from McPinR through the provision of notes and feedback after meetings, and communication between meetings.

CONSEQUENCES We will critically reflect on the process and potential impact of involving young people, parents/carers and other stakeholders in research conducted using large datasets of this type. We will discuss the challenges and opportunities encountered, strategies to facilitate PPIE involvement in CPRD studies. The co-produced dissemination outputs will be shown at the conference.

Funding acknowledgement: NIHR School for Primary Care Research (grant number 566) Greater Manchester Patient Safety Centre

3A.6

Does a data-enabled Quality Improvement programme improve timeliness and equity of childhood immunisations across North East London?

Presenter: Milena Marszalek

Co-Authors: Meredith Hawking, Ana Gutierrez, Isabel Dostal, Zaheer Ahmed, Nicola Firman, Anna Billington, John Robson, Helen Bedford, Ngawai Moss, Carol Dezateux

Author Institutions: Clinical Effectiveness Group, Wolfson Institute of Population Health Sciences, Queen Mary University of London

Abstract

PROBLEM Immunisation rates in London are the lowest in England and have become worse during the pandemic(1). Children living in deprived areas and from Black and Mixed ethnic backgrounds are less likely to be fully protected. Call and recall systems in primary care settings are effective at improving immunisation coverage, however it is unclear whether they also improve timeliness and equity.In February 2022, the Clinical Effectiveness Group (CEG) launched a quality improvement (QI) programme in North East London (NEL). It aims to increase the percentage of children completing their primary immunisations by 8 months and receiving first measles, mumps and rubella (MMR) by 18 months and to reduce inequalities in timeliness. It comprises a novel purpose-built call and recall tool [tinyurl.com/3wxp87b4] which practice teams use to prioritise appointments according to immunisation timeliness, ensuring vulnerable children are contacted first. Practices receive 1:1 support from CEG facilitators to download the tool and use it effectively, alongside online instructional resources.1. Firman N, Marszalek M, Gutierrez A, et al Impact of the COVID-19 pandemic on timeliness and equity of measles, mumps and rubella vaccinations in North East London: a longitudinal study using electronic health records. BMJ Open 2022;12:e066288. doi:10.1136/bmjopen-2022-066288

APPROACH A mixed methods evaluation of this programme will be carried out in 2023. The quantitative component comprises an interrupted time series comparing the percentage of children receiving their 1st MMR by 18 months and 1st DTaP by 6 months in the pre-, implementation and post-implementation periods. The qualitative component uses a 'Think Aloud' exercise and semi-structured interviews with practice teams to assess feasibility and sustainability of the tool. A public engagement group was convened to understand parental perspectives.

FINDINGS Preliminary analyses demonstrate that 87% of NEL practices have downloaded the tool and 42% have been visited by a CEG facilitator. The percentage of children receiving MMR by 18 months increased by 3.1% from 82.2% to 85.3% between September 2021 and September 2022 for practices using the tool and receiving a

facilitation visit. Parents raised the importance of access to local and flexible services and of sending relevant information to diverse ethnic communities. The first half of the qualitative evaluation has been completed and analysis of the Think Aloud component of the evaluation will be completed by June 2023.

CONSEQUENCES These interim FINDINGS highlight the importance of facilitation as part of a data-enabled QI programme however a full evaluation is required to confirm this. Implementation has been disrupted by NHS reorganisation and the London Polio Booster Campaign, and a Local Incentive Scheme to incentivise practices has yet to be delivered. Qualitative evaluation of pilots is planned in other London areas in 2023.

Funding acknowledgement: Barts Charity North East London Digital First

3B.1

Health professionals views on discontinuation of long-term antidepressants: a systematic review and thematic synthesis

Presenter: Ellen Van Leeuwen

Co-Authors: Emma Maund, Catherine Woods, Tony Kendrick, Sibyl Anthierens, Thierry Christiaens

Author Institutions: Clinical Pharmacology Unit & Public Health and Primary Care, Ghent University, Belgium; Primary Care & Population Sciences, University of Southampton, UK; Family Medicine and Population Health, University of Antwerp, Belgium;

Abstract

PROBLEM Long-term antidepressant use, much longer than recommended by guidelines, may cause harmful effects and generate unnecessary costs. This study aims to investigate health professionals (HP) views on long-term antidepressant discontinuation and their barriers and facilitators.

APPROACH Systematic review and meta-synthesis. We included primary studies that used qualitative data collection and had data on any HP's attitudes, beliefs, feelings, and perceptions on continuing or discontinuing AD use. The review searched nine database sources from inception until May 2022. Study quality was assessed using the Critical Appraisal Skills Programme (CASP) checklist. A thematic synthesis was performed.

FINDINGS Thirteen studies were included in the review. Nine studies were of general practitioners' (GPs) perspectives, one study of GPs and nurses working in nursing homes, one study of psychiatrists, and two of a mix of health professionals. Barriers and facilitators to discontinuing long-term AD emerged within six major themes: 'perception of long-term AD use', 'intrinsic motivations', 'fears', 'HP role and responsibility, 'patient readiness', and 'process related and structural factors'.

CONSEQUENCES Barriers and facilitators for HP regarding discontinuation of long-term use of AD are numerous and complex. More emphasis on the futility of the actual effect and potential harms related to long-term use is needed to improve HPs' motivation to discontinue long-term AD. The review shows a need to support for GPs around their fear of patient relapse and to initiate discussion around discontinuation. Future studies should assess under-researched HP perspectives (such as pharmacist, psychotherapist, or nursing home staff).

Funding acknowledgement: no funding

3B.2

Understanding the mental health and psychosocial experiences of asylum seekers', refugees' and undocumented migrants' and their journey to accessing healthcare and social services.

Presenter: Alessio Albanese

Co-Authors: Professors Catherine O'Donnell and Sara MacDonald and Dr Barbara Nicholl

Author Institutions: University of Glasgow

Abstract

PROBLEM Asylum seekers, refugees and undocumented migrants are reported to have higher rates of mental health issues compared to the general population in host countries (Fazel et al., 2005). This is, at least in part, due to difficulties experienced in the post-migration context (i.e. in the country of resettlement). The aim of this research was to identify and better understand the ways in which these migrant groups access services (e.g. mental health) and their experiences related to this. In so doing, the Theory of Candidacy was employed.

APPROACH Eighteen asylum seekers, refugees and undocumented migrants based in the Glasgow area were interviewed. Snowball sampling was used for participant recruitment. The interviews were transcribed and analysed using the theory of Candidacy to understand in more detail participants' journeys to accessing the services needed. Candidacy provides a framework through which access to health and social care services can be explored. Candidacy is composed of seven phases which include identification, navigation, permeability, presentation to the service, adjudication, offers & resistance, and operating conditions.

FINDINGS The results were presented according to the seven Candidacy phases. However, these are non-linear and inter-related. The perceived stigma and sense of burdensomeness on others associated with experiencing mental health difficulties was described by several participants in the interviews. Communication and language difficulties and lack of interpretation are shown as barriers to accessing mental health services for these populations. Difficulties registering with a GP and limited knowledge of the healthcare system were also barriers to access. The operating conditions identified were composed of macro- meso- and micro-level factors. These included language difficulties and interpretation, access to secondary care and the biomedical approach to mental health (e.g. psychotropic medication) as a barrier to access. The UK's hostile asylum system, was reported to impact on every aspect of the Candidacy journey..

CONSEQUENCES The analysis identified operating conditions as broad, contextual factors, that potentially influence each phase of the Candidacy framework. Results illustrate the importance of the social determinants of health in exploring the mental health and psychosocial experiences of asylum seekers, refugees, and undocumented migrants. The implications of a hostile asylum system on the mental health and wellbeing of these vulnerabilized populations became evident. FINDINGS also show the need for more resources and greater support required to aid GPs' and practice teams' delivery of care. We suggest that policy-based interventions could include a strong commitment to the provision of high-quality interpretation services. Also, digitalised forms of healthcare delivery should account for, and mitigate, issues around digital poverty in these migrant groups.

Funding acknowledgement: School of Medical, Veterinary and Life Sciences and a private donor

3B.3

Developing inclusive APPROACHes to multidimensional mental health assessment in UK primary care: A qualitative study and community outreach APPROACH

Presenter: Adam Geraghty

Co-Authors: Adam W A Geraghty, Sian Williamson, Carolyn A. Chew-Graham, Miriam Santer, Michael Moore, Tony Kendrick,

Berend Terluin, Paul Little, Beth Stuart, Sonia Newman, Shanaya Rathod, Manoj Mistry, Al Richards, Debs Smith, Harm van Marwijk.

Author Institutions: University of Southampton, Brighton and Sussex Medical School, Keele University, Amsterdam University Medical Centre

Abstract

PROBLEM The four-dimensional symptom questionnaire (4DSQ) is a measure recommended in Dutch national guidelines. The 4DSQ uniquely provides a profile of a patients' symptoms on dimensions of distress, depression, anxiety and related physical symptoms (splitting stress from disorder). The 4DSQ is not widely used the UK. It may facilitate diagnostic conversations, support targeted treatment, and potentially reduce unnecessary over-treatment with antidepressants. We aimed to explore peoples' experiences of completing the 4DSQ and their perceptions of their score profile across the four symptoms. We also aimed explore a diverse groups' experiences and perceptions of distinctions between distress and disorder through community outreach work

APPROACH A qualitative study was used to explored peoples' experience of completing the 4DSQ. Participants were recruited from community routes (e.g. through a local Sure Start centre) and via GP practices. Participants completed the 4DSQ then took part in in-depth telephone interviews about their mental health experience, completing the 4DSQ, and their perception of their scores. Interviews were transcribed verbatim, and thematic analysis is on-going. Community outreach/public contributor events were held at a local Sure Start centre, combined with meetings organised through the Beth Johnson Foundation (BJF) and meetings with individuals from diverse communities.

FINDINGS Twenty-four interviews were conducted. Early analysis shows the current complexity in the understanding and use of labels such as stress, depression, and anxiety in a primary care context. Participants were generally positive regarding the 4DSQ: describing that that their emotional experiences were validated, that the 4DSQ may be helpful in opening conversations, and valued the potential to score differently on each dimension (e.g. distress and depression). Four community outreach events were held at a local Sure Start, two BJF meetings, five individual meetings. There was wide agreement that distinguishing distress from disorder would be helpful, along with proposals for support for distress without disorder. The Sure Start group developed a model for care for those experiencing heightened distress that will be used in on-going work.

CONSEQUENCES This research is ongoing, and full details will be presented at the conference. However, the 4DSQ appears to have potential for use in UK general practice. Community outreach approaches with diverse groups greatly aided our understanding of issues affecting the development of a future clinical process for the 4DSQ, as well as how to ensure we use inclusive research methods going forward.

Funding acknowledgement: This study/project is funded by the NIHR Programme Development Grants (NIHR203688). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

3B.4

How do patients with a mental health diagnosis interact with online services at the general practice? A qualitative study

Presenter: Jo Parsons

Co-Authors: Carol Bryce, Jennifer Newbould, Stephanie Stockwell, Gary Abel, John Campbell and Helen Atherton

Author Institutions: Warwick Medical School; University of Warwick, RAND Europe, University of Exeter

Abstract

PROBLEM This study was conducted as an extension to a wider study examining how general practices support patients in their use of online services (e.g. making appointments, attending appointments, ordering repeat medications). Patients with a mental health condition are potentially a group at greater risk of increased inequalities in accessing healthcare, and therefore their perceptions and experiences of interacting with online general practice services are important to understand. This study aimed to examine how patients living with a mental health condition interact with and experience online services at their general practice.

APPROACH Patients with a mental health condition were recruited via eight participating general practices across the UK. Semi-structured interviews were conducted with patients to explore their views of interacting with online general practice services, and of perceived challenges and advantages in doing so. Thematic analysis was conducted on interview transcripts.

FINDINGS Interviews were conducted with ten patients with mental health conditions (including anxiety, depression, OCD and bipolar disorder). Participants often reported using the practice frequently, which was linked to increased familiarity with using online services. Those that struggled to interact with online services tended to be those that were unfamiliar with technology. Some participants reported barriers to interaction with online services associated with their mental health conditions, including increased anxiety, and with concerns about trust in information security. For other participants, using online services reduced anxiety associated with making appointments at their general practice.

CONSEQUENCES Patients with mental health conditions often use general practice frequently whilst experiencing points of crisis with their mental health, which impacts positively on familiarity and on ease of using online services. However, the converse can be true with reliance on online services creating additional barriers and reduces access for some patients.

Funding acknowledgement: This study is funded by the National Institute for Health Research (NIHR) [Health Services and Delivery Research Programme 128268].

3B.5

Can we reduce the risk of relapse of depression in primary care? A mixed methods study

Presenter: Andrew Moriarty

Co-Authors: Lewis W Paton, Kym IE Snell, Lucinda Archer, Richard D Riley, Nick Meader, Dean McMillan, Simon Gilbody, Carolyn A Chew-Graham

Author Institutions: University of York, Hull York Medical School, University of Birmingham, Newcastle University, Keele University

Abstract

PROBLEM Most people with depression are treated in primary care. Relapse (a re-emergence of depressive symptoms) after improvement is common, contributing to the burden associated with depression. We lack evidence-based approaches for identifying people who are at higher risk of relapse. By identifying higher risk individuals, we could potentially target relapse prevention strategies with a view to improving patient outcomes and using limited healthcare resources more effectively.

APPROACH This was a mixed methods study. We aimed to identify and critically appraise

previous studies looking to predict relapse of depression across all settings. We then attempted to derive and validate a prognostic model to predict relapse within 6-8 months in a primary care setting. We used multilevel logistic regression analysis on individual participant data from 6 RCTs and a cohort study (n=1244) to develop a model and internal-external cross validation to assess generalisability. Concurrently, a qualitative work-stream explored the perspectives of General Practitioners (GPs) and people with lived experience of depression on relapse risk and prevention in practice. Data analysis used principles of constant comparison and ethics approval was granted by the Health Research Authority. A Patient Advisory Group contributed to all stages of the study.

FINDINGS Our Cochrane systematic review identified 12 studies looking to develop and/or validate prognostic models for predicting relapse. All were either at high risk of bias or developed models with poor predictive performance; none could be implemented in a primary care setting. Our model development work is ongoing; preliminary results suggest inadequate predictive performance. Twenty-two interviews with GPs and 23 with people with lived experience of depression.Thematic analysis of the qualitative data generated three over-arching themes: significance of social, personal and environmental factors in determining depression course; relationships and communication; recognition of importance of relapse, but limited discussion in practice. Continuity and an understanding, empathic approach from the GP was felt to be important by people with lived experience of depression. People with lived experience of depression and GPs reflected that a discussion around relapse would be useful but was not routinely offered. Both participant groups felt there would be benefits to relapse prevention for depression being embedded within primary care. GPs suggested that, while relapse prevention is appropriate work, additional resource would be needed to enable relapse prevention to be incorporated into routine primary care.

CONSEQUENCES Relapse is considered an important problem by GPs and people with lived experience of depression. The constructs of relapse, remission and recovery, widely used in the psychological literature, may not be applicable in primary care. Work is needed to ensure individuals at higher risk of relapse can be identified and target relapse prevention efficiently. Scalable brief interventions are needed and barriers to their implementation in primary care should be addressed.

Funding acknowledgement: This report is independent research supported by the National Institute for Health Research (NIHR Doctoral Research Fellowship, Dr Andrew Moriarty, DRF-2018-11-ST2-044). The views expressed in this publication are those of the authors and not necessarily those of the NHS, the National Institute for Health Research or the Department of Health and Social Care.

3B.6

What were Health Professionals' perspectives of antidepressant discontinuation during the REDUCE trial?

Presenter: Hannah Bowers

Co-Authors: Catherine, Woods, Helen Page, Mahboobeh Sadeghi, Amy Din, Geraldine Leydon, Adam Geraghty, Tony Kendrick, Riya Tiwari on behalf of the REDUCE research team

Author Institutions: University of Southampton

Abstract

PROBLEM Antidepressant prescriptions are increasing and there is evidence that this increase is in part explained by patients continuing treatment long-term. Around 30-50% of patients taking antidepressants long-

term may be able to stop taking them. The REDUCE programme developed an intervention package to support health professionals in tapering antidepressants. The intervention included an online resource for health professionals, an online resource for patients and three telephone support calls for patients. This was developed using evidence, theory and a person-based approach.

APPROACH 131 practices across England and Wales took part in the REDUCE trial, recruiting a total of 330 participants. Practices were randomised to the intervention arm or usual care. Health professionals in both arms of the trial were responsible for discussing antidepressant discontinuation with patients, tapering patients' medication and reviewing patients as they discontinued. Twenty-seven health professionals were interviewed (23 GPs, 2 psychological wellbeing practitioners, 1 pharmacist, 1 mental health nurse). Interviews were transcribed and analysed using a thematic analysis.

FINDINGS The ongoing thematic analysis is exploring the health professionals' perspectives of discontinuing antidepressants during the trial. The analysis aims to uncover perspectives on usual care well as views of the intervention package, processes through which the intervention may have worked, and how it could be implemented widely if effective.

CONSEQUENCES The FINDINGS of this study will explore views of the intervention package within the context of the randomised control trial. The findings will inform how the intervention, and primary care practice more generally, could be adapted to support health professionals in monitoring and tapering antidepressant medication. These FINDINGS will also shed light on how the developed intervention may be implemented in future, should it be effective.

Funding acknowledgement: The study is funded by the National Institute for Health Research.

3C.1

Digital first primary care for patients with multiple long-term conditions – the views of staff and stakeholders

Presenter: Jenny Newbould

Co-Authors: Lucy Hocking, Manbinder Sidhu, Kelly Daniel

Author Institutions: RAND Europe, University of Birmingham

Abstract

PROBLEM General practices are facing challenges including rising patient demand and difficulties recruiting and retaining GPs. Greater use of digital technology, expediated since the COVID-19 pandemic, has been advocated as a way of mitigating some of these challenges and improving patient access. This includes digital first primary care, whereby digital approaches are used across primary care, from booking appointments to consultations with healthcare professionals. There is little evidence of staff experiences of using digital first primary care with more complex patients such as those with multiple long-term conditions. This study aimed to explore the experiences and views of digital first primary care approaches for use with patients with multiple long-term conditions from the perspective of healthcare professionals and stakeholders (academics, policymakers and providers).

APPROACH Eight general practices, using one of two digital first primary care approaches, were recruited to the study with varied demographic characteristics. Interviews were conducted with fourteen healthcare professionals (GPs and nurses) and fifteen stakeholders. Interviews were semi-structured and were audio recorded, with participants permission, and transcribed verbatim. Data were analysed using a thematic framework approach.

FINDINGS Digital first primary care approaches can enable patients to speak with a healthcare professional more quickly than traditional approaches. Those with multiple long-term conditions can submit healthcare readings remotely, though they may struggle navigating systems not designed to capture the nuances associated with living with multiple conditions. Some health professionals expressed preferences to see patients face-to-face, particularly those with multiple long-term conditions, to identify non-verbal cues about a patient's health. Staff and stakeholders felt that digital first primary care can be useful for patients with multiple long-term conditions but not at the expense of face-to-face consultations. Digital first primary care approaches may provide an opportunity for carers of patients living with multiple long-term conditions to become more involved in their care, though there were concerns around consent and confidentiality. There remains debate amongst participants about the extent to which digital first primary care impacts on staff workload. Any impacts on continuity of care depended largely on how surgeries implemented digital first approaches.

CONSEQUENCES Despite a large volume of the consultations in general practice taking place with patients with multiple long-term conditions, the roll out of digital first primary care, particularly during the COVID-19 pandemic, did not specifically address the needs of patients with multiple long-term conditions. General practices should be encouraged to reflect on how digital first approaches impact upon patients with multiple long-term conditions, their carers and the health professionals who work with them. There may be economies of scale in terms of expertise, and buying power with providers, for practices commissioning digital first primary care approaches to do so at Primary Care Network or Integrated Care System level.

Funding acknowledgement: The BRACE Rapid Evaluation Centre is funded by the NIHR Health and Social Care Delivery Research programme (Project No: HSDR 16/138/31).

3C.2

Interim FINDINGS from a pragmatic, multicentre pilot randomised controlled trial (RCT) of optimisation of prescribing by primary care pharmacists in patients with chronic obstructive pulmonary disease (COPD) and associated co-morbidities

Presenter: Richard Lowrie

Co-Authors: Dave Anderson, Jennifer Anderson, Gillian Cameron, Lynda Attwood, Jane Moir, Andrew McPherson, Fiona Hughes, Donald Noble, Aziz Sheikh, Nicola Greenlaw, Bethany Stanley, Emma McIntosh, Samuel Owusu Achiaw, Elaine Rankine, Frances Mair.

Author Institutions: General Practice and Primary Care, School of Health and Wellbeing, University of Glasgow; NHS Greater Glasgow and Clyde; NHS Lothian, University of Edinburgh.

Abstract

PROBLEM Therapeutic management of people at home with moderate-severe COPD and comorbidities is time consuming and suboptimal. There is room for improvement in clinical outcomes, cost effectiveness, quality of life and a need to reduce numbers of acute and primary care medical contacts. NHS employee General Practice-based Pharmacists prescribe medicines but whether they collaboratively improve care for people with COPD and co-morbidities, is under-researched.

APPROACH We are undertaking a multicentre pilot RCT of a home-based intervention comprising of a collaborative pharmacist independent prescriber supported by a consultant physician for patients with moderate-to-severe COPD and associated co-

morbidities. Our aim is to inform a subsequent definitive RCT. Participants were recruited from respiratory clinics in Glasgow and Lothian between July 2021 - February 2022. Comprehensive baseline data were collected during home visits by researchers, supplemented by clinical records including: demographics; home circumstances; lifestyle; medicines; comorbidities; frailty; EuroQol 5D5L; breathlessness assessments; Patient Experience with Treatment; resource use; primary and secondary and social care resource use. After baseline data collection, participants were randomly allocated (1:1) to either pharmacist intervention (home visits including patient assessment, prescribing and referral to health and social care when appropriate, monthly for 6 months then every 2 months for 6 months) plus Usual Care (UC) or UC. Pharmacists had full read and write access to all primary and acute NHS clinical records. Independent researchers continue to follow up participants at home 3 monthly until trial closedown in the third quarter of 2023. The RCT includes accompanying qualitative process and economic evaluations.

FINDINGS We successfully recruited 110 participants: 55 Intervention and 55 UC. 59% female; mean age 67 years. Baseline number of diagnoses (mean): 2.8 respiratory; 7.6 other physical health; 1.1 mental health with a mean of 11.3 medicines/patient. In the previous year, mean: healthcare contacts=27; costing £5607. 20% reported quality of life states “worse than death”; 4% reported “perfect health”. 52/55 received pharmacist intervention e.g. referral for DEXA scans; X-rays. Pharmacists prescribed for respiratory; infections; gastrointestinal; pain; nutrition/anaemia; skin; nervous system; and genitourinary problems. 55/55 received usual care. After 12 months, 22 participants died; 6 withdrawn. 18/24 month follow up is underway.

CONSEQUENCES We met our pre-specified recruitment and retention targets and the intervention was delivered as planned. Qualitative data indicate that the intervention was valued by patients and carers. We are collecting final follow-up data from our pilot RCT and interim results will be available for July 2023 to allow planning for the definitive trial.

Funding acknowledgement: Chief Scientist Office and Chiesi

3C.3

Managing epilepsy in primary care. A qualitative study and logic model.

Presenter: Charlotte Cotterill

Co-Authors: Jon Dickson, Daniel Hind

Author Institutions: University of Sheffield

Abstract

PROBLEM Epilepsy management in primary care is a good example of care for chronic conditions, balancing the need for good quality primary care, which also must support the profound social and psychological impact of the condition, with the need for communication with specialists in secondary care. To the best of our knowledge, the GPs with an extended role (GPwER), formerly known as GPs with a special interest (GPwSI), have never been compared to GPs for the delivery of care for people with epilepsy (PWE) until this ongoing research project.

APPROACH This qualitative interview study informed by a scoping review of literature recruited GPs and GPwERs (target sample size of 15-20 participants per group) analysing and comparing their responses separately . Questions were developed using the European Service Mappin Schedule to describe the service, the availability of care, resource use and service characteristics (Romero-Lopez-Alperca et al., 2019) combined with theoretical propositions jointly developed from the scoping review findings and a framework for primary care ‘the united

model of generalism' (Reeve and Byng, 2017). Results from individual interviews were collectively used to produce logic models representing outcomes for people with epilepsy.

FINDINGS We identified system level conditions facilitating training to become a GPwER: exposure to neurology after qualifying as a doctor, research opportunities to explore epilepsy and epilepsy management, and a strong, continuing professional relationships with neurologists. for opting to act as a GPwER in epilepsy, rather than a standard GP. Without these preconditions, GPs typically were unable to build the required epilepsy specific knowledge and epilepsy related professional networks to become a GPwER. The importance of the generalist skill set of a GP was relevant for epilepsy management and engaging in 'whole person care'. While both groups held these skills, GPwER were more adept at navigating demand management during consultations, while GPs were often limited to referrals to secondary care. Participants attributed the low uptake of GPwER roles across the country to a lack of personal relationships and experiences with neurology, but GPwERs who did participate were able to demonstrate several examples of service models which are highly appreciated by patients and specialists alike.

CONSEQUENCES The role of GPwERs in epilepsy is not widespread across the country, but benefits from strong support from the International League Against Epilepsy's British Branch. It is hoped that the logic model produced from the research will demonstrate the strengths in providing primary care for people with epilepsy can lead to better outcomes for: complex cases, those at risk of experiencing poor outcomes and also for all people with epilepsy who require 'whole person care' as opposed to fragmented treatment of their condition between primary care and secondary care.

Funding acknowledgement: This research is part of a PhD, funded by an NIHR Applied Research Collaboration (YH) studentship.

3C.4

Participatory Co-design of a novel website to improve GPs' understanding of the benefits and harms of treatments for long-term conditions.

Presenter: Julian Treadwell

Co-Authors:

Author Institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford.

Abstract

PROBLEM GPs regularly prescribe lifelong treatments for long-term conditions, supported by clinical guidelines and encouraged by performance measures. However, GPs have a poor understanding of the absolute benefits and harms of these treatments, impairing their ability to engage in genuine shared decision making or optimally manage polypharmacy. There are few easily accessible and understandable sources of this kind of quantitative information. The aim of the project was to produce a novel website to communicate understandable, usable information to GPs on the benefits and harms of treatments for long-term conditions, in a way which will be usable and useful in everyday clinical practice.

APPROACH A mixed-methods approach employing participatory co-design and research-through-design principles: Patient and Public Involvement including an Expert and Patient Steering Committee. Qualitative Interview study with GPs. A joint application design workshop, multiple cycles of iterative user-testing, focus groups and pair-writing. User-centred Content Design methods. A pragmatic evidence search, review, collation and curation process, drawing principally on

NICE and Cochrane evidence reviews. Preliminary evaluation study using online GP focus groups including clinical vignette-based questionnaires and open discussion.

FINDINGS A new website, gpevidence.org (launched 01/02/22) was developed providing evidence on treatments for 12 common long-term conditions. The website itself represents the main research finding, in keeping with the principle of research-through-design whereby new artifacts (products, environments, services, and systems) are themselves a type of implicit, theoretical contribution. It employs graphic design and "content-designed" textual information within an information architecture mapping to GPs' practice and mental models. User-testing and preliminary evaluation have shown it successfully communicates complex evidence about the benefits and harms of treatments to GPs in a way that is understood and which will be usable and useful in practice.

CONSEQUENCES It is possible to communicate quantitative information about the clinical evidence base behind treatments in a way that will be usable in practice and that complements existing clinical guidelines and normative practice. This has potential to support shared decision making, improve the management of polypharmacy and multimorbidity, and increase GPs' confidence in this area of practice.

Funding acknowledgement: National Institute for Health and Care Research Doctoral Research Fellowship

3C.5

Evaluating ethnic variations in the risk of infections presenting to primary and secondary care in people with pre-diabetes and type 2 diabetes: a matched cohort study

Presenter: Umar A R Chaudhry

Co-Authors: Iain Carey, Julia Critchley, Umar A R Chaudhry, Stephen DeWilde, Elizabeth Limb, Derek Cook, Peter Whincup, Tess Harris

Author Institutions: Population Health Research Institute, St George's, University of London, London.

Abstract

PROBLEM People living with type 2 diabetes have a higher infection risk. However, it is unknown how this risk varies by ethnicity, or whether this risk is similarly observed in people with non-diabetic hyperglycaemia ("pre-diabetes"). The study has examined the magnitude of infection risks among adults with type 2 diabetes or pre-diabetes in England, and whether patterns of risk were similar in people from different ethnic groups.

APPROACH Using Clinical Practice Research Datalink (CPRD), patients in England aged 18-90 with pre-diabetes, and type 2 diabetes, alive on 1/1/2015 were matched to patients without diabetes. Each individual with type 2 diabetes was matched to two patients without diabetes or prediabetes on age, sex and ethnic group. Ethnicity was categorised into five broad categories: White, South Asian, Black, Mixed/Other and missing ethnicity. Infections during 2015-2019 were collated from primary care [CPRD Aurum] and linked hospitalisation records, and included any infection with a prescription in primary care for an antibiotic, antifungal or antiviral within +/- 14 days of the diagnosis or any new hospital episode where an infection was the primary diagnosis. Infection incidence rate ratios (IRR) for pre- or type 2 diabetes were estimated with 95% confidence intervals (95%CI).

FINDINGS Of the 527,151 people with type 2 diabetes, 69.9%, 10.4%, 4.3% and 5.8% were of White, South Asian, Black, Mixed/Other ethnicity respectively, with 9.7% missing. There was an increased risk for infections in people with type 2 diabetes presenting in primary care (IRR = 1.51, 95%CI 1.51-1.52) and hospitalisations (IRR = 1.91, 1.90-1.93).

Overall, within each ethnic group, this was broadly consistent regardless of underlying differences in age and deprivation, and seen for all specific infection types considered, though younger (age <50) people with type 2 diabetes of White ethnicity experienced a greater relative risk. For pre-diabetes (n = 273,216), a significant but smaller risk was seen for primary care (IRR = 1.35, 95%CI 1.34-1.36) and hospitalisations (IRR = 1.33, 95%CI 1.31-1.35); similar within each ethnicity for primary care infections, but less consistent for infection-related hospitalisations. In the population, 5.3% of primary care and 8.9% of hospitalisation infections were attributable to pre-diabetes or type 2 diabetes.

CONSEQUENCES Our study estimated an elevated risk of infection for people with type 2 diabetes in England, that was broadly similar in each major ethnic group. An increased relative risk of infections was also seen in people with pre-diabetes compared to people without diabetes. Infections are therefore a significant cause of ill health and health service use across both primary and secondary care for people with pre-diabetes and type 2 diabetes. Given the rising prevalence of type 2 diabetes and pre-diabetes, the burden of infections will continue to have public health implications.

Funding acknowledgement: Research for Patient benefit Programme (NIHR RfPB: 202213), National Institute for Health and Care Research.

3C.6

Which long-term conditions benefit from exercise-based rehabilitation, and how are comorbidities considered? An overview of systematic reviews

Presenter: Grace Dibben

Co-Authors: Hannah ML Young, Lucy Gardiner, Lewis Steell, Stephanie J Krauth, Sayem Ahmed, Emma McIntosh, Frances S Mair, Bhautesh D Jani, Sally J Singh, Rod S Taylor

Author Institutions: MRC/CSO Social & Public Health Sciences Unit - Uof Glasgow, University Hospitals of Leicester NHS Trust, Diabetes Research Centre - Uof Leicester, Department of Respiratory Sciences - Uof Leicester, General Practice & Primary Care - Uof Glasgow, Health Economics & Health Technology Assessment - Uof Glasgow, Robertson Centre for Biostatistics - Uof Glasgow

Abstract

PROBLEM There is a growing prevalence of multiple long-term conditions (presence of ≥2 long-term conditions (LTCs)) which is associated with reduced health-related quality of life (HRQoL), functional decline, and increased risk of healthcare utilisation, morbidity and mortality. Previous systematic reviews have shown benefits of exercise-based rehabilitation in the management of single condition LTCs for improving functional capacity and HRQoL and reducing hospital admissions. However, little research has been performed to date assessing the effects of exercise-based rehabilitation in LTCs with consideration of multiple LTC or comorbidity issues.

APPROACH An overview of systematic reviews (SRs) was conducted to identify single-condition LTCs within which there is clear evidence of benefit from participating in exercise-based rehabilitation, and to explore how comorbidity or multiple-LTC issues had been previously managed. Database searches for SRs and supplementary primary studies were undertaken up to June 2022. Eligibility criteria included peer-reviewed SRs comparing exercise-based rehabilitation to usual care, no-exercise control, or alternative non-exercise interventions, in adults (≥18 years) diagnosed with an LTC from a pre-defined list of 45 LTCs. Outcomes included mortality, hospital admissions, exercise or functional capacity, frailty, disability, HRQoL and physical

activity. A single SR was selected for each LTC based on recentness, comprehensiveness, focus, methodology and outcomes, and the available evidence from selected SRs was extracted and summarised using a narrative synthesis. Methodological quality of selected SRs was assessed using the AMSTAR-2 tool.

FINDINGS Database searches yielded 11,074 unique records, from which 617 eligible SRs were identified. Forty-one SRs across 37 LTCs were selected with three supplementary primary studies for two LTCs, resulting in a total of 990 eligible randomised trials, and 936,825 participants. Five (12%) SRs were rated as high quality, 11 (26%) moderate quality, 12 (29%) low quality, and 14 (33%) critically low quality. Results identified 25 LTCs with strong evidence that exercise training is beneficial. Evidence was unclear or conflicting for 13 LTCs, and there was no evidence identified for six LTCs. Very few SRs described participant comorbidities, and where it was mentioned, it was most often as an exclusion criterion. None of the included SRs described exercise programme modifications for co-morbidities.

CONSEQUENCES Exercise-based rehabilitation is beneficial for many LTCs but current NHS commissioning of rehabilitation services is limited to a small number of individual LTCs (e.g., pulmonary/cardiac). There is urgent need to consider provision of such rehabilitation to people living with multiple LTCs. The individual LTCs identified by our review as benefiting exercise-based rehabilitation have informed the population inclusion criteria for our NIHR funded pilot randomised controlled trial to test the feasibility/acceptability of a rehabilitation intervention targeting people with multimorbidity.

Funding acknowledgement: This project is funded by the National Institute for Health and Care Research (NIHR) [Personalised Exercise-Rehabilitation FOR people with Multiple long-term conditions (multimorbidity)-The PERFORM trial (NIHR202020)]

3D.1

Using the Primary Care Academic Collaborative to explore patient safety in actioning and communicating blood test results

Presenter: Jessica Watson

Co-Authors: Polly Duncan, Ian Bennett-Britton, Samuel W D Merriel, Sam Hodgson, Salman Waqar, Alexander Burrell and Penny Whiting

Author Institutions: University of Bristol

Abstract

PROBLEM Errors associated with failures in filing, communicating, and actioning blood test results can lead to delayed and missed diagnoses and patient harms. Surveys and qualitative research have demonstrated that most UK general practices rely on patients contacting the practice for their test results, seldom using fail-safe mechanisms.

APPROACH This study recruited primary care clinicians from across the UK through the Primary Care Academic Collaborative (PACT). PACT members audited 50 recent sets of blood tests from their own practice and entered data into a REDCap database on the coding, actioning, and communication of blood test results. Participating PACT members received a practice report, showing their own results, benchmarked against other participating practices.

FINDINGS PACT members from 57 GP practices across all four UK nations collected data on 2572 patients who had blood tests taken in April 2021. When the PACT member reviewed the notes with the benefit of hindsight, in 89.9% of cases (n=2,311) they agreed with the initial GPs actioning of blood tests; 10.1% disagreed, either partially (n=183) or fully (n=78). In 44% of patients (n=1,132) an

action was specified by the coding GP (e.g. speak to doctor, repeat test). This action was carried out in 89.7% (n=1,015) of cases; in 6.8% (n=77) the action was not carried out, in 3.5% (n=40) it was not possible to tell from the medical records if the action had been carried out or not. In the 117 cases where the test result had not been actioned 38% (n=45) were felt to be at low risk of harm, 1.7% (n=2) were at high risk of harm, 0.85% (n=1) came to harm. Overall, in 47% (n=1,210) of cases there was no evidence in the medical records that test results had been communicated to patients. In patients with one or more abnormal test results (n=1,176), there was no evidence of test communication in 30.6% (n=360).In a follow up survey, 58% of PACT members had discussed their practice report in a practice meeting, and 50% had utilized these results for quality improvement, education, or practice learning.

CONSEQUENCES This research has important implications for patients and clinicians and demonstrates the importance of ensuring failsafe systems are implemented in primary care to ensure blood tests are actioned and communicated to patients. This study also has important implications for researchers, as it is the first to demonstrate the success of the PACT model, opening up opportunities for future research using this collaborative model. We have shown that PACT members can collect data which requires clinical interpretation of the GP electronic health records. We have also shown that sharing benchmarked results with participating practices can help stimulate quality improvement and could help widen participation in research beyond traditionally 'research active' practices.

Funding acknowledgement: This study was funded by NIHR Research Capability Funding (RCF) from Bristol, North Somerset and South Gloucestershire CCG (RCF21/22-1JW) and was also supported by the NIHR Applied Research Collaborative West (ARC West). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

3D.2

A concept mapping APPROACH to assess factors influencing the delivery of community-based salon interventions to prevent cardiovascular disease and breast cancer among ethnically diverse women in South London

Presenter: Dr Maham Zaman

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Author Institutions: 1 Department of Population Health Sciences, Kings College London; 2 Department of Nutritional Sciences, Kings College London; 3 Health Service & Population Research, Kings College London; 4 Kings College Hospital

Abstract

PROBLEM BACKGROUND In the United Kingdom (UK), women from ethnically diverse and socioeconomically deprived groups are at increased risk of underdiagnosis of cardiovascular disease (CVD) and low uptake for breast cancer screening. Earlier detection and management of CVD and raising breast cancer awareness and screening uptake in partnership with salons (successfully used in the US) could produce significant benefits for female patients and the NHS. AIMSTo explore the perceptions of hair and beauty professionals in the UK of the factors that could influence the ability of hairdressers and beauty therapists in community salons to promote a culturally adapted educational intervention to improve CVD and breast cancer awareness and screening.

APPROACH Concept mapping is a multi-stage mixed methods participatory approach Snowball sampling and dissemination of study information (online and face to face) amongst salon staff nationally was conducted to ensure multi-sectoral, geographical, and sociodemographic representation. to participate in concept mapping. Participants were given a focus prompt “What would be some factors that can influence the ability of salons to deliver this service?” and required to generate statements in response. Statements will be sorted into categories based on similarity and rated for importance and feasibility. Multidimensional scaling and hierarchical cluster analyses will be used to produce concept maps which will be discussed with participants.

FINDINGS A total of 19 participants participated in the first stage. We will report on statements generated by participants, as well as the clusters generated by them and their ratings for importance and feasibility. This will be depicted in a Go-Zone map that will show statements simultaneously rated above average in both importance and feasibility.

CONSEQUENCES Participatory approaches can support the development of educational community-based interventions aiming to establish partnerships between community assets and health systems for CVD and breast cancer awareness and prevention.

Funding acknowledgement: National Institute of Health Research for Patient Benefit Programme (NIHR202769) Royal Marsden Pan London Research fellowship

3D.3

A mixed-methods evaluation of urgent care delivered through telephone based digital triage

Presenter: Vanashree Sexton

Co-Authors: Dr Helen Atherton, Prof Jeremy Dale, Dr Gary Abel, Dr Catherine Grimley

Author Institutions: University of Warwick, University of Exeter(Dr Gary Abel)

Abstract

PROBLEM England’s urgent care is delivered via a two-step triage model, where initial (primary) triage is conducted by a non-clinician, this contrasts with other countries which do not widely use non-clinician led triage. In both models, software based digital triage is widely used by call takers to support the provision of referral and/or self-care advice, based on the patient’s symptoms. Despite wide adoption of digital triage, there is limited evaluation of patterns of use, triage outcomes, and patient experience, and patients’ subsequent use of healthcare following triage. Understanding these outcomes in the context of two-step triage may help to identify where the delivery can be improved which is particularly important, given the pressures faced by urgent and emergency care.

APPROACH A mixed methods study including an analysis of routine data from four urgent care providers in England to evaluate patterns of triage outcomes, including clincians’ overriding of: 1) primary triage outcomes and 2) digitally recommended triage outcomes. A qualitative study using semi-structured interviews and thematic analysis was used to explore patients’ experiences. A follow-on study of patients ED attendance and hospitalisation following two-step triage using Hospital Episodes Statistics (HES) data is planned.

FINDINGS Non-clinician triage was found to be risk averse, however, in calls about certain symptoms clinical risk appeared to be underestimated. There was substantial variation between clinicians in how likely they were to override urgency levels from the urgency assigned by the non-clinician, as well from the digital recommendation. Complexity

in two-step triage, and variation in call takers conduct of triage was evident in patients' experiences, additionally the patient's confidence and knowledge were seen to influence the triage outcome urgency. Additionally, it is hoped that preliminary findings relating to patients subsequent use of emergency departments and hospitalisation following two-step triage will be presented.

CONSEQUENCES This research has identified potential clinical risk and the highlighted the importance of clinician triage within the two-step model. The very high variation in how clincians use digital triage suggests inconsistency in care provision; further research is required to better understand why this occurs to improve the safety and consistency of care. Service providers should focus monitoring, auditing, and training on key areas of risk identified. Exploring patients service use following triage is additionally expected to better understand how patients go on to use the health system after using telephone based digital triage services in urgent care.

Funding acknowledgement:

3D.4

Equity, Diversity, and Inclusion (EDI) thinking in systematic reviews: the comparison of two tools for increasing the awareness and consideration of EDI in a systematic review of physical activity and heart failure.

Presenter: Alyson Huntley

Co-Authors: Lorna Duncan, Shoba Dawson, Rachel Johnson, Rosie Essery, Yasmin Ismail, Justine Baird, Karen Butcher, Emily Whight

Author Institutions: University of Bristol, University of Southampton, University Hospitals Bristol, North Bristol NHS Trust, Sirona Care

Abstract

PROBLEM It is important when we carry out health research to think about everyone who will benefit from the project, considering things like age, gender, race, where people live, what types of lives they lead. We call this equity, diversity, and inclusivity (EDI) thinking. Historically, researchers have not always been very good at this, and the participants involved in research have often been the easiest people to involve, rather than an appropriate range of people for whom the research is useful. This project is about EDI thinking in systematic reviews (SR) in health care.

APPROACH We used two tools that have been developed to help researchers consider EDI issues: the PROGRESS-Plus tool (PPT) and the Equality Impact Assessment tool (EqIAT). We compared these tools within our current SR 'Experiences of participation in physical activity by people with heart failure: a systematic review and meta-aggregation of qualitative studies'. (PROSPERO 2022 CRD42022342883). We followed the individual guidance on using the tools and documented our progress, the experience of the research team and the final impact on the completed review.

FINDINGS The PPT identified gaps in EDI thinking within the papers in the SR, with a lack of information around such items as occupation and social capita. Known inequities in heart failure research such as a low percentage of female participants and unrepresentative age groups were confirmed by the process. No papers explicitly outlined EDI thinking in their methods although age, sex and ethnic group representation issues are reported in some of the papers' discussions. In some papers we can see digital exclusion borne out by restrictive inclusion criteria for tele/remote/digital approaches.The EqIAT facilitated relevant EDI discussions around our topic area prior to and after the conduct of the SR which included the researchers, clinicians and our heart failure public and patient involvement group. This enhanced

awareness of EDI issues on our topic area prior to data extraction, some of which were relevant to the SR and some that were more generally relevant to people with heart failure. There were no discrepancies between our EqIAT discussions and the PPT items.

CONSEQUENCES Considering EDI issues in SRs is essential so that the evidence produced is relevant to patients and the public. Both the PPT and the EqIAT acted as a checklist to facilitate this process and support EDI thinking in health care research. The two tools differed in that PPT ensures that all relevant data is extracted from the included papers in a SR and identifies EDI issues for discussion and future research. The EqIAT is designed to ensure EDI thinking occurs before a SR is conducted, potentially at the protocol stage, and overlaps with the PPT in facilitating the output of a review.

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3D.5

Primary care research for all: two proof-of-concept studies using the Primary care Academic CollaboraTive (PACT) network

Presenter: Polly Duncan

Co-Authors: Polly Duncan, Jessica Watson, Ian Bennett-Britton, Alexander Burrell, Rupert Payne, Victoria Silverwood, Orla Whitehead, Salman Waqar, Beth Winn, Samuel W D Merriel.

Author Institutions: University of Bristol, University of Exeter, Keele University, University of Southampton, University of Oxford, University of Newcastle, University of Manchester

Abstract

PROBLEM There is often a disconnect between academic GPs, perceived as not 'real GPs', and clinicians working at the coalface of general practice, with few opportunities to develop and test their own research ideas. PACT is a new UK-wide research collaborative that aims to engage primary healthcare professionals (hereinafter 'PACT members') in high-quality research. The feasibility of using the PACT model is being evaluated in two studies. 'Why Test' aims to explore why tests are requested in primary care and how test results are communicated to patients. 'Care of Housebound patients in Primary care' (the 'CHiP study') aims to describe the characteristics and healthcare use of older (≥65 years) housebound patients – an under-researched group.

APPROACH For the 'Why Test' study, PACT members reviewed 50 patients' blood test results in each of their practices and inputted data into a database. For the 'CHiP study', PACT members will identify 20 older housebound and non-housebound people and collect both coded data and free text data (e.g. from hospital letters) from their GP records (target 20 practices, 400 housebound, 400 non-housebound). In both studies, a report with practice-level data, benchmarked against other practices, will be sent to all participating PACT members to identify areas for quality improvement. We will examine the feasibility of using the PACT network by collecting data about PACT members and practices who sign up and complete data collection and by assessing the quality of data collected.

FINDINGS Data collection for 'Why Test' is complete in 57 GP practices (target 50 practices) for 2572 eligible patients. 84% of PACT members who completed the project were not in formal academic training and 28% had never previously engaged with research.

Half of practices surveyed have already used the reports for quality improvement, education or practice learning. For the 'CHiP study', data collection procedures have been developed and piloted, eight practices have been recruited and data collection has started. By this summer, we expect to have recruited our target of 20 practices and completed data collection.

CONSEQUENCES The 'Why Test' and 'CHiP' studies demonstrate that it is feasible to use a network of trainees and healthcare professionals with no formal academic training to conduct high quality primary care research. Using the PACT model, clinically trained PACT members extract non-coded data from the electronic GP records, answering important research questions which cannot be answered using routinely collected data. Furthermore, PACT members with little or no research experience, are provided with opportunities to take part in high quality research. Practices have been resoundingly positive about receiving practice-level reports, benchmarked against other practices. The PACT network is growing with 700 PACT members currently. Our next challenge will be to support PACT members to develop and test their own research ideas.

Funding acknowledgement: The 'Why Test' study is funded by NIHR Research Capability Funding (RCF) from Bristol, North Somerset and South Gloucestershire CCG (RCF21/22-1JW) and is also supported by the NIHR Applied Research Collaborative West (ARC West). The CHiP study is 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.

3D.6

Adherence to statins and LDL-cholesterol control: a population-based study using primary care data

Presenter: Juan Carlos Bazo-Alvarez

Co-Authors: Juan Carlos Bazo-Alvarez, Kingshuk Pal, Tim P Morris, James R Carpenter, Rafel Ramos, Irene Petersen

Author Institutions: University College London (UCL), Institute for Primary Health Care Research Jordi Gol i Gurina (IDIAPJGol)

Abstract

PROBLEM Statins are associated with cardiovascular disease risk reduction due to their direct effect on low-density lipoprotein cholesterol (LDL-C) levels. However, effective LDL-C control requires adherence to statin treatment. The association between adherence to statins and long-term LDL-C control has barely been studied in real-life contexts (e.g., primary care). We aimed to describe the impact of different levels of adherence to statin treatment on LDL-C control up to 5 years from the first statins prescription.

APPROACH Retrospective cohort study using UK primary care data (The Health Improvement Network). We evaluated individuals aged 40 to 99 between 2006 and 2018, observed from their first statin prescription date up to 5 years. For all patients, historical data of statins prescriptions were organised, using the NICE criteria to define the dosage level of each prescription record (1 = low intensity, 2 = medium intensity, 3 = high intensity). For each three months of individual follow-up (quarter), we selected the highest dosage recorded to define the dosage of that period. Then, we performed a latent class growth analysis to identify classes or clusters of patients with different adherence patterns (i.e., each class was characterised by a different type of adherence). For each class identified, we described the non-linear LDL-C

trajectory over time (up to 5 years of follow-up) by fitting fractional polynomial models. This allowed visualising longitudinal LDL-cholesterol change/control related to each class/type of adherence reached.

FINDINGS We observed 60,257 patients, 32,298 men (53.6%) and 27,959 women (46.4%). From latent class growth analysis, we detected six classes of adherence that were labelled as 1) extremely poor (16.9%), 2) very poor (16.4%), 3) poor (11.9%), 4) moderate (12.8%), 5) good adherence with medium dose (35.7%), 6) good adherence with higher dose (6.3%). LDL-C trajectories differed across adherence classes. For example, the group with “extremely poor adherence” controlled their cholesterol levels for a very short period (<1 year) and then got back to baseline levels of LDL-Cholesterol. Conversely, people with good adherence showed a stable control of their LDL-Cholesterol levels over time (up to 5 years). The trend was consistent across adherence classes, which means the better the adherence, the better the LDL-C control.

CONSEQUENCES We identified six classes of adherence to statin treatment, from extremely poor to good adherence, up to 5 years from treatment initiation. More than 1/3 of patients showed good adherence with medium dosage. In real-life contexts, people with better adherence reach better LDL-C control.

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3E.1

The hidden work of engaging with online services: ethnographic case study on digital facilitation

Presenter: Carol Bryce

Co-Authors: John Campbell, Laura Sheard, Stephanie Stockwell, Bethan Treadgold, Jenny Newbould, Rachel Winder, Helen Atherton

Author Institutions: University of Warwick, University of Exeter, RAND Europe

Abstract

PROBLEM There is a policy drive in the NHS in England for a digital first primary care service. Whilst some services, including online repeat prescription ordering, online booking and accessing your patient record online are well established, uptake has been variable. The Covid-19 pandemic accelerated the uptake of some online services and the introduction of others. This has raised questions about what support is needed to enable patients and staff to use these services.

APPROACH As part of a wider mixed method study looking at digital facilitation in primary care, we conducted an in-depth focussed ethnographic case study, aiming to understand how general practices facilitate patient use of online and digital services. We collected data through non-participant observation, document collection and semi-structured interviews with staff and patients. Sites were selected to include maximum variation in terms of practice size, patient demographics and levels of digital facilitation.

FINDINGS We recruited eight practices, and conducted 33 interviews with patients and 36 with staff. There was hidden work associated with supporting patients to use digital services. Practices lacked written strategies and policies for digital service implementation including how to support patients. Administrative staff were left to work out for themselves how to support patients and often this work was defaulted to members of staff perceived as tech savvy. A lack of planning for

digital support led to a 'collusion of anonymity'1 where responsibility for implementation and support was disjointed.

CONSEQUENCES Policy makers must take account of the invisible work that is required by staff and patients to allow them to engage with digital services. Until there is a clear understanding of the importance of planned implementation and support there will be groups who are underserved by the introduction of digital services in primary care.

Funding acknowledgement:

3E.2

Impact and experiences of offering HIV testing across a whole city population through primary care clusters and GP surgeries in the Texting 4 Testing (T4T) project

Presenter: David Gillespie

Co-Authors: Zsanett Lukács, Darren Cousins, Alessandro Ceccarelli, Lisa Power, Zoë Couzens, Lucy Wynne

Author Institutions: Fast Track Cardiff & Vale, Public Health Wales, Pride Cymru

Abstract

PROBLEM Widening access to HIV testing is considered to be an effective APPROACH to meet the UK government's goal of zero new HIV transmissions by 2030. In Cardiff and Vale (CAV), it is estimated that 2/1,000 residents are living with HIV and over 90% know their status. In 2021, a pilot offer to recommend online HIV self-sampling kits to all population covered by a cluster of GP surgeries in one area of CAV successfully diagnosed one individual with late asymptomatic HIV infection and was acceptable to healthcare workers and practice population. The question remained whether such interventions across a whole city would identify further undiagnosed cases and be acceptable to communities.

APPROACH The Texting 4 Testing (T4T) project aimed to support GP surgeries across CAV to send an SMS text invite to order a HIV test through a national online postal testing service (https://www.friskywales.org/) to all practice patients aged 16+. All nine primary care clusters in the region were APPROACH ed and where agreed, texts were sent from the practice. Click-throughs and subsequent test requests were logged with results collated. A survey of participating GP practices examined the impact on their services.

FINDINGS Six of the nine CAV primary care clusters had GP practices that sent text messages. From these, 20/41 practices sent 139,539 text messages to practice patients. There were 4,402 (3.2%) click throughs to the national online STI self-sampling service. In the eight weeks following text messages being sent, 418/2409 (17.4%) individuals ordering tests residing in a participating primary care cluster indicated that they had accessed the service after receiving a text message. Compared to those ordering a test who had not received a text message, those in receipt of a text message tended to be older, were more likely from a minority ethnic background, less likely to engage in oral sex, and 84.9% ordered a chlamydia/gonorrhoea test. Furthermore, compared to those ordering a test who had not received a text message, those receiving a text and ordering a test were less likely to return their test within 8 weeks (38.8% vs. 49.5%) and in those who returned a test positivity rates were lower (5.6% vs. 10.4%).

CONSEQUENCES Texting patients through GP surgeries is an acceptable strategy to deliver HIV testing at scale, was associated with a demographic shift in testers, and enabled testing for a wider range of STIs/BBVs beyond HIV. Lower positivity rates may imply that people are screening for STIs / BBVs rather than accessing the service due to symptoms. However, this approach may still have

population-level benefits by raising awareness of the service and reducing onward transmission. Further work is needed to explore barriers towards returning test kits and how this service would work in different contexts.

Funding acknowledgement: This work was funded by Gilead Sciences (community grant).

3E.3

Making sense of technology: Use and non-use of doctor-patient video consultations in Danish general practice

Presenter: Elle Lüchau

Co-Authors: Helen Atherton, Finn Olesen, Jens Søndergaard, Elisabeth Assing Hvidt

Author Institutions: University of Southern Denmark, University of Warwick, Aarhus University

Abstract

PROBLEM Video consultations were introduced in Danish general practice in 2020. Despite a strong political push towards the use of video consultations in Denmark and a great adoption rate in times of covid, video consultations now make up less than 2% of all consultations in general practice. Still, all GPs in Denmark must offer video consultations by the end of 2024. This is problematic as we lack knowledge about the reasons for the low and fragmented video consultation use. Consequently, in this study we are the first to explore how GPs interpret video consultations and how these interpretations influence their use or non-use of the technology.

APPROACH This study is based on 30 qualitative interviews with 27 Danish general practitioners conducted from August 2021 to August 2022. To study interpretative processes related to video consultations in general practice the interviews were analyzed through the lense of organizational theorists Orlikowski & Gashs' (1994) theory about "technological frames" and technologies' "interpretative flexibility".

FINDINGS Frame 1: Video consultation as compromising occupational values: For GPs who share this interpretative frame, there is a conflict between their identity and occupational values and the introduction of video consultation which leads to non-use or very limited use of the technology. These GPs place heavy emphasis on the physical, bodily aspect of their job. Frame 2: Video consultation as crisis tool: For GPs who share this frame, the video consultation is interpreted as a "crisis-tool" due to its introduction in times of covid, making it a need-to-have technology. Some GPs tied the video consultation strongly to the pandemic situation and consequently struggled to find a place for video consultation beyond the covid-crisis. Frame 3: Video consultation as the future: For GPs who share this frame, video consultation is interpreted in a flexible and optimistic way as a technology leading to more time efficiency, freedom and improved access to healthcare. Nevertheless, not all GPs have started to use the technology. Frame 4: Video consultation as tool to improve work conditions: For GPs who share this frame, using video consultations regularly aligns well with their existing ambitions towards securing good work conditions and job satisfaction. This group of GPs believes video consultations to be a given part of their job which supports high use of the technology.

CONSEQUENCES Video consultations are differently adopted across general practices due to different interpretations of the technology and its relative advantage. Despite political goals for increased video consultation use, the future of video consultations still seems unpredictable. The relationship between occupational identity, values and use of video consultations deserves more attention. This study can help align political agendas with actual conditions of video consultation use in the clinics as political

decision makers continuously push for increased use of video consultations.

Funding acknowledgement: Funded by University of Southern Denmark, Health Insurance Denmark and The Fund for General Practice.

3E.4

Ethnic inequities in the patterns of Personalised Care Adjustments for 'Informed Dissent' and 'Patient Unsuitable': A retrospective study using Clinical Practice Research Datalink

Presenter: Brenda Hayanga

Co-Authors: Mai Stafford, Mark Ashworth, Jay Hughes, Laia Bécares

Author Institutions: King's College London, The Health Foundation

Abstract

PROBLEM General Practitioners in England voluntarily take part in the Quality and Outcomes Framework (QOF)– a programme to resource and reward good practice. Some patients receive a personal care adjustment (PCA) which excludes them from the statistics for this programme because they are considered 'unsuitable' (e.g. if they have complex care needs that require a different approach to treatment) or because they opt not to have the treatment/intervention offered. Patients who are older, living in deprived areas, and have multiple long-term conditions are more likely to have a PCA. Minoritised ethnic group people may be more likely to have PCAs as they are disproportionately represented in the most deprived areas and have as many or more long-term conditions than white people. We have a partial understanding of ethnic inequities in PCAs because prior studies have aggregated ethnic group populations, focused on specific conditions, or combined all PCA reasons. This study examines patterns of PCA reporting for 'informed dissent' and 'patient unsuitable', how they vary by ethnic group, and whether ethnic inequities can be explained by socio-demographic factors or comorbidities.

APPROACH This retrospective study uses individual patient data from Clinical Practice Research Datalink. The sample consists of patients aged 18+ years on the 1st of January 2016, with at least one of the 12 QOF conditions with PCA coding options, from a random sample of 690,00 patients. The associations between ethnicity and two PCA reasons ('Informed Dissent' and 'Patient Unsuitable') were examined using logistic regressions after adjustment for age, sex, multiple QOF conditions and area-level deprivation.

FINDINGS The association between ethnicity and the two PCA reasons were in opposite directions. After accounting for age, gender, multiple QOF conditions and area-level deprivation, people of Bangladeshi [OR: 0.69, 95% CI: 0.55 to 0.87], Black African [OR: 0.70, 95% CI: 0.61 to 0.81], Black Caribbean, OR: 0.67, 95% CI: 0.58 to 0.76], Indian [OR: 0.74, 95% CI: 0.66 to 0.83], mixed [OR: 0.86, 95% CI: 0.74 to 0.99], other Asian [OR: 0.74 95% CI: 0.64 to 0.86] and other ethnicity [OR: 0.66, 95% CI: 0.55 to 0.80] were less likely to have a PCA record for 'informed dissent' than people of white ethnicity. Only people of Indian ethnicity were significantly less likely than people of white ethnicity to have a PCA record for 'patient unsuitable' in fully adjusted models [OR: 0.80, 95% CI: 0.67 to 0.94]. We found ethnic inequities in PCA reporting for 'patient unsuitable' among people of Black Caribbean, Black other, Pakistani, and other ethnicity, but these attenuated after adjusting for multiple QOF conditions and/or area-level deprivation.

CONSEQUENCES Study findings counter the narratives that suggest that people from minoritised ethnic groups often refuse medical intervention. They illuminate the

complex relationship between 'informed dissent' and (dis)empowerment which requires further scrutiny. They also show ethnic inequalities in PCA reporting for 'patient unsuitable' that are linked to clinical and social complexity and should be tackled to improve health outcomes for all.

Funding acknowledgement: This work is funded by The Health Foundation (AIMS 1874695)

3E.5

Digital facilitation in primary care, a focused ethnographic study of the experiences of staff, patients and stakeholders.

Presenter: Jenny Newbould

Co-Authors: Carol Bryce, John Campbell, Emma Pitchforth, Laura Sheard, Stephanie Stockwell, Bethan Treadgold, Rachel Winder and Helen Atherton

Author Institutions: RAND Europe, University of Warwick, University of Exeter

Abstract

PROBLEM The NHS is under pressure due to the increasing demands of a growing and ageing population and changing expectations amongst the public. Recent NHS policy in England has advocated the greater use of digital services, with a vision of a fully digitally integrated primary care service. The Covid-19 pandemic has seen the rapid development and use of digital services within primary care. Some patients may require assistance in setting up and/or using digital services, which has been termed digital facilitation. Digital facilitation may be important for patients who struggle to navigate digital primary care services. This study aims to understand, from the perspective of practice staff and patients/carers, the potential benefits and challenges associated with different models of digital facilitation in primary care.

APPROACH This work, part of a large study of digital facilitation in primary care, used an in-depth focused ethnographic APPROACH in eight general practices sampled to include a variety of demographic characteristics. As part of focused ethnography interviews were conducted with practice staff (n=36) and patients/carers (n=33).

FINDINGS Digital facilitation was seen as valuable but was poorly conceptualised, and it was often unclear where the responsibility for digital facilitation lay within the practice. A range of approaches to digital facilitation were identified; proactive, reactive, or a mixture of both. Reactive approaches were observed in practices, where digital facilitation was provided in response to individual patient need. Digital facilitation was often conducted by members of the administrative team who lacked formal training on digital services and associated technologies. We observed embedded attitudes about who needs digital facilitation. For instance, assumptions were made about who may or may not be able to use digital services which were not necessarily grounded in evidence. Different groups of patients had different needs in relation to digital facilitation. Individual circumstances were important when it came to the need for digital facilitation.

CONSEQUENCES Successful digital facilitation needs dedicated funding, infrastructure and staff training, not currently accessible in primary care. For the NHS to reach its ambition of greater use of digital approaches in general practice, targeted investment and support are required in staff time and training. Some patient groups, such as marginalised groups, may require tailored digital facilitation approaches customised to their needs.

Funding acknowledgement: This work was funded by NHIR (NIHR128268).

3E.6

The illusion of inclusion: digital transformation in general practice

Presenter: Jackie van Dael

Co-Authors: Chrysanthi Papoutsi, Claire Reidy, Felix Greaves, John Powell, Sara Shaw

Author Institutions: University of Oxford, Imperial College London

Abstract

PROBLEM There is significant impetus towards ensuring the health service provides inclusive and equitable care, including through remote means. Several policy initiatives aim at addressing inequalities for disadvantaged groups and a range of programmes specifically support digital inclusion. In this presentation we draw on two examples of digital 'transformation' in general practice to surface persistent challenges with delivering inclusive care remotely and to identify fine-grained practices staff adopt to carefully navigate inclusion.

APPROACH We draw on two NIHR-funded, mixed-methods evaluation projects in English general practice. The first focused on the large-scale, top-down, national roll-out of the NHS App (2020-2023) and the second on the small-scale, bottom-up introduction of video and hybrid group consultations (VHGCs) (2022-ongoing). Working with 8 clinical sites, here we primarily combine our qualitative data which included: a) 67 interviews with 25 patients/carers, 40 (non-)clinical staff and 25 decision-makers, b) 4 focus groups with 22 patients/carers, c) observations in 20 group consultations and back-end operational processes (53hrs).

FINDINGS We observed significant complexity in efforts to establish and maintain inclusion (across its different dimensions). As a top-down policy initiative, national roll-out of the NHS App raised several inclusion challenges for general practice, especially as patients viewed their surgeries as first port of call for queries related to the app. Such inclusion work was made difficult for staff given little resource or training was provided, regular updates meant they found it difficult to keep up with changes, and limited functionality was provided for languages other than English. Despite staff effort to carefully manage inclusion/exclusion boundaries (e.g. reserving offline appointments, creating patient champion roles, restricting frequent users), it was not always clear to patients how exclusionary effects were managed and by whom. In contrast, as a bottom-up initiative, VHGCs were locally and flexibly led by enthusiastic clinicians. Still, significant gaps were identified as staff familiarised themselves with the potential for exclusion in VHGCs, but local implementation offered more opportunities for creatively developing inclusion strategies based on intimate and direct knowledge of patients (e.g. ad hoc testing, IT support, access to local digital inclusion campaigns, adjusting the service model). While in many cases resolving inclusion gaps, these adaptive strategies were by nature informal and ad hoc, which made them challenging to sustain, and in some cases, led to the abandonment of VHGCs and a return to in-person models..

CONSEQUENCES In both studies active inclusion work was performed but remained largely unacknowledged in a system under pressure. More emphasis is needed on the multiple ways in which inclusion challenges manifest in technology-supported general practice, on appropriate distribution of responsibility across formal and informal channels, and on opportunities to grow adequate infrastructural support rather than sustain an 'illusion' of inclusion through short-term solutions.

Funding acknowledgement: Both studies were funded by the National Institute for Health and Care Research (NIHR) Health and Social Care Delivery Research (HSDR) Programme (NIHR133895 and NIHR128285)

3F.1 (Workshop)

Developing an LGBTQ+ INCLUDE Framework

Presenter: Adam DN Williams

Co-Authors:

Author Institutions:

Abstract

Aim and intended outcome: We are aiming to develop a LGBTQ+ framework to assist those designing clinical trials, to consider barriers related to sex, gender and sexuality which may exclude certain groups from engaging in trial research. The outcome from this workshop will be to engage various healthcare professionals, researchers, policy officials and lay individuals to explore sex, gender, and sexuality in relation to trial research and engagement.

Format: Introduction and brief explanation of the framework and plan for its development (5 mins) Split room into groups – each group discusses and answers the 4 key INCLUDE questions in relation to sex, gender and sexuality. Answers can be written or via visually creative means i.e., drawings, cartoons, sketches. Workshop facilitators will float between groups or have 1 per group depending on availability of team (20mins). Bring whole room together to discuss answers to each question / present any visuals created. Drawing out more the fundamentals, sensitivities needed to be considered and any challenges identified. (30 mins). Summary and end of session (5 mins).

Content: Minimal content will be covered except for providing the INCLUDE 4 key questions as a basis for focusing the discussion. We want the content to be provided from those attending the workshop, identifying and addressing the current engagement of LGBTQ+ groups within trial research with consideration of barriers and facilitators in relation to the 4 key INCLUDE questions.

Intended audience: All individuals attending the conference can engage with this workshop, we hope to engage a spectrum of individuals to support the development of the framework (Max 30 attendees).

4A.1

Understanding the diagnostic timeliness of cancer patients with pre-existing morbidities: What do different methodological APPROACHes tell us?

Presenter: Gary Abel

Co-Authors: Bianca Wiering, Sarah Price, David Shotter, Jose M. Valderas, Sam Merriel, Sarah Moore, William Hamilton, Luke Mounce

Author Institutions: University of Exeter, National University of Singapore, University of Manchester

Abstract

PROBLEM Studies have suggested that cancer patients with pre-existing co-morbidities experience longer times between presentation in primary care and diagnosis (diagnostic interval) than patients without co-morbidities, potentially contributing to worse outcomes in these patients. However, establishing these timelines depends on the identification of an index consultation, which has the potential to introduce bias when comparing groups with different background consulting patterns. Here we aim to compare findings from traditional approaches of investigating diagnostic timeliness with an alternative approach based on trends in the rate of consultations prior to diagnosis.

APPROACH Using linked primary care and cancer registration data for patients diagnosed cancer (2012-2018) we constructed 4 groups with varying multimorbidty burden using the Cambridge Multimorbidity Score. The diagnostic interval was calculated for all patients with a feature of possible cancer in the year before diagnosis. We also used a

novel maximum likelihood based methods to estimate the time before diagnosis when population consultation rates increased (the inflection point) stratified by multimorbidity burden group.

FINDINGS The median diagnostic interval was 63 days which varied by multimorbidity burden; 35 days in those without pre-existing comorbidities; 135 days in the highest burden group. Contrastingly, the consultation rate inflection point varied little by morbidity burden; 126 days in those without pre-existing comorbidities or low/medium morbidity burdens; 112 days in those with high burden (p=0.054). Results by cancer site will also be discussed.

CONSEQUENCES Our findings that cancer patients with multimorbidity have longer diagnostic intervals concur with previous work using similar methodology. However, using a different approach we reach the conclusion that multimorbidity has little impact on diagnostic timeliness. We posit this difference can be explained by an artefactual bias in traditional approaches. Given these findings, explanations for worse outcomes in patients with pre-existing morbidities, other than delayed diagnosis, should be sought.

Funding acknowledgement: This study/project is funded/part funded by the NIHR Programme Grants for Applied Research (PGfAR) SPOtting Cancer among Comorbidities (SPOCC) programme: supporting clinical decision making in patients with symptoms of cancer and pre-existing conditions (NIHR201070). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

4A.2

Does residency (rural vs. urban) influence the uptake of cervical, breast and colorectal cancer screening in Scotland?

Presenter: Jamie Collins

Co-Authors: Professor Peter Murchie, Dr Lisa Iversen

Author Institutions: University of Aberdeen

Abstract

PROBLEM It has been documented in the literature that rural dwellers tend to have poorer cancer survival rates, are more likely to experience cancer-related mortality and typically present with more advanced disease compared to their urban counterparts. A previous systematic review established a general pattern of lower screening uptake in breast, cervical and colorectal screening among rural dwellers in multiple countries across the world. However, of the studies included, few were conducted in the United Kingdom and even fewer focused on Scotland. We aimed to investigate whether there was a difference in cervical, breast and colorectal cancer screening uptake between rural and urban areas across Scotland.

APPROACH Datasets for cervical, breast and colorectal screening were obtained from Public Health Scotland. For each cancer dataset, we calculated screening uptake rate with separate estimates for residency status (urban/rural) as determined by the Scottish Government Rural Urban Classification, age group, sex (colorectal only), year, health board and Scottish Index of Multiple Deprivation (SIMD) quintile. To-way interaction effects were investigated between residency status and SIMD quintile, and residency status and health board. Median GP list size (by health board), Shetland & Orkney data and Breast Screening Programme interviews were conducted to supplement and contextualise quantitative data.

FINDINGS Cervical screening (25-49 years): Uptake was higher in rural areas (73.3%) compared to urban areas (69.7%). After adjustment, there was no observed interaction between residency status and

deprivation. Two health boards demonstrated higher rural uptake, two demonstrated lower rural uptake and seven demonstrated no difference.Cervical screening (50-64 years): No significant difference in uptake in rural (75.7%) or urban (75.7%) areas. After adjustment, there was no observed interaction between residency status and deprivation. Four health boards demonstrated higher rural uptake, two demonstrated lower rural uptake and five demonstrated no difference.Breast screening: Uptake was higher in rural areas (77.1%) compared to urban areas (71.0%). After adjustment, as deprivation increased, screening uptake in rural areas increased. Three health boards demonstrated higher rural uptake, two demonstrated lower rural uptake and nine demonstrated no difference.Colorectal screening: Uptake was higher in rural areas (62.5%) compared to urban areas (56.6%). After adjustment, as deprivation increased, screening uptake in rural areas increased. Ten health boards demonstrated higher rural uptake, two demonstrated lower rural uptake and two demonstrated no difference.

CONSEQUENCES Cancer screening uptake and residency status share a complex relationship. Generally, rural residency appeared to be associated with increased odds of screening uptake across Scotland. However, the pattern of screening uptake is much less consistent when confounders are considered. Reasons for the variation seen may be partly explained by differences in organisation between screening programmes and the topography of Scotland.

Funding acknowledgement: NHS Grampian Endowments for providing funding for the wider cancer screening project.

4A.3

Complexities in cancer diagnosis: An embedded qualitative intervention development study for the Think Cancer! trial on early diagnosis of cancer in primary care

Presenter: Julia Hiscock

Co-Authors: Rebecca-Jane Law, Annie Hendry; Katherine Brain, Stephanie Smits, Stefanie Disbeschl, Nic Nikolic, Richard Neal, Clare Wilkinson on behalf of the Think Cancer! team.

Author Institutions: Bangor University, Cardiff University, University of Exeter

Abstract

PROBLEM Every four minutes someone in the UK dies from cancer. UK cancer mortality is worse than in many high-income countries. Diagnostic delays, including delays in primary care, partly explain this.The aim of the 'ThinkCancer!' intervention is to improve cancer diagnosis and therefore survival. A theoretically driven, novel, complex behavioural intervention to reduce primary care cancer diagnostic delays, it was rigorously developed, then tested in a mixed-method feasibility trial. The aim of the embedded qualitative study, reported here, was to obtain in-depth understanding of GP personal beliefs and behaviour and practice team systems and norms, on diagnosis of cancer. The originality is in combining individual GP behaviours with practice systems and culture.

APPROACH This embedded study used a qualitative design to fulfil its aim of obtaining in-depth data. It was trial development work, conducted in Wales.Rigorous purposive sampling ensured a range of GPs (years since qualification, rurality, deprivation) and practices (training practice status, rurality).Twenty telephone interviews were conducted with GPs and four face-to-face focus groups with practice teams.Analysis used Framework, which facilitates analysis both by theme and case. The final stage, interpretation, involved in-depth, explanatory level analysis to identify patterns, links and associations. Interpretative analysis sessions

with the wider research team allowed us to map, discuss, scrutinize and eventually finalise the emerging themes.

FINDINGS The findings demonstrate complex, multi-level considerations facing GPs and practice teams in the process of cancer referral. Tensions emerged between internal, individual considerations of GPs and context-dependent pressures.Detecting cancer was guided, not just by external requirements, but also by personal motivations and considerations that GPs described as part of their cancer diagnostics process: standards, integrity, emotions, relationships, reputation, autonomy, 'gut feeling'.External influences and pressures on diagnosis processes often resulted from the primary-secondary care interface, including rejection or 'downgrading' of GP referrals. GPs, in response, adapted their behaviour, including delaying referral 'until it was obvious', increasing referral workup or developing (often informal) ways to ensure referral acceptance. Positive practice culture and helpful practice-based systems ameliorated these tensions and complexity.

CONSEQUENCES The study originality is combining individual GP behaviours with practice systems and culture, at this level of granularity. We hope that this approach will influence future research practice. These FINDINGS influenced the design of the Think Cancer! intervention, now rolled out as a RCT, with likely influence on clinical practice and policy.These research findings matter because they contribute new understandings on improving cancer diagnostic delays in primary care. They highlight a commonly overlooked problem of the dynamics and tensions shaping early cancer diagnosis in primary care. Importantly, they show how positive practice cultures and systems can ameliorate these tensions. This has implications for clinical practice and policy, highlighting the importance of whole-practice interventions.

Funding acknowledgement: Cancer Research Wales

4A.4

Symptom attribution and clinical decision-making among general practitioners relating to lung cancer investigations for patients with pre-existing COPD: a vignette study

Presenter: Lucy Mitchinson

Co-Authors: Alexandra Blyth, Dr Christian Von Wagner, Dr Cristina Renzi,

Author Institutions: Research Department of Behavioural Science and Health, University College London, London, UK.

Abstract

PROBLEM It is essential that patients presenting to their general practitioner (GP) with symptoms possibly associated with lung cancer are promptly referred for diagnostic investigations. The presence of a pre-existing chronic condition (also termed comorbidity) may delay cancer diagnosis, as the comorbidity might provide alternative explanations or be prioritised over symptom investigation. Chronic Obstructive Pulmonary Disorder (COPD) is a degenerative condition which impacts the lungs and shares many symptoms with lung cancer. As patients with COPD are at increased cancer risk, it is important to understand clinical decision-making regarding investigations for a possible lung cancer in general practice. We aimed to investigate the role of pre-existing COPD on GP symptom attribution and clinical decision-making in relation to lung cancer diagnosis.

APPROACH An online cross-sectional vignette survey was conducted with a panel of UK GPs. Four vignettes were developed which described general symptoms (weight loss and fatigue) or respiratory symptoms (breathlessness and cough) in patients with or without COPD. In an online survey, GPs were asked to read the vignettes and provide the first, second and third most likely diagnoses in a free-text box. GPs were also asked to select

up to 4 referral actions from a pre-coded list. Free-text responses on symptom attribution were examined using content analysis. Binomial and multinomial logistic regressions were used, including cluster-robust standard errors. The primary outcomes of interest were the attribution of symptoms to a lung cancer and selection of an urgent chest x-ray referral (as recommended by current UK NICE guidelines). Analyses were conducted on overall (i.e. GP attributed symptoms to lung cancer at any likelihood) and 'most likely' attribution.

FINDINGS 422 vignettes were completed by 109 GPs. Lung cancer was the most frequent attribution for patients presenting with general symptoms, with no difference by COPD status (61.32% for those with and 62.62% for those without COPD at the 'most likely' level). For patients presenting with respiratory symptoms, the most frequent attribution was COPD for patients with the comorbidity (48.57%) and 'other respiratory conditions' for patients without (47.12%). General symptoms were a significant predictor of lung cancer attribution regardless of COPD status (OR= 2.44, 95% CI 1.39 – 4.26). Attribution of lung cancer as the 'most likely' cause of symptoms was the only significant predictor of urgent chest x-ray referral (OR = 2.63, 95% CI = 1.31 – 5.25).

CONSEQUENCES In our study, COPD status did not play a role in influencing GP symptom attribution or referral action, despite the higher risk of lung cancer associated with COPD. It is important for GPs to consider the possibility of an underlying cancer in patients who present with respiratory symptoms, particularly for those with COPD, as such symptoms were often attributed to the comorbidity which may delay necessary diagnostic investigations.

Funding acknowledgement: This research was funded by an NIHR grant for the SPOtting Cancer among Comorbidities (SPOCC) project.

4A.5

Can incorporating lower risk symptoms into urgent cancer referral guidance detect cancers earlier?

Presenter: Sarah F. Moore

Co-Authors: Sarah F. Moore, Sarah Price, Richard D. Neal, Willie Hamilton

Author Institutions: University of Exeter

Abstract

PROBLEM Reducing the threshold for urgent cancer referrals in England is a potential path to identifying cancers earlier. The current threshold is set at a positive predictive value (PPV) of ≥3% for presenting features resulting in a diagnosis of cancer. Our previous study showed that reducing this to ≥2% or ≥1% would increase the numbers of patients eligible for referral by 8% and 136%, respectively, across 11 cancer sites.What we now need to explore is whether patients presenting to their GP with a ≥3% risk feature also present with a lower risk feature in the preceding year. If this were the case, lowering the referral threshold might allow them to be identified earlier, resulting in improved outcomes if diagnosed with cancer.

APPROACH This observational cohort study used data from the Clinical Practice Research Datalink. Information on PPVs of potential features of 11 cancer sites (bladder, breast, colorectal, endometrium, kidney, larynx, lung, oesophago-gastric, ovary, pancreas, prostate) was collated and stratified into bands of PPV≥3%, 2-2.99% and 1-1.99%. For each cancer site studied, we identified patients presenting in 2016 with a feature meeting at least one criterion for PPV≥3%. The earliest occurrence was nominated the index date. We then identified patients who presented with any features meeting criteria in the 2-2.99% or 1-1.99% bands within a year before the index date. For multiple instances of meeting a criterion, the furthest instance from the index within a year was used. Analysis was

conducted using Stata and results presented as detailed descriptive statistics.

FINDINGS In 2016, of 150,921 eligible patients in our sample, 8576 presented with a feature with a PPV of ≥3% for one of the 11 cancers. Of those, 365 (4.2%) and 1147 (13.3%), respectively, presented with a feature meeting 2-2.99% PPV and 1-1.99% PPV criteria in the preceding year. The percentages were heterogeneous across cancer sites, ranging from 0 (bladder, breast, endometrium, kidney, pancreas) to 9% (larynx) for those meeting 2-2.99% PPV criteria and from 0 (endometrium, larynx, ovary) to 30.7% (oesophago-gastric) for those meeting 1-1.99% PPV criteria in the preceding year.

CONSEQUENCES This information could underpin changes to NICE guidance on thresholds for urgent cancer referral in England. Although limited by lack of linked cancer referral and diagnosis data, the detail of progression of specific features from low to high risk across multiple cancer sites will allow for a tailored APPROACH to any future reduction in referral thresholds. Further work to estimate the potential impact on referrals and diagnoses will strengthen this evidence and increase its potential for influence on policy.

Funding acknowledgement: This project is funded by the National Institute for Health and Care Research (NIHR) School for Primary Care Research as part of a GP Career Progression Fellowship awarded to SFM. SP is funded by the National Institute for Health Research Policy Research Program, conducted through the Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis, PR-PRU-1217-21601. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

4A.6

The ThinkCancer! Intervention: results and lessons learned from a phase II feasibility trial in Wales

Presenter: Annie Hendry

Co-Authors: Nicola Nikolic, Clare Wilkinson, Stefanie Disbeschl, Alun Surgey, Daniel Walker, Lowri Griffiths, Janice Rose, Rachel Evans, Nia Goulden, Bethany Anthony, Victory Ezeofor, Julia Hiscock, Rhiannon Tudor Edwards, Nefyn Williams, Andrew Carson-Stevens, Kathe

Author Institutions: Bangor University, Cardiff University, Exeter University, Liverpool University

Abstract

PROBLEM Early diagnosis is key to improving cancer outcomes. “ThinkCancer!” is a novel complex behaviour change intervention designed to reduce primary care diagnostic delays by improving stage shift in cancer diagnosis. ThinkCancer! is designed for primary care teams and consists of a series of online educational and quality improvement sessions, culminating in the design of a bespoke practice safety netting plan and nomination of a practice safety netting champion to support implementation and change. ThinkCancer! was tested in a feasibility trial to assess intervention feasibility and acceptability and to determine the most appropriate clinical outcome measures for a phase III trial.

APPROACH This feasibility study incorporated a pragmatic, superiority pilot RCT with an embedded process evaluation and feasibility economic analysis. The unit of randomisation was the general medical practice, and the clinical outcome data were collected from practices. Practices also completed questionnaires on practice characteristics and cancer safety netting systems. Post-workshop, individual staff members completed evaluation and feedback forms, and a select group participated in qualitative interviews.

The intervention was adapted and refined throughout the trial.

FINDINGS The trial recruited participating practices across Wales between March 2020 and May 2021, with a 5 month pause due to COVID; workshops were delivered between December 2020 and May 2021. Trial progression criteria for recruitment, intervention fidelity and routine data collection were met. Staff-level fidelity, retention and ability to collect individual level data were reviewed and processes amended for the newly funded phase III trial. Interviews highlighted positive participant views on all aspects of the ThinkCancer! intervention, all practices set out to liberalise referral thresholds appropriately, implement guidelines, and create detailed safety netting action plans.

CONSEQUENCES ThinkCancer! was found to be feasible and acceptable, and the results and lessons learned from the feasibility study have informed the final iteration of the ThinkCancer! workshop and the design and delivery of a definitive phase III trial to assess the effectiveness and cost effectiveness of this novel behaviour change intervention. Strategies have been designed to improve retention, staff-level fidelity and individual data collection, and delivery at scale to multiple practices will likely improve fidelity and reach and may allow for cross pollination of best practice between practice teams.

Funding acknowledgement: Cancer Research Wales and North West Cancer Research

4A.7

What is the risk of cancer after a negative urgent suspected cancer referral?

Presenter: Suzanne Scott

Co-Authors: Thomas Round, Carolynn Gildea, Deb Smith, Ruth Evans, Jo Waller, Brian Nicholson

Author Institutions: Queen Mary University of London, King's College London, University of Oxford, NHS Digital

Abstract

PROBLEM Over 2 million patients are referred each year on urgent two-week wait (TWW) pathways to rule-out cancer in England. The vast majority of those referred (over 90%) do not have cancer initially diagnosed. We do not know the subsequent cancer risk following negative initial referral. This is an under researched area and of clear importance given millions going through pathways. TWW may be a 'teachable moment' when people are responsive and receptive to health information.

APPROACH We extracted cancer registration data for all TWW referrals in England 2013/14 with five-year follow up. Eight main TWW referral groups were included. Those who had no cancer diagnosis within 12 months of TWW referral were included. Number of cancers for years 1-5 (Y1-5) was calculated, and subgroups for main TWW pathways. Expected cancer incidence for each group based on age/sex distribution was modelled. Y1-5 standardised incidence ratio (SIR) was calculated for each group following negative TWW. Analysis was for risk of all cancers and then for the same cancer type as initial referral.

FINDINGS There were 1.32 million TWW referrals across eight main cancer pathways in 2013/14 of which 1.13 million were found not to have cancer. Of these, 63,112 (5.4%) were diagnosed with cancer Y1-5 years post referral. Expected cancer risk in Y1-5 was 4%, SIR 1.27, i.e. 27% high cancer risk. Highest risk was in Y1-2 (SIR 1.33), with similar pattern for main referral types. The lowest absolute risk for any cancer Y1-5 followed negative breast TWW (3%), the highest was for urological and lung TWW, (8% and 7% respectively). For same cancer diagnoses as the initial TWW pathway, the lowest Y1-5 absolute risk was lower GI (0.7%, SIR 0.94). Urological and lung

pathways had the highest absolute risk for the same cancer diagnoses as the initial pathway (4% and 3%, SIR 2.37 and 3.0 respectively).

CONSEQUENCES Five-year cancer risk and SIR has been calculated for the first time following negative initial TWW to compare future cancer risk across TWW pathways. Risk of any cancer was 27% higher than expected, particularly highest in the first few years, informing potential cancer reduction messaging and safety netting. Y1-5 risk was highest for those with negative initial urological and lung TWW assessments, suggesting the potential requirement for more active monitoring and follow up for this group. Following a negative lower GI TWW patients can be reassured that their Y1-5 risk of developing lower GI cancer appears lower than expected.

Funding acknowledgement: This work was funded by Cancer Research UK [EDDCPJT\100015].

4A.8

How cost-effective is a biomarker and low-dose CT scan compared to standard care in the early diagnosis of Lung cancer?

Presenter: Frank Sullivan

Co-Authors: Pfrof Frances mair, Dr Nicola McMeekin, Dr. Jose Antonio Robles

Author Institutions: Universities of St Andrews and Glasgow

Abstract

PROBLEM Diagnostic blood tests have the potential to identify lung cancer in people at high risk, detecting lung cancer at an early stage with associated survival advantages. We conducted an economic evaluation to assess the cost-effectiveness of a screening intervention, using the EarlyCDT®-Lung Test with subsequent x-ray and low-dose chest CT scans (LDCT) for patients with a positive test result, compared to both usual care and LDCT screening for the whole target population.

APPROACH A lifetime analyses with a UK NHS and personal social services perspective was conducted using a decision model for a target population of 1,000 individuals, where model parameters came from the ECLS study and literature. The model simulated the probability distribution of stage at cancer detection (early vs. late) for each evaluated alternative. Quality adjusted life years assigned to patients was dependent on stage at detection, costs dependent on the diagnostic pathway followed by patients and on cancer stage at diagnosis. We estimated net monetary benefit (NMB) at policy relevant cost-effectiveness thresholds for base-case, deterministic sensitivity, and scenario analyses.

FINDINGS The base case incremental NMB of the ECLS intervention compared to no screening were £2,890 (95% CI: -£92,700, £97,500) and £90,800 (95% CI: -£56,700, £237,000) respectively for a cost-effectiveness threshold of £20,000 and £30,000 per QALY. The same figures compared LDCT screening were respectively £183,000 (95% CI: £90,000, £278,000) and £103,000 (95% CI: -£39,400, £248,000). A deterministic sensitivity analysis showed that the cost-effectiveness results change with modifications of the prevalence of lung cancer in the target population and with variations in the cost of the EarlyCDT®-Lung Test. A scenario analysis confirmed that the EarlyCDT®-Lung Test performs better than a zero-cost random test and showed that if the sensitivity of the test is assumed 25% (rather than base case 52%) the ECLS intervention would further be not cost effective at a £30,000 per QALY threshold.

CONSEQUENCES The base case analysis results estimated that the ECLS intervention is the most cost-effective alternative, with highest probability, when compared to no screening or LDCT screening. This result may change with modifications of the parameters

prevalence of lung cancer and EarlyCDT®-Lung Test cost, suggesting that the three alternatives considered in the main analysis could be potentially cost-effective for some specific risk of the target population and the cost of testing.

Funding acknowledgement: Oncimmune Ltd and the Scottish Government Health & Social Care Directorate of the Chief Scientist Office (CSO).

4A.9

Effectiveness of COVID-19 vaccination in people with blood cancer

Presenter: Emma Copland

Co-Authors: Jennifer Hirst, Emma Mi, Martina Patone, Carol Coupland, Julia Hippisley-Cox

Author Institutions: University of Oxford

Abstract

PROBLEM Blood cancer patients are at high risk of severe COVID-19 outcomes and were prioritised for COVID-19 vaccination in the UK. However, compared with the general population, people with haematological malignancies are known to have poorer response to COVID-19 vaccination, indicated by antibody and cellular responses. The aim of this study was to assess the effectiveness of COVID-19 vaccination against severe COVID-19 outcomes in people with blood cancer.

APPROACH We analysed individuals with blood cancer aged ≥12 years on 1st December 2020 in the QResearch UK primary care database. The outcomes were COVID-19-related hospitalisation, ICU admission and mortality. We used a matched case-control design, matching on age, sex and calendar time, to estimate odds ratios (ORs) for outcomes in vaccinated versus unvaccinated blood cancer patients using conditional logistic regression models, adjusted for body mass index, ethnicity, deprivation, comorbidities and previous SARS-CoV-2 infection. We incorporated dose number and time since vaccination to investigate the level of protection afforded by booster doses and vaccine waning, and conducted stratified analysis across time periods when Alpha, Delta and Omicron BA.1 SARS-CoV-2 variants were dominant. We also compared vaccine effectiveness in blood cancer patients who received chemotherapy during the study period to those who did not.

FINDINGS The analysis included 81,793 people with blood cancer. During the study period, 1740 blood cancer patients experienced COVID-19-related hospitalisation, of whom 97 were admitted to the ICU, and 1119 died from COVID-19. For the primary course of vaccination, blood cancer patients were most protected against COVID-19 hospitalisation 2-6 weeks after the second dose (OR 0.43 [95% confidence interval (CI) 0.24-0.76] compared to unvaccinated) but after 26 weeks, vaccine effectiveness had waned (OR 1.01 [95%CI 0.74-1.39] 182-272 days after second dose compared to unvaccinated). Across all doses, vaccine effectiveness against COVID-19 hospitalisation was highest 2-6 weeks after the third dose, and remained high up to 14 weeks after the third dose (OR 0.35 [0.24-0.50] 14-41 days and OR 0.37 [95%CI 0.28-0.49] 42-97 days after third dose compared to unvaccinated). The likelihood of COVID-19 hospital admission 2-6 weeks after the fourth dose was lower than in unvaccinated individuals (OR 0.70 [95%CI 0.47-1.04]), but effectiveness was not as high as after the second or third doses. Preliminary results suggest there is heterogeneity in vaccine effectiveness across time periods when different SARS-CoV-2 variants were dominant, and that COVID-19 vaccines were less effective in those who received chemotherapy during the study period compared to those who didn't.

CONSEQUENCES The preliminary results of this analysis suggest that COVID-19 vaccines are effective in blood cancer patients, but

protection against COVID-19 hospitalisation starts to decline after approximately six weeks. Analyses of COVID-19 ICU admission and mortality outcomes, in different blood cancer types and comparisons against the general population are ongoing.

Funding acknowledgement: This work was funded by Blood Cancer UK.

4B.1

Using a child's antibiotic history as a data-enabled brief intervention to optimise antibiotic prescribing

Presenter: Oliver Van Hecke

Co-Authors: Aleksandra Borek, Sarah Tonkin-Crine, Chris Butler

Author Institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford

Abstract

PROBLEM One in four GP appointments are for children. Many of these appointments are for "respiratory tract infections" (RTIs). At least 1 in 3 children are prescribed an unnecessary course of antibiotics for these illnesses. Recent research from over 250,000 UK children highlighted those children who had taken two or more antibiotic courses for RTIs in the last year had around a 30% greater chance of not responding to treatment for future RTIs compared to children who had not taken no antibiotics.

APPROACH Our primary aim was to explore the feasibility of using a child's antibiotic history as a data-enabled brief intervention to optimise antibiotic prescribing. This research has two phases. In phase 1, through a series of 'think aloud' workshops and interviews, we worked together with parents and clinicians on how best to design the computer screen prompt and personalised consultation print-out and whether this would be acceptable for parents and clinicians. In phase 2, GPs/nurses have the opportunity to explore and use a prototype computer-based prompt and consultation flyer/print-out, developed from Phase 1 and integrated into the GP computer software (EMIS) and share their feedback through a series of 'think aloud' interviews to refine the intervention.

FINDINGS We have iteratively co-developed two components of an electronically embedded intervention (computer-screen prompt, patient-facing flyer/print-out) with parents of young children, clinicians and information design specialists. Phase 2 is currently in progress.

CONSEQUENCES We will produce an automated computer screen prompt that is acceptable and feasible to use during GP consultations and is ready to be tested in a future trial. If shown to be effective, such automated electronic tools could be scaled up in GP practices to promote better antibiotic prescribing for children.

Funding acknowledgement: Academy of Medical Sciences Starter Grants for Clinical Lecturers (REF:SGL024\1040)

4B.2

Developing Acne Care Online: early insights from developing a digital behaviour change intervention to support effective treatment of acne in young people

Presenter: Rosie Essery

Co-Authors: Mary Steele, Charlotte Cairns, Rebekah Le Feuvre, Nick Francis, Paul Little, Matthew Ridd, Alison Layton, Sinéad Langan, Andrew Thompson, Mahendra Patel, Adam Yates, Tracey Sach, Sophie Dove, Kate Henaghan-Sykes, Ingrid Muller, Miriam Santer

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

Abstract

PROBLEM Acne is very common, affecting more than 90% of teenagers, and persisting in up to 60% of young adults in their twenties. It is often associated with physical discomfort, and frequently negatively impacts on individuals' mental wellbeing. Topical treatments for mild-to-moderate acne are effective, but many young people are unaware of appropriate treatment options. This leads to reliance on ineffective off-the-shelf products, and/or potentially avoidable treatment with oral antibiotics. Amongst those who do access topical treatments, adherence is often low due to slow onset of action, or lack of advice on how to manage side effects. The Acne Care Online programme aims to develop a digital behaviour change intervention to support young people to access and effectively use topical treatments to improve acne outcomes. The primary aim of this development work was to understand beliefs and expectations about acne and acne treatments, as well as help-seeking and adherence-related behaviours amongst young people with acne and their parents/carers, to guide content development.

APPROACH Employing the Person-Based approach to intervention development, we conducted semi-structured qualitative interviews with a diverse sample of 24 people with acne aged 13-25 years (9 aged 13-15, 15 aged 16-25; 14 who had previously consulted, 10 who had not; 9 White/White British, 7 Asian/Asian British, 4 Black/ Black British, 2 other ethnic group, 2 undisclosed), and 8 of their parents/carers. Interviews were audio-recorded and transcribed. Field notes documented immediately after interview were triangulated with the intervention's draft logic model and key publication findings to rapidly identify key context-specific behavioural issues relevant to developing intervention content to support this group.

FINDINGS These insights highlighted the importance of drafting intervention content that would clearly communicate several core messages to address the beliefs and experiences of teenagers and young adults about acne symptoms and treatments. Firstly, that there is a distinction between proven acne treatments and general skincare products and that the latter should not be relied upon to treat acne. It also appeared important to emphasise that acne is a medical condition that warrants medical help-seeking and is not wasting clinicians' time. Finally, it seemed important to communicate that individuals should take action in treating their acne if it is impacting on their physical and/or mental health, rather than because of a need to change the way their skin appears.

CONSEQUENCES Alongside insights from patient and public contributors, published literature, and relevant theory, these insights were vital to informing the provisional 'guiding principles' and 'behavioural analysis' processes which underpinned the person-based development of early Acne Care Online structure and content. Qualitative think aloud interviews are currently ongoing to iteratively optimise Acne Care Online content in preparation for a feasibility trial beginning in late 2023.

Funding acknowledgement: This project is funded by the National Institute for Health and Care Research (NIHR) under its Programme Grants for Applied Research (PGfAR) Programme (Grant Reference Number NIHR202852). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

4B.3

Seasonal trends in antidepressant prescribing, depression, anxiety, and self-harm in adolescents and young adults: an

open cohort study using UK primary care data

Presenter: Ruth Jack

Co-Authors: Rebecca M Joseph, Chris Hollis, Julia Hippisley-Cox, Debbie Butler, David Waldram, Carol Coupland

Author Institutions: University of Nottingham, University of Oxford

Abstract

PROBLEM Weather and seasons, or stressful periods associated with their education could affect young people's mental health. Members of a Young Person's Advisory Group asked us to investigate whether there are particular periods in the year when adolescents have more mental health issues. We aimed to examine whether there are different seasonal trends in primary care antidepressant prescribing, depression, anxiety, and self-harm in adolescents compared with young adults in England.

APPROACH We used information about antidepressant prescribing and mental health events between 2006 and 2019 from the QResearch database, which contains anonymised primary care electronic health records. We studied males and females in three age groups: 14-18 years (adolescents), 19-23 years and 24-28 years. We calculated monthly incidence rates and incidence rate ratios of prescriptions for the most commonly prescribed antidepressants (selective serotonin reuptake inhibitors) and records of depression, anxiety and self-harm. Incidence rate ratios were adjusted for year, region, deprivation, ethnic group and number of working days in a month.

FINDINGS The study included 5,081,263 people over 17.9 million person-years. Antidepressant prescribing, depression and anxiety incidence rates were higher in autumn months for male and female adolescents, but not for the older age groups. For female adolescents, the highest incidence rate ratios compared with January were in November for SSRI prescribing (1.75, 95% confidence interval: 1.67-1.83, p<0.001), depression (1.29, 1.25-1.33, p<0.001) and anxiety (1.17, 1.13-1.22, p<0.001). For male adolescents, the highest incidence rate ratios were also in November for SSRI prescribing (1.72, 1.61-1.84, p<0.001) and depression (1.29, 1.23-1.35, p<0.001), and in September for anxiety (1.19, 1.12-1.27, p<0.001). Self-harm was lowest in August for adolescents, lower in July-December for 19-23-year-old females and stable throughout the year for other groups.

CONSEQUENCES There were higher rates of antidepressant prescribing, depression and anxiety at the start of the school year in adolescents. Support around mental health issues from GPs and schools should be focussed during this period. Future studies should examine whether these results apply to younger children and develop interventions to lessen their impacts on adolescents.

Funding acknowledgement: The study was funded by the National Institute for Health and Care Research School for Primary Care Research (NIHR SPCR), grant reference number: 479.

4B.5

TRAINS: a pragmatic cluster RCT to prevent summer holiday drop in asthma prescription uptake in school-age children.

Presenter: Rami Alyami

Co-Authors: Rebecca Simpson, Phillip Oliver, and Steven A. Julious

Author Institutions: University of Sheffield

Abstract

PROBLEM Abstract Following the summer break, asthma exacerbations peak in school-aged children. Research shows a drop in prescription pickups in August, followed by a rise in unscheduled healthcare provider visits

in the next period. As an investigation of this, a cluster randomized controlled trial (PLEASANT) revealed that a family doctor's reminder letter to parents of asthmatic children during summer vacation increased prescription collections in August by 30%, and the number of unscheduled care visits decreased after school was back in September. A cost saving of £36.07 per patient per year was also estimated as a result of this intervention. Objective: To conduct a randomised trial to assess whether advising GP practices of an evidence-based intervention leads to the use of that intervention by GP practices.

APPROACH Design: A pragmatic cluster randomised trial using routine data, which utilises the Clinical Practice Research Datalink (CPRD) to both deliver the intervention and gather all data.Participants: 1389 general practitioner practices in England were included (694 in the intervention group and 695 in the control group).Intervention arm: Received a letter from CPRD regarding the findings of the PLEASANT study, along with recommendations. The letter was sent in June 2021 via postal mail and email to the asthma lead or practice manager. Control arm: Usual careRandomisation: GP practices were stratified by practice size and randomly assigned to the intervention or control group. Main outcome: Proportion of children with asthma who have a prescription for an asthma preventer medication in August and September 2021.

FINDINGS We are currently engaged in a comprehensive analysis of the data and findings. By the time the conference rolls around, we will be ready to present the results to the attendees.

CONSEQUENCES Sending an intervention, such as a letter, to General Practitioners (GPs) can increase GPs' awareness of the issue being addressed, leading to more informed decision making and better patient care.

Funding acknowledgement: The study has been funded by Saudi Cultural Bureau in the UK (SACB) and Jazan University.

4B.6

Healthcare professionals' priorities for training to identify and manage distress experienced by young people with a stoma due to inflammatory bowel disease: a consensus study using online nominal group technique

Presenter: Benjamin Saunders

Co-Authors: Kay Polidano, Carolyn A Chew-Graham, Tamsin Fisher, Nadia Corp, Megan McDermott-Hughes, Adam D Farmer, Lucy Bray

Author Institutions: Keele University, Edge Hill University, University of Malta, University Hospitals of North Midlands NHS Trust

Abstract

PROBLEM Young people, aged 16–35, who have a stoma due to inflammatory bowel disease (IBD), commonly experience distress related to body image concerns, sexual difficulties, reduced social functioning and lowered self-esteem. General Practitioners (GPs) are a first point of contact for addressing this distress; however, stoma-related distress may not be disclosed or discussed and/or is sub-optimally managed in clinical settings. Early and effective healthcare support may reduce the risk that the young person will develop depression. This study aimed to gain consensus among a multidisciplinary group of healthcare professionals (HCPs) on the priorities for training in the identification and management of distress in this population.

APPROACH Two online consensus group meetings were carried out in June and July 2022, using Nominal Group Technique (NGT), a systematic approach to building consensus which follows a distinct set of stages.

FINDINGS Nineteen HCPs participated in one of two NGT meetings (group 1= 10 participants; group 2= 9): GPs, clinical psychologists, stoma care nurses, IBD nurses and gastroenterologists. Participants were located across England, with one IBD nurse based in the USA. Twenty-five ideas were generated by participants, 19 of which reached consensus of >80%, that is, a mean average of >5.6 on a 7-point Likert scale. These included: recognising and validating different levels of, and variation in, distress; tackling stigma and 'normalising' having a stoma; everyday practicalities of stoma management, e.g. food and sleep hygiene; information about physical issues related to stoma surgery and understanding what is 'normal' in terms of function; opening and holding conversations about stoma-related distress; exploring with patients the role of family and peer support; considering the impact of different cultural views and beliefs on adaptation after stoma surgery; training in simple techniques for gauging the patient's distress in the specific moment; having conversations about body image; and myth-busting of common fears patients may hold, for instance in relation to odour.

CONSEQUENCES A strong level of consensus was reached among HCPs for 19 topic areas relating to the identification and management of stoma-related distress. This reflects the varied needs that young people with a stoma have, indicating that training in a range of areas is required for HCPs to meet these needs. findings have implications for improving healthcare provision for this group through raising awareness among HCPs of important areas to address in supporting young people with an IBD stoma, specifically in relation to their mental health needs. The findings will also directly inform the development of an information and training package for HCPs, to enhance the identification and management of stoma-related distress, that is being co-produced with young people with an IBD stoma and HCPs.

Funding acknowledgement: This work was funded by the National Institute for Health Research (NIHR) School for Primary Care Research (SPCR) grant number: 516.

4B.7

Accuracy of the LqSOFA and National PEWS scores for detecting serious illness in acutely unwell children presenting to general practice

Presenter: Kathryn Hughes

Co-Authors: Amy Clark, Rebecca Cannings-John, Enitan Carrol, Emma Thomas-Jones, Gerri Sefton, Alastair Hay, Chris Butler, Kathryn Hughes

Author Institutions: Cardiff University, University of Liverpool, Alder Hey Children's NHS Foundation Trust, University of Bristol, University of Oxford.

Abstract

PROBLEM Children with acute illnesses commonly present in general practice. Most have mild and self-limiting infections but a minority of children have a serious illness. Clinical tools may help to identify which children are at high risk of serious illness and need to be admitted to hospital and which children can safely be managed at home. A widely used tool, the National Institute for Health and Care Excellence (NICE) Traffic Light system has recently been validated in general practice and found to perform poorly. The LqSOFA score was developed for use in Emergency Departments and was found to perform well in this setting. A new standardised paediatric early warning system (National PEWS) is currently undergoing development and validation in hospitals throughout England. It is essential that any tool developed in another setting is validated in general practice before it is recommended

for use by GPs. The aim of this study was to determine the accuracy of the LqSOFA and National PEWS scores at identifying children who need to be admitted to hospital, for use in general practice.

APPROACH This study uses data from a retrospective cohort of acutely unwell children aged under five years presenting to general practice in England and Wales. Study data was linked with hospital admission data from NHS Digital within the Secure Anonymised Information Linkage (SAIL) Databank. The primary outcome was a hospital admission within two days of the index GP consultation.

FINDINGS 6,703 children were included in the study. Using a threshold of 1 point or more, the LqSOFA score had an area under the curve (AUROC) of 0.58 (95% confidence interval: 0.53 to 0.63), sensitivity of 30.6% (21.8% to 41.0%) and specificity of 84.7% (83.7% to 85.6%). Using a threshold of 1 point or more, National PEWS (age <12 months) had an AUROC of 0.53 (0.49 to 0.58), sensitivity of 95% (77% to 99%) and specificity of 12% (10% to 14%). National PEWS (age >12 months) had an AUROC of 0.57 (0.52 to 0.63), sensitivity of 75.9% (63% to 85%) and specificity of 38.7% (37% to 40%).

CONSEQUENCES Neither tool performed well, with low AUROCs. With a low sensitivity, the LqSOFA score is not suitable for use in general practice. The National PEWS had a higher sensitivity, however, confidence intervals were wide. Specificity was low, limiting its value, as the majority of children seen in general practice would be flagged as high risk.

Funding acknowledgement: This study used linked data from the LUCI Study which was funded by Health and Care Research Wales. It also used cohort study data from the DUTY study which was funded by the HTA.

4B.8

Title: Are children who receive their first Measles Mumps and Rubella (MMR1) vaccination by 24 months more likely to share a household with older non-vaccinated children?

Presenter: Milena Marszalek

Co-Authors: Nicola Firman, Ana Gutierrez, Marta Wilk, Gill Harper, Kate Homer, Kelvin Smith, Paul Simon, Carol Dezateux

Author Institutions: Wolfson Institute of Population Health Sciences, Queen Mary University of London

Abstract

PROBLEM No UK country reaches the WHO target of 95% MMR1 coverage by age 24 months, essential for herd immunity (1), and this has worsened during the pandemic, increasing the risk of a measles outbreak (2). National data do not examine coverage across all children sharing the same household. We used primary care electronic health records to link people in households (3) and explored associations between household characteristics and MMR coverage. Specifically, we examined whether children receiving their MMR1 by 24 months were more likely to share a household with children also not vaccinated by this age and variation in coverage by ethnic background and household composition.

APPROACH We identified all children born between 2014-2019, eligible for MMR1 and sharing a household with at least another child from the primary care EHRs of 1,192,630 children registered with general practitioners in North East London between 2001-2021. We identified household members at the MMR1 date of our cohort of interest (3). We estimated the proportion (95% Confidence Interval [CI]) of children receiving MMR1 by age 24 months. We calculated mutually adjusted prevalence ratios (PR) by sex, ethnicity, deprivation (Index of Multiple Deprivation (IMD) quintiles), household size

and household composition to examine household-level associations in MMR1 coverage.

FINDINGS We identified 70,968 children (36186 [50.9%] boys) from 8,3517, households, of whom 18,417 (26.0%), 19,961 (28.1%), 5817 (8.2%), 6680 (9.4%) were from White, South Asian, Black, and Mixed/Other ethnic backgrounds respectively (20,093 (28.3%) ethnic codes missing). Overall, 67,527 (80.9%) children in eligible households received an MMR1 by 24 months, of whom 95.7% were living with children who also received it by this age. After mutual adjustment for sex, ethnicity, deprivation and household composition, children from South Asian ethnic backgrounds (PR 1.01; 95% CI: 1.00,1.01) were more likely, and those from mixed ethnic backgrounds (PR: 0.98; 95% CI: 0.97,0.99), living in single adult households (PR: 0.97, 95% CI: 0.97-0.98) or in households with >4 children (PR: 0.96, 95% CI: 0.95-0.96) less likely, to receive MMR1 by 24 months of age.

CONSEQUENCES Household composition is associated with MMR1 coverage. Children living in single adult households or with larger numbers of children are less likely to receive MMR1 by 24 months. Further work is needed to explore the reasons for this and identify actionable opportunities using data-enabled primary care interventions to reduce vaccination inequalities and prevent measles outbreaks. 1) http://bit.ly/3DZjUCG2) http://dx.doi.org/10.1136/bmjopen-2022-0662883) DOI: 10.23889/ijpds.v6i1.1674.

Funding acknowledgement: Barts Charity

4B.9

Documented adolescent dysmenorrhoea (period pain) and adolescent endometriosis in English general practice: prevalence and social patterns

Presenter: Sharon Dixon

Co-Authors: Andrew Snelling, Tom Ranger, Katy Vincent, Julia Hippisley-Cox

Author Institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford (SD, AS, TR, J-H-C), Nuffield Department of Women's and Reproductive Health, University of Oxford (KV)

Abstract

PROBLEM Dysmenorrhoea affects up to 94% of teenagers who menstruate, with a third experiencing severe pain. Menstrual pain disrupts school and leisure activities, and may contribute to central pain sensitisation. Despite the existence of effective treatment, most teenagers don't access medical care, although a recent English survey reported 29.5% of teenagers have seen doctors about periods. Menstrual pain occurs in the absence of identifiable causes (primary dysmenorrhoea), but can also be a presenting symptom for other conditions (secondary dysmenorrhoea). Endometriosis is the commonest cause of secondary dysmenorrhoea in adolescents, but is believed to be under-recognised, with delays between presentation with symptoms and diagnosis.

APPROACH To explore the prevalence of recorded dysmenorrhoea in adolescents accessing general practice in England, we undertook a descriptive epidemiologic study conducted within the QResearch database. QResearch is a validated database containing the anonymised GP health records of over 35 million individuals. We report the annual prevalence of recorded dysmenorrhoea amongst female-at-birth individuals aged 10-19 years in England between 1.1.2010-30.6.2021, stratified by age, region, ethnicity, and socio-economic status (SES).

FINDINGS In a cohort of 2,414,103 adolescents recorded as female in their GP records, 4.02% had documented dysmenorrhoea, and 0.8% had recorded endometriosis. The peak age for dysmenorrhoea was 16, whilst endometriosis diagnoses increased throughout adolescence. The annual prevalence of dysmenorrhoea and endometriosis did not fluctuate considerably throughout the study period. We observe variation in the prevalence of both dysmenorrhoea and endometriosis by ethnicity and socio-economic status (SES). Using self-reported ethnicity from GP records, adolescents documented as white had a higher prevalence of recorded dysmenorrhoea, and a significantly higher rate of diagnosed endometriosis. Adolescents with a documented ethnicity other than white were 27% less likely to have documented dysmenorrhoea (OR 0.73 (0.71, 0.74), $p < .001$) and 72% less likely to have a documented diagnosis of endometriosis (OR 0.28 (0.23, 0.33), $p < .001$). There was some variability within this, for example, those with documented Caribbean ethnicity had the highest prevalence of dysmenorrhoea (6.32% cf. 4.34% for white adolescents). However, this did not translate into the highest prevalence of endometriosis diagnosis (0.05% cf 0.1% for white adolescents). While there was no obvious pattern between prevalence and geographic region, the prevalence of recorded dysmenorrhoea and endometriosis in adolescence were both inversely socially patterned, reducing from the highest to lowest SES brackets.

CONSEQUENCES The prevalence of dysmenorrhoea in GP records is significantly lower than community surveys of symptom prevalence and health seeking suggest. The prevalence of diagnosed endometriosis in adolescence is low. There is differential prevalence of both dysmenorrhoea and endometriosis by ethnicity and SES, more marked for endometriosis. The relatively low levels of coding or healthcare seeking and discernible demographic patterns in this observational epidemiologic study warrant further exploration.

Funding acknowledgement: This study was funded as part of Sharon Dixon's NIHR Doctoral research fellowship NIHR301787. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

4C.1

GP Workforce Sustainability to maximise effective and equitable patient care: a realist review of what works, for whom and in what circumstances?

Presenter: Sophie Park

Co-Authors: Emily Owen, Bryan Burford, Tanya Cohen, Claire Duddy, Harry Dunn, Claire Goodman, Cecily Henry, Lily Lamb, Margaret Ogden, Tim Rapley, Eliot Rees, Gillian Vance, Geoff Wong.

Author Institutions: University College London, University of Oxford, Newcastle University, Northumbria University, and the University of Hertfordshire.

Abstract

PROBLEM There are not enough General Practitioners (GPs) in the UK National Health Service. This problem is worse in areas of the country where poverty and underinvestment in health and social care mean patients experience poorer health compared with wealthier regions. Encouraging more doctors to choose and continue in a GP career is a government priority. Our review will examine which aspects of the healthcare system affect GP workforce sustainability, how, why, and for whom. By taking a system and theory-driven approach to understanding what works, in which contextual circumstances, and to what extent, we aim to explore and make visible the often unsaid or implicit issues that influence

working environments, relationships, and organisational culture. The findings from our review will offer structural and organisational recommendations to inform sustainable, context-specific ways of future working, which can underpin effective and equitable patient care.

APPROACH We are conducting a realist review, synthesising data from the published literature to produce a refined evidence-based programme theory that will identify the important contexts and mechanisms which underpin observed outcomes relating to GP workforce sustainability to support the delivery of effective and equitable patient care. A realist review is an interpretive and theory-driven approach to evidence synthesis, that brings together data drawn from quantitative, qualitative, mixed methods research, the wider grey literature, stakeholder, and PPI engagement. Using this data and a realist logic of analysis allows us to examine a diverse range of evidence with a clear focus on understanding factors which support or challenge GP workforce sustainability, how these are shaped by important contexts, and the mechanisms that underpin them. Based on this understanding, captured in our final programme theory, we will be able to identify and prioritise important system-level contexts that may be amenable to change.

FINDINGS We will present our emerging findings in the form of a programme theory that will explain the relationships between the interconnected components (e.g. the nature of social interactions between patients, colleagues, and external institutions; alignment of personal and policy priorities; organisational support structures; and leadership culture) that work together in an integrated and coordinated way to sustain and enhance the GP workforce.

CONSEQUENCES Our research will generate new knowledge about the interdependencies between contextual factors, causal mechanisms, and outcomes of interest. The findings and refined programme theory can inform strategies and interventions intended to support, facilitate, and assist the GP workforce in delivering equitable and effective patient care. We will identify critical gaps in knowledge and prioritise the expectations for scope and nature of future GP work.

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

4C.2

How the changing role of the GP is impacting community palliative care: a qualitative interview study

Presenter: Tanuka Palit

Co-Authors: Bowers B (2), Chamberlain C (1), McCabe C (3) , Mitchell S (4), Selman LE (1) , Pocock L (1)

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Abstract

PROBLEM GPs are known to provide continuity and coordination of care within their role. Together with community nurses and specialist palliative care teams, GPs provide the majority of palliative care in private homes. With an ageing population and more patients dying at home, good community palliative care provision has never been more important. This was recognised by the 2022 UK Health and Care Act that now expects all Integrated Care Systems (ICS) to

commission palliative care services.Alongside increasing patient demand and a shrinking workforce, GPs are making changes to their working practice, including alternative ways of providing home visits. It is unclear how this has impacted the care for patients dying at home. This qualitative interview study explores the changing GP role in palliative care and how this has affected other healthcare professionals caring for patients receiving palliative care in the community.

APPROACH The study was carried out across two ICS areas in South West England. Purposive sampling was used to recruit participants from primary care, community nursing and specialist palliative care. Participants took part in semi-structured, audio-recorded interviews over video conferencing software. Recordings were transcribed verbatim, and analysed using a reflexive, inductive thematic approach.

FINDINGS Twenty-two participants took part, including seven GPs and one GP nurse practitioner, seven nurses and one healthcare assistant from the community nursing team, and six specialist palliative care nurses.Three key themes were identified: 1. Proactive versus reactive GP. Whilst some GPs believe they still offer continuity of care for patients, all participants describe GPs as 'firefighting'. A number of system, patient and GP factors were perceived to contribute to more reactive working. Examples of these factors were part-time working of GPs, increasing frailty and multimorbidity of patients, and changes to rules around death certification. 2. Loss of home visiting role. Reduced home visiting may have changed the GP-patient relationship, and led to a reliance on other roles such as paramedics and community nurses to carry out visits. 3. Fragile GP and community nursing relationship. Changes to GP visiting roles and the reduced accessibility of community nursing teams may have caused strains in relationships between these professionals.

CONSEQUENCES These findings highlight the desire for GPs to maintain a proactive approach when managing patients towards the end-of-life to ensure good continuity. Improved GP working with paramedics and community nurses may replace some home visits, and support the firefighting GP. Furthermore, it is important that GPs retain close working relationships with community nurses. Greater community nurse presence at multidisciplinary team meetings and systems to facilitate joint working with community healthcare professionals may help. Further research is needed to understand patient and families' experiences of the changing role of the GP and its impact on end-of-life care.

Funding acknowledgement: NIHR GP Academic Clinical Fellowship

4C.3

What are the facilitators of, and barriers to, the communication of poor prognosis between secondary and primary care? A systematic review with narrative synthesis

Presenter: Dr Lucy Pocock

Co-Authors: Palit T, McDermott A, Creavin S, Gilbert E, Merriel S, Moore S, Purdy S, Barclay S, Selman LE

Author Institutions: University of Bristol (Pocock, Palit, McDermott, Creavin, Gilbert, Purdy, Selman), University of Manchester (Merriel), Great Western Hospital NHS Foundation Trust (Moore), University of Cambridge (Barclay)

Abstract

PROBLEM The communication of poor prognosis between secondary care and primary care is important to ensure that patients with life-limiting illness receive appropriate and coordinated care. It allows GPs to prepare for the changing needs of the patient and provides an opportunity for advance care planning. We aimed to

synthesise the evidence regarding the communication of poor prognosis between secondary and primary care to inform clinical practice. The following questions were addressed:How is poor prognosis communicated? What are the facilitators of, and barriers to, this communication? How acceptable and useful is this communication to patients, family/carers and clinicians?What is the impact of this communication on patient care?

APPROACH Design: Systematic review with narrative synthesis. Four electronic databases were searched from 1st January 2000 to 17th May 2021 (re-run on 24th August 2022), supplemented by hand-searching five key journals. Any study reporting, in English, empirical data was included. Searches were developed to identify studies reporting any type of communication or intervention that facilitates the sharing of poor prognosis from secondary care to primary care, including the views and experiences of primary or secondary care clinicians and patients with incurable, advanced disease, or their (current or bereaved) carers. A quarter of titles and abstracts were independently screened by a second reviewer. Two reviewers independently undertook data extraction and quality appraisal using the Mixed-Methods Appraisal Tool. Data were synthesised into a narrative providing a critical overview and reported following PRISMA guidance.

FINDINGS Searches identified 23,853 unique records, 30 of which met the inclusion criteria. Few studies had a primary focus on the review questions and the quality of studies was highly variable, with only 18 meeting all possible appraisal criteria. Information about prognosis was not commonly communicated between secondary and primary care, but was more likely to occur if death was imminent. Challenges in the identification of patients with a poor prognosis by secondary care teams were a barrier to this communication. Facilitators included shared electronic records and direct clinician-clinician contact. GPs welcomed receiving prognostic information from secondary care colleagues and considered it vital for continuity of care.

CONSEQUENCES Although the communication of poor prognosis from secondary to primary care is highly valued, it happens rarely due to organisational or interpersonal challenges. Further research is necessary to understand the process of identification of poor prognosis and how good communication at the primary / secondary care interface can facilitate shared decision-making and continuity of care.

Funding acknowledgement: This study is funded by the National Institute for Health Research (NIHR) Doctoral Fellowship Programme (NIHR300928). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

4C.4

Creating a patient experience film to convey experiences and emotions of older people and their carers' interaction with general practice following discharge from hospital

Presenter: Rachel Spencer

Co-Authors: Zakia Shariff

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

Abstract

PROBLEM The immediate post-discharge period for older, vulnerable patients is a complex and error-prone time for GPs and patients/carers to navigate. The GP-MATE study uses a co-production technique, Experience Based Co-Design (EBCD), to create a communication-based solution to this problem. Creating a patient experience film is a perquisite for of EBCD. The film allows participants to tell their own stories of general practice care following discharge from hospital. The aim of this study was to create a

patient experience film to convey the experiences and insights of older people and their carers which triggers emotional and creative responses to stimulate co-production.

APPROACH Nine older patients discharged from hospital in the last three months or their carers were recruited from five practices in the West Midlands Participants were interviewed in person on film, in their homes or at a University site. The interview guide was developed using a journey format, allowing participants to talk about their post-discharge experiences and the communication that followed with their GP practice with minimal interruption. Results were analysed using framework analysis based on Leveque's Conceptual Access Framework. Key clips from this analysis were incorporated into a half hour film.

FINDINGS We present video clips from the film interviews that impactfully convey the experiences of older people and their carers following discharge from hospital. Participants spoke about the difficulties accessing general practice care following discharge due to; vulnerability, frailty and rapid change in appointment systems in general practice. They also spoke about the difficulties being empowered at this time of care transition, with a general preference for proactivity from the GP practice. Continuity of care was highlighted as key, with participants stating the importance of seeing the same clinician to ensure more personalised care is provided. Participants also spoke about the importance of being seen/heard as a person Our participants were very aware of the pressures in general practice and did not want to place addition burden on the system..

CONSEQUENCES The film clips from these interviews are a powerful catalyst for the co-production process and highlight participants' personal stories following discharge from hospital. Themes such as the importance of enhancing access will be bought forward to the co-production stage of EBCD, where participants will be directly involved in the design and development of a communication intervention that aims to enhance patient experiences of post-discharge care.

Funding acknowledgement: This study is funded by the National Institute for Health Research Advanced Fellowship (Award number 301328).

4C.5

A survey of patients' experiences of GP consultations since the introduction of the new GP contract in Scotland

Presenter: Kieran Sweeney

Co-Authors: Eddie Donaghy, David Henderson, Huayi Huang, Harry Wang, Stewart Mercer

Author Institutions: University of Edinburgh, Sun Yat-Sen University

Abstract

PROBLEM Scotland embarked on a new general practitioner (GP) contract in 2018 with the aim of improving quality of care through a redesign of primary care services. Changes included an expansion of the multidisciplinary team (MDT) with the aim of enabling GPs to provide longer consultations for patients with complex needs and multimorbidity. A stated aim of the contract was to mitigate health inequalities. The aim of this questionnaire study was to determine the characteristics, views and experiences of patients presenting in general practice in three population settings: remote, deprived urban and affluent urban Health Board areas of Scotland.

APPROACH A postal questionnaire was sent to a random sample of patients from selected practices who had consulted a GP within the previous four weeks. The practices included those serving mainly affluent urban areas, mainly deprived urban areas, and mainly remote areas. Data was collected on the sociodemographic and health characteristics

of patients and the nature and quality of their consultations using validated tools including the CARE Measure and the Patient Enablement Instrument (PEI).

FINDINGS 1053 out of 6291 patients from 12 practices responded (response rate 17%). Response rates were higher in affluent urban areas (27%) than in remote areas (20%) and deprived urban areas (12%) ($p<0.01$). In the deprived areas, multimorbidity (two or more long term conditions) was more common in consulting patients (78% vs 58% affluent vs 68% remote, $p<0.01$) and complex presentations (spanning physical and psychosocial issues) were more likely (16% vs 10% affluent vs 11% remote, $p<0.01$). A higher proportion of consultations in the deprived areas were conducted by telephone (42% vs 31% affluent vs 31% remote, $p<0.01$). Patients consulting in deprived urban areas viewed the GP as less empathic, reported lower enablement and lower satisfaction from their consultations, and had poorer self-reported outcomes than in both other areas (all $p<0.05$). On the same measures, patients in affluent urban areas had the best experience of GP consultations (all $p<0.05$).Overall, face-to-face consultations were associated with higher ratings of empathy, enablement and satisfaction than telephone consultations (all $p<0.05$) although self-reported consultation outcomes were similar. In all three settings, patients were mostly unaware of the expansion of the MDT (<50% awareness for 3 of 5 MDT roles), although most were happy to be triaged by reception staff (79% affluent urban vs 71% remote vs 66% deprived urban, $p<0.01$).

CONSEQUENCES Despite the vision of the new GP contract, patients in deprived urban areas in Scotland report poorer care and outcomes than those in more affluent urban areas or remote settings. Further efforts are required to tackle the inverse care law in Scotland.

Funding acknowledgement: Funding for this study came from the European and Social Research Council (ESRC)

4C.6

How are social prescribing link workers creating and maintaining professional networks in different socioeconomic areas?

Presenter: Amadea Turk

Co-Authors:

Author Institutions: Nuffield Department of Primary Care Health Sciences, University of Oxford

Abstract

PROBLEM Social prescribing link workers are being deployed across the NHS. A key part of their role is to network and establish relationships between primary care and community organisations. The aim of these networks is to create referral pathways and enable organisations to work collaboratively to fill gaps in community services provision. It is not currently clear how social prescribing might work in areas with high levels of socioeconomic disadvantage. In these areas, community infrastructure may be limited and overstretched, and thus link workers may struggle to build sustainable partnerships and social prescribing pathways that are responsive to patients' needs.

APPROACH We interviewed 20 link workers working across different socioeconomic areas (defined by Index of Multiple Deprivation) about their experience of undertaking their roles and connecting to organisations in their community. We also collected network data about the interactions link workers have with professionals in primary care and the voluntary and community sector. This includes data on the types of organisations they are connecting with and referring patients to, the number of work contacts they have, how frequently they interact with them, who they

go to for advice and support, as well as who they are working with to improve service capacity. Qualitative interview data is being analysed thematically and descriptive statistical approaches are being applied to the network data.

FINDINGS Our data highlight a number of challenges that link workers working in areas with high levels of socioeconomic disadvantage face and the crucial role that they play as bridges between primary care and community organisations. The data also speaks to the different ways in which link workers are being implemented across the NHS and the impact these different implementation models may have on link workers' ability to form and sustain social prescribing pathways.

CONSEQUENCES Our final analysis will help characterise the relational aspect of the link worker role, highlight the barriers and facilitators to the networking link workers undertake, and identify the skills and support they may require to successfully fulfil their roles to, in turn, support the equitable implementation of social prescribing. This study is the first to apply network approaches to the study of social prescribing. Network methodologies are not currently widely employed in health and social care research in the UK. This project presents an opportunity to demonstrate the value of such approaches for studying major policy initiatives such as social prescribing.

Funding acknowledgement: NIHR SPCR 529 NIHR Doctoral Research Fellowship NIHR302325

4C.7

The Experiences of Patients with Palliative Care needs and their Carers who have accessed Out-of-Hours Care in the Community: A Systematic Review.

Presenter: Laura Emery

Co-Authors: Mark Walker, Sarah Mitchell

Author Institutions: University of Sheffield

Abstract

PROBLEM Patients in the community with palliative care needs can struggle to access adequate care during the evenings, nights and weekends. The provision of high quality palliative care in the out of hours community setting is an enduring concern for policy makers and is a top priority for future research as identified by the James Lind Alliance.

APPROACH To understand the experiences of patients with palliative care needs, and their carers, who have received care from community out-of-hours services. This will identify areas of good practice as well as providing information to improve out-of-hours services. This systematic review studies the experiences of patients in the community with palliative care needs when accessing unscheduled care. Keyword searches were carried out in medical databases (Web of Science, Medline via OVID, SCOPUS and Embase via Ovid) to identify studies published in English between 1980 and 2021. Systematic narrative synthesis was undertaken, identifying cross-cutting themes from each study.

FINDINGS Nine studies were included. Unscheduled community care services accessed by patients with palliative care needs and their carers include out of hours General Practice and hospice at home services. Three themes have been identified: (1) there are multiple factors that influence the decision of a patient and carer decisions to access out-of-hours care, (2) the care received is highly variable, and (3) patients and carers value continuity of care. The design of the out-of-hours service can be off putting when patients and carers are considering accessing care as they are required to repeat their story multiple times. They are more likely to contact out of hours services if they are encouraged to do so and if they are contacting a familiar

service where they have previously had a positive experience. Hospice at home services are described in a positive manner. They have the potential provide continuity of care throughout the out-of-hours setting. They can help carers with the decision making process and facilitate the navigation of the out-of-hours services.

CONSEQUENCES Patients and carers have difficulties in deciding when to access help and where to seek help during the out-of-hours period. Hospice at home services may have the potential to provide the continuity of care during the out-of-hours setting that patient's desire. Patients and carers have positive experiences if they receive care from well informed health care professionals in a timely manner and negative experiences if these are not maintained.Future research is needed to understand the experiences of patients from more diverse ethnic backgrounds, those without a diagnosis of cancer, those who reside in care homes, and how hospice at home services can bridge a gap between in hours and out-of-hours care.

Funding acknowledgement:

4C.8

Population, workforce, and organisational characteristics affecting appointment rates in primary care: a retrospective cross-sectional analysis

Presenter: Tianchang Zhao

Co-Authors: Rachel Meacock, Matt Sutton

Author Institutions: University of Manchester HOPE

Abstract

PROBLEM This study aims to identify the population, workforce, and organisational predictors of practice variations in appointmentvolume. Appointment volume and the waiting time for appointments are direct measures of patient access to primary care. The practice level appointment data was published by NHS Digital for the first time in November 2022. Previous studies had to rely on self-reported survey data as measures of access.

APPROACH We conducted cross-sectional regression analysis using practice level appointment data collected from 6,284 GP practices in England in August to October 2022, to relate population age and deprivation, numbers of GPs, nurses and other care professionals, and organisation characteristics (e.g. practice rurality, contract type), to numbers of appointments by stafftype (GP or other practice staff) and to proportions of appointments took place on the same or next day after booking.

FINDINGS Appointment levels were higher at practices serving rural areas. Practices serving more deprivedpopulations had more appointments with other care professionals but not GPs. One additional fulltimeequivalent (FTE) GP per 1,000 patients was associated with an extra 175 appointments per1,000 population over three months. Additional FTEs of other staff types were associated with largerdifferences in appointment rates (367 appointments per additional nurse and 218 appointments peradditional other care professional). There was evidence of substitution between staff types inappointment provision. Levels of staffing were not associated with proportions of same or next dayappointments.

CONSEQUENCES Supply and demand predictors of variation in activity levels for all practices in England could not be identified until now. We show that appointment rates per person are higher for practices serving rural areas. Appointment rates with other care professionals are higher in deprived areas but appointment rates with GPs are not. This may indicate inequality in access to certain GP services. There is clear evidence of substitution between GPs and other care

professionals in the provision of appointments. This may indicate that recent policy efforts such as The Additional Roles Reimbursement Scheme (ARRS) is effective.

Funding acknowledgement: Tianchang Zhao is funded by a NIHR School for Primary Care Research PhD Studentship.

4C.9

The Role of General Practice in Bereavement Care after Death in the Acute Setting: a scoping review and model

Presenter: Chloe Gamlin

Co-Authors:

Author Institutions: University of Bristol

Abstract

PROBLEM Every GP in the country can expect an average of 20 patient deaths per year. Some studies report up to 72% of the adult population will have lost a loved one in the last five years. In short, bereavement will come to us all. General practice is well placed to offer care for bereaved patients in the community. Increasingly, patients spend their final moments in an acute hospital setting. It is well documented both in practice and the literature that an unexpected death, including in hospital, is a risk factor for developing complex or prolonged grief. For these patients in particular, their GP has the potential to intervene through effective and long-lasting bereavement support, yet provision can be patchy across the socio-economic continuum.

APPROACH This scoping review explores the current role of primary care in bereavement support and suggests a model to optimise this care after death in the acute setting. This work was conducted according to the Arksey & O'Malley framework for a scoping review. MEDLINE and EMBASE were searched extensively to identify relevant studies. There were no predetermined exclusion criteria, in keeping with an exploratory study. A total of 23 articles dating from 1998-2022 were included, from a variety of healthcare settings.

FINDINGS Analysis of the literature suggests a tripartite role for primary care in bereavement support, particularly in the case of an unexpected death in the acute setting. The first area to address is a robust method to identify affected patients within a practice population, such that they could then be offered relevant care. The bereavement support offered by general practice can then be split into conversations had 'in-house' whereby a therapeutic relationship is fostered, and the role of the GP as a 'broker' to facilitate access to other organisations for further, perhaps non-medical support. This can be summarised via a novel 'Triple Forte' model for bereavement care: Find, Foster, Facilitate.

CONSEQUENCES This review highlights multiple avenues for further research. Key areas include early intervention from general practice for potential complex grief following unexpected death, and exploration of the non-medical bereavement support services available to patients in the community. Improved understanding of the needs of this cohort and the resources available or desired is key to improving both provision and access to bereavement support across the social spectrum.

Funding acknowledgement: GP ACF post funded by HEE

4D.1

Perspectives on Contraception amongst Ethnic Minority Groups: A Qualitative Study. (Work in progress)

Presenter: Rebecca Mawson

Co-Authors: Emma Linton, Kate Fryer, Habiba Aminu, Caroline Mitchell

Author Institutions: University of Sheffield

Abstract

PROBLEM Unplanned pregnancies carry increased risks to mother and baby yet account for a significant proportion of UK births. Evidence suggests that women from ethnic minorities (EM) suffer from inequitable access to contraceptive services. There is a paucity of evidence regarding the views of EM women in this field. NICE suggest that 'additional support' is needed to provide contraceptive counselling to women from minority ethnic groups but provides little guidance on what this entails. Worryingly, recent research suggests that women from marginalised groups feel their communities are disproportionately 'targeted' to use LARCs. We will explore the perspectives of women from EM communities towards different methods of contraception, aiming to identify barriers and facilitators to access.

APPROACH We will use a qualitative study design comprising focus groups and interviews. We will use purposive sampling to recruit a diverse sample of women from ethnicities including Black African, Black Caribbean and South Asian as well as participants who do not speak English. To improve inclusivity, we will offer participants a choice of interview or a focus group. Analysis will follow the principles of Braun and Clarke's reflexive thematic analysis. Community engagement is integral to our methodology. We have close links with several community groups working with people from ethnic minorities. We have recruited 3 women from these groups as community research workers (CRW) and they have co-designed the research. We are providing training on generic and topic-specific research skills. The CRWs will then be supported to contribute to recruitment, facilitate the focus groups and triangulate the analysis.

FINDINGS Extensive PPI confirmed the importance of the topic amongst the participating women from ethnic minorities. The in-depth discussions which took place suggest that we will obtain rich data. findings are likely to be contraception specific but also about the wider role that ethnicity plays in family planning. We will conduct focus groups and interviews in the next 6 weeks. Analysis will be performed thereafter and presented.

CONSEQUENCES We expect our findings to be far reaching. By gaining perspectives on contraceptive types, we can make clinicians aware of what culturally pertinent information should be covered in consultations. Exploring opinions about if, where and how EM women would like to access contraceptive advice will allow for more equitable provision of services. We will also gain insights into whether our participants feel access to contraception is a significant health concern. This is particularly important given that EM are known to suffer adverse outcomes in maternity settings. Finally, through recruiting and training CRWs we hope to forge long-lasting links with communities who are traditionally under-represented in research, such that they can effect change beyond the scope of this project.

Funding acknowledgement: This work was funded by a grant from the Scientific Foundation Board, Royal College General Practitioners. (SFB 21-05)

4D.2

Person Centred care: an untapped resource to increase patient capacity to manage multimorbidity in the context of poverty?

Presenter: Marianne McCallum

Co-Authors: Prof Frances Mair, Prof Sara Macdonal

Author Institutions: School of Health and Wellbeing, University of Glasgow

Abstract

PROBLEM Despite significant investment over 20 years, health inequalities have persisted

and, sometimes worsened. This is pertinent for multimorbidity (MM), which is more prevalent, and begins earlier, in areas of high socioeconomic deprivation (SED).Person Centred Care (PCC) is a cornerstone of modern healthcare, yet a recent literature review demonstrated the patient voice is (ironically) missing. This is particularly so for socially vulnerable populations. Previous work has suggested PCC is especially important in the context of both MM and SED.We aimed to explore the experience of PCC and its impact, as part of a wider study exploring individual/community factors that influence capacity to manage MM in the context of SED.

APPROACH Ethnography conducted within a community experiencing high SED in the West of Scotland over 18 months (142 hours participant observation in four community groups and 25 in-depth interviews with patients with MM). Two participatory workshops and one focus group were conducted towards the end to explore emerging themes, including PCC which emerged strongly as a capacity enabler. Thematic analysis conducted combining all data sources.

FINDINGS Participants experienced both good and poor care from their GPs, and the wider health service; negative experiences were detrimental to engagement and capacity to manage MM. Effective PCC for the participants required a therapeutic relationship and power sharing. Key to a therapeutic relationship was connection and trust, continuity of care and challenge combined with support. True power sharing was exceptionally beneficial to participants' wellbeing and capacity to manage MM, but it rarely happened. Power sharing only ever occurred in the context of a strong therapeutic patient-practitioner relationship. Lack of agency in the practitioner relationship, or within the health system, or misunderstandings about illness (of which patient may be unaware) were key barriers to power sharing. In addition, the desire to be a "good patient", particularly post-pandemic, was a significant barrier.In addition, there was a shared community experience of stigma, and of none of the systems working, which fundamentally altered how people APPROACH ed all statutory services including health. People responded by getting angry or disengaging - neither of which helped. Good PCC was able to, at least partially, negate these experiences. Where it worked well, primary care shifted to a system that was "for them".

CONSEQUENCES Good PCC in the context of SED and MM is important but often not experienced. It could be critical in enabling patients, improving wellbeing and, if well-resourced, may narrow health inequalities. Further work to understand how true power sharing can occur in this context, and what resource that may require of practitioners is crucial. Research to understand the pressure of "being a good patient", and its impact on access, particularly in socially vulnerable groups post pandemic, is also required.

Funding acknowledgement: This work waspart of Dr Marianne McCallums CSO Clinical Academic PhD Fellowship

4D.3

Expanding Burden of Treatment Theory in the context of multimorbidity and poverty: the importance of community and biography

Presenter: Dr Marianne McCallum

Co-Authors: Prof Frances Mair, Prof Sara Macdonald

Author Institutions: School of Health and Wellbeing, University of Glasgow

Abstract

PROBLEM Despite 20 years of investment, health inequalities remain stubbornly associated with socioeconomic deprivation (SED). Burden of Treatment Theory (BOTT)

proposes poorer outcomes when work associated with managing long-term illness (treatment burden) outweighs capacity. MM is associated with SED, and both are associated with increased TB and lower levels of capacity. While treatment burden is well documented, less is known about the differential role of capacity. In this context of work and capacity, interventions to assist self-management are often designed and introduced with little regard to resources required by those living in areas of SED to facilitate participation. Better understanding of capacities and how they may be enhanced to enable optimal self-management of MM, and ultimately mitigate health inequalities, is needed as at present the relative importance of individual and community capacity factors remain unclear.We aimed to explore the key individual and community factors drawn on to enable self-management of multimorbidity in the context of high SED.

APPROACH An ethnography was undertaken in a community experiencing high SED in the West of Scotland over 18 months. Data generation methods included: participant observation in community groups (142 hours), in-depth interviews with individuals living with MM (n=25), and three participatory workshops. Thematic analysis applied to all data sets and subsequently mapped to BOTT framework.

FINDINGS Most themes corresponded to the BOTT framework, but there were important exceptions. Lack of understanding (of health conditions, or the health system) and difficulty navigating systems were important factors that impaired capacity to manage. Critically, participants were not always aware of their knowledge gaps.Wider community-level experiences such as stigma, influenced individual capacity as well as help-seeking and access.Biography, or the ease with which those living with MM reconciled or absorbed illness into everyday lives, was central to expressions of capacity. While BOTT considers biography in terms of mobilising resource, we found that meaning and purpose were crucial. Support to integrate biography or explore meaning and purpose in the context of illness, is not routinely prioritised by practitioners.

CONSEQUENCES While BOTT is useful in encouraging us to consider the importance of differential capacity, it should be extended to include community capacity and biography. Acknowledging their importance in intervention and system design has the potential to enhance capacity and in turn mitigate health inequalities. Research that builds on these findings to explore how practitioners might support biographical integration in the context of MM, especially meaning and purpose is needed. Management plans must routinely gauge patient understanding of conditions, and the wider health system, particularly in the context of SED. Work to negate the under-recognised influence of stigma, and the work of navigating the health system, will be crucial if inequalities in health outcomes are to narrow.

Funding acknowledgement: This work was done as part of Dr McCallum's PhD, funded by a CSO Clinical Academic PhD Fellowship

4D.4

Integration of primary care and palliative care services to improve cultural competency and equity at the end-of-life: FINDINGS from realist stakeholder workshops

Presenter: Sarah Mitchell

Co-Authors: Sarah Mitchell, Kate Fryer, Nicola Turner, Isabel Leach, Jude Beng, Justin Aunger, Katherine E Sleeman, Catherine Evans.

Author Institutions: University of Leeds, University of Sheffield, University of Nottingham, University of Surrey, King's College London

Abstract

PROBLEM Good palliative care is a human right. People from ethnic minorities and low socio-economic backgrounds are less likely to receive palliative care. New ways of working through effective integration are urgently required to address inequalities and meet need. This study aimed to generate theory to guide integration of primary and palliative care and reduce inequalities.

APPROACH A realist approach underpinned by existing theory of healthcare integration at interpersonal, organisational and systems level. Data collection was through two online stakeholder workshops. A topic guide explored how, when, and why inequalities can be improved through effective integration between primary and palliative care. Realist analysis led to the formulation of explanatory context(c)-mechanism(m)-outcome(o) configurations(c) (CMOCs).

FINDINGS Workshops were attended by 27 participants in July and September 2022: patient and public members (n=6), commissioners (n=2), clinicians and researchers from primary care (n=5) and specialist palliative care (n=14). Most were White British (n=22), other ethnicities were Asian (n=3), Black African (n=1) and British mixed race (n=1).Participants described power imbalances that hinder people from different cultures accessing current services (c). As organisations enter integrated partnerships (c), an open, shared commitment to challenging these cultural norms (m) is required at every level, including amongst organisation and system leaders. At an organisational level (c), openly addressing bias and racism (m), supporting professionals to learn about cultures beyond their own (m) and respond in the delivery of care (o), is necessary. In this environment (c), White British professionals in palliative care (the majority), can develop more self-awareness (m) and adopt allyship as an anti-racist, continual learning process (o). At a multi-disciplinary team level, co-location of professional teams from different organisations (c) and reliable record sharing (c), help to build trust (m), leading to improved communication and co-ordination of care for patients (o). Trusted relationships (c) enable patients to gain mutual understanding (m) of their uncertain situation with professionals (o). Positive experiences (c) are important to enable ongoing partnership effectiveness, providing affirmation, building confidence (m) and establishing a satisfying way of working (o). At organisational and system levels (c), leaders must understand (m) the need for investment in time with patients and promote the delivery of more culturally competent quality palliative care (o). Positive patient experiences (c) provide affirmation, grow confidence, and drive commitment (m) to more equitable palliative care (o).

CONSEQUENCES Integrated Care Boards have a statutory duty to commission palliative care services for the population. Integration of palliative care services with primary care is vital to achieve this. Integration requires a continual process of allyship, trust building, challenging cultural norms and acknowledging uncertainty at interpersonal, organisational and systems levels. Working in this way has the potential to achieve positive outcomes of more culturally competent, equitable, palliative care.

Funding acknowledgement: This abstract presents independent research funded in part by the National Institute for Health Research HTA Palliative Care Partnership: REducing inEQUalities through integration of Primary and Palliative Care (RE-EQUIPP). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.

4D.5

What is the prevalence of multimorbidity in migrants, refugees, asylum seekers and displaced persons and its association with

mortality? FINDINGS from a systematic review

Presenter: Catherine O'Donnell

Co-Authors: Anna Abrahamsson, Alba Rozalen Gonzalez, Amanda Santiago Fernandes, David N Blane, Frances S Mair, Barbara I Nicholl, Catherine A O'Donnell

Author Institutions: General Practice & Primary Care University of Glasgow, Federal University of Paraiba Brazil

Abstract

PROBLEM Multimorbidity, the presence of 2 or more long-term conditions (LTCs) is common and associated with poor health outcomes. Little is known about multimorbidity in migrant groups (including refugees, asylum seekers, and displaced persons). The aims of this systematic review are to:

1. Assess what is known about the prevalence of multimorbidity in migrant populations.

2. Determine the association between multimorbidity and mortality in migrant populations.

APPROACH A systematic review was conducted following PRISMA-P guidelines. Five bibliographic databases (MEDLINE (Ovid), Embase (Ovid), CINAHL (EBSCOhost), The Cochrane Library (Wiley) and Scopus (Elsevier)) were searched (timeframe January 2000-March 2022) using the following concepts: 1) Migrant/refugees/asylum seekers/displaced persons/undocumented migrants, 2) multimorbidity, and 3) prevalence/mortality. Two reviewers independently screened titles, abstracts and full text articles before extracting data and assessing risk of bias using the Newcastle-Ottowa scale for observational studies. An independent third reviewer adjudicated on disagreements. Inclusion criteria: adults ≥18 years, migrant/refugees/asylum seekers/displaced persons/undocumented migrants; multimorbidity (measured by count of LTCs or a multimorbidity index); community, primary or secondary care setting; cross-sectional or observational study design; English or Spanish language. Studies measuring single LTCs or comorbidity were excluded. findings are synthesised narratively.

FINDINGS 2400 references identified, 747 excluded as duplicates, 1539 at abstract screening and 79 at full text screening. 8 additional articles were identified through reference list and citation checking. Overall, 38 full text articles were included: 33 cross-sectional studies, 5 cohort studies. Of these, 35 studies examined prevalence; 3 studies examined mortality. Cross-sectional studies ranged from small bespoke studies to largescale health registry data. Thus, participants ranged in number from 61 to 5,074,227. Most were conducted in Europe (n=22). Studies reported on multiple groups including immigrants/foreign-born (n=24), asylum seekers and refugees (n=12), undocumented/irregular migrants (n=4), displaced people (n=2). Multimorbidity was most commonly defined as ≥2 chronic diseases, although several papers only included a small number (4 or fewer) of LTCs (n=3) or mental health conditions only (n=12). As a result of these variations in definition of multimorbidity and migrants, the prevalence of multimorbidity (≥2 physical conditions) varied widely from 0.6% to 75.0%. The prevalence of mental health multimorbidity ranged from 16.0% to 45.0%. Multimorbidity increased with age and was generally higher in women compared to men. Where comparison was possible, migrants often had lower prevalence of multimorbidity compared to the native-born population, but some groups (e.g. refugees) may have higher prevalence. Migrants did not appear to be at greater risk of mortality compared to native-born populations.

CONSEQUENCES This review has provided new insights on the scale of multimorbidity in

migrant populations and highlights areas requiring further research as well as providing evidence to inform future clinical practice and policy. Clear and consistent definitions for migrant groups is needed.

Funding acknowledgement:

4D.6

FAIRSTEPS: Integrative Review of the Barriers and Enablers to Primary Care Equity

Presenter: Josephine M.K. Reynolds

Co-Authors: Ben Jackson, Caroline Mitchell, Steven Ariss, Joanne Coster, Tom Lawy, Chris Burton

Author Institutions: The University of Sheffield

Abstract

PROBLEM Primary care inequities are unjust and avoidable. High quality healthcare can improve outcomes by up to 20%. Locally targeted interventions, developed by primary care services to reflect the needs of their setting, were argued to be integral to tackling health equity in the 2010 Marmot report. The FAIRSTEPS study was conducted to produce an evidence-informed framework to guide this process. This element of the review aimed to inform the FAIRSTEPS framework development with a comprehensive understanding of the wide-ranging barriers and enablers to primary care equity.

APPROACH An integrative review of primary care interventions in published and grey literature was undertaken. Sources were limited to those in English since 2010 from countries with developed primary care services whose services sought to achieve universal availability (Canada, North Western Europe, Scandinavia or Australasia). Searches were performed via Medline, Embase and CINAHL for published literature. Grey literature was sourced via relevant websites, experts in the field and hand searching. During evidence selection, a substantial number of publications were identified which described no intervention but provided rich information on what influenced the provision of equitable services. A supplementary review was therefore undertaken to identify themes from this data.

FINDINGS There were 4 overarching themes: 1] Healthcare 'actors' (health practitioner, practice & network and health system) 2] Patient & community 'actors' 3] Influencing elements (personal, local and societal) 4] Targeted Innovations. 1] Health practitioners' conceptualisation of inequity is impactful to patient outcomes and could be enhanced through early exposure in training to deprived settings. Practices & networks adapting services to be authentically patient-focused and increasing staff diversity improves equity, however workforce pressures often prevent local innovation and further deepen inequity. 2] Patients knowledge and education (health, digital, reading literacy), health beliefs, fear and expectations are important and influence their self-advocacy. Instability of circumstances and increased rates of trauma are linked to vulnerability characteristics and worsen access. Communities can provide support, motivation and bridge cultural gaps but also embody stigma. 3] Influencing elements incorporate normalisation of poor health, trust, language, structural discrimination and political will. 4] Targeted innovations take a system-based approach; collecting data and responding strategically.

CONSEQUENCES This review provides a comprehensive overview of barriers and enablers to primary care equity. The analysis is rooted in a practical APPROACH , allowing frontline practitioners and commissioners to position themselves in their conceptual landscape alongside the patient, community and wider health system. This work offers an explanation as to how these 'actors' and their influences construct the barriers and enablers to equally distributed primary care. This should allow easy identification of the local

barriers amenable to change (and those which are outside their influence) and 'actors' or influencing elements which could be effectively targeted to improve equity.

Funding acknowledgement: Health Education England (North East and Yorkshire)

4D.7

A co-produced systematic review about barriers to healthcare in people with a learning disability from ethnic minority populations

Presenter: Christina Roberts

Co-Authors: Umesh Chauhan, Katie Umpleby, Nicola Cooper-Moss, Nicola Ditzel

Author Institutions: University of Central Lancashire

Abstract

PROBLEM It is well documented that people with a learning disability face inequalities in their access to care, experience of care and health outcomes. Those from an ethnic minority background with a learning disability face a 'double discrimination', experiencing barriers to healthcare from two sources as members of two marginalised groups. Robertson et al. (2019) conducted a systematic review looking at research about health inequalities for people with a learning disability from ethnic minority backgrounds and found limited evidence relating to health outcomes. We aimed to expand upon Robertson et al. (2019)'s review by incorporating the perspectives of a working group of people with lived experiences to our analysis. This is part of a wider project about healthcare for people from an ethnic minority background with a learning disability.

APPROACH We used an experience-based co-design (EBCD) approach with people with lived experience guiding the review process. We focused the review on research relating to access, experience and outcomes: research that explores issues around accessing appropriate services, research that describes experiences of healthcare services and research that documents health (mental and physical) outcomes in people with a learning disability from ethnic minority backgrounds. Using this framework, we used an EBCD approach to focus our analysis on issues that were pertinent to members of the working group. Three electronic databases were searched for original UK-based studies published in English from 1st January 1990 (Prospero registration ID: CRD42022347318). We used NVivo to thematically analyse the papers meeting our inclusion criteria which were found through database and manual searches.

FINDINGS We screened 5,770 records by title and abstract. 531 full text articles were reviewed, of which 84 were deemed eligible to be included in the review. 10 papers were added through a manual search. We found 16 papers which gave evidence on health outcomes (12/16 of mental health outcomes). For the thematic analysis, we explored themes co-produced with the working group: these were discrimination, community and family networks, COVID-19, digital access, transitional care and the learning disability register. We found limited evidence of the themes generated by the working group, suggesting these are under researched topics despite being important to people with a learning disability from ethnic minority backgrounds. We identified groups which were underrepresented in the literature (e.g., Jewish, Traveller communities). We found issues throughout the literature in how ethnicity is conceptualised – many studies used broad groupings such as 'Asian' without further specification, discounting heterogeneity within this. Many studies failed to conduct ethnicity specific analyses.

CONSEQUENCES Our findings suggest that the research on barriers to healthcare for people with a learning disability from ethnic minority

backgrounds is limited in several ways. The topics explored in the literature do not reflect issues that are pertinent to people with a learning disability from ethnic minority backgrounds.

Funding acknowledgement: NHS Race and Health Observatory

4D.8

Inequalities in primary care: an exploration of the causal pathways linking practice funding, workforce and patient experience

Presenter: Natasha Salant

Co-Authors: Dr Efthalia (Lina) Massou, Hassan Awan, Dr John Ford

Author Institutions: University of Cambridge

Abstract

PROBLEM Socio-economic inequalities exist in general practice across workforce, practice funding and quality of care, including patient experience. There is reason to believe that these three variables are linked; and while there have been studies that have aimed to understand their associations, the mechanisms of action are as yet unknown. The aim of this study is to determine whether GP supply explains part of the mechanism through which practice funding affects patient experience at the level of general practice in England, and if it does, whether the chain of effects is patterned by socio-economic deprivation.

APPROACH Publicly available practice-level data for funding, workforce, patient experience and deprivation in England were acquired and linked by practice code. Staff categories GPs, nurses and DPC staff were weighted to adjust for patient need according to the Carr-Hill formula, and plotted against deciles of deprivation. Thereafter, a mediation analysis tested the significance of the mediation of GPs per 10,000 patients on the effect of payments per patient, on patient experience. Non-parametric bootstrapping was used to estimate the average causal mediation effect and confidence intervals. Simple models were built and tested before testing models with added covariates.

FINDINGS We found that practices in more deprived areas on average have fewer GPs per 10,000 weighted patients than practices in less deprived areas, and that the average practice serving more deprived populations receive less NHS funding per weighted patient than the average practice serving less deprived populations. In addition, GPs statistically significantly ($p<0.001$) mediate the effect of practice funding on overall patient experience even when adjusting for rurality, sex and age, and deprivation. The mediated effect constitutes on average 30% of the total effect of practice funding on patient experience.

CONSEQUENCES This study adds to the growing body of evidence on the relationships between workforce, practice funding and quality of care; and moreover, by exploring the mechanism by which practice funding affects patient experience, the results are informative for policy strategies to reduce inequality of practice funding, patient experience and workforce supply.

Funding acknowledgement: Chevening Scholarships, the UK government's global scholarship programme, funded by the Foreign, Commonwealth and Development Office (FCDO) and partner organisations

4D.9

Significant and persistent challenges to accessing healthcare, throughout the pandemic and beyond, have perpetuated inequities amongst minoritised communities living with chronic conditions and disabilities: qualitative FINDINGS from the CICADA study

Presenter: Dr Amanda Moore

Co-Authors: K. Anand, CA. Rivas

Author Institutions: Social Science Research Unit, University College London

Abstract

PROBLEM Those living with chronic conditions and disabilities and those from minoritised ethnicities suffered a disproportionate burden during the COVID-19 pandemic both in terms of infection rates, risk and challenges with access to care (1, 2). The CICADA study is a national, mixed methods study, which has explored the intersectional impact of ethnicity, migration and chronic conditions on health and social care during the COVID-19 pandemic and beyond (3). The study aimed to both explore lived experiences and to identify assets and coping strategies which may be leveraged to improve health outcomes in future. In this analysis we have focused on the qualitative data concerning healthcare access.

1. Núñez A, et al., Int. J of environmental research and public health. 2021;18(6):2980.

2. White C, et al., ONS, UK Gov, 2020.3. Rivas C, et al., JMIR research protocols. 2022;11(7)

APPROACH The research team worked in partnership with a network of UK migrant charities, to conduct semi-structured interviews. We also conducted 4 community workshops at 2 subsequent time points. We aimed to capture the voices of those who may not normally access the research process, including undocumented migrants. The conversations were audio recorded and professionally transcribed. They were analysed using a framework approach to identify key themes.

FINDINGS 228 interviews were analysed (South Asian (40%), Arab/N.African (26%), Black African (13%), Central/Eastern European (11%), White British (10%)). Participants had a range of conditions including sensory disability, amputations, neurological, mental health, cardiovascular and pulmonary conditions. Overall, health status was considered to have deteriorated for most during the pandemic. Access to healthcare presented a significant challenge. Key themes identified were difficulties accessing appointments; reduced rapport with and support from healthcare teams; specific challenges with physical and mental therapy being given online; language, cultural and digital access barriers; increasing use of alternatives to primary care (including escalation to accident and emergency and turning to private community doctors and unregulated support groups); and specific access barriers associated with hybrid care for certain disabilities and conditions.

CONSEQUENCES In moves towards establishing a hybrid healthcare system for primary care, consideration needs to be given to those living with disability and chronic conditions and from minoritised ethnic groups, to ensure their needs are met.

Funding acknowledgement: The CICADA Study is sponsored by University College London (UCL) and funded by the National Institute for Health Research (NIHR) HS&DR programme (NIHR132914). The views expressed are those of the study team/author(s) and not necessarily those of the sponsor or of NIHR or the Department of Health and Social Care.

4E.1

Developing inclusive support for socioeconomically deprived and ethnic minority women with gestational diabetes, to reduce the risk of subsequent type 2 diabetes.

Presenter: Dr Amanda Moore

Co-Authors: S. Poduval, J. Ross

Author Institutions: University College London

Abstract

PROBLEM There is an increasing prevalence globally of women diagnosed with gestational diabetes (GDM), with the burden falling disproportionately amongst women from minority ethnicities and those of low socioeconomic status (1). Women diagnosed with GDM are 7 times more likely to develop type 2 diabetes (T2D) in their lifetime than women with normoglycaemic pregnancies (2). The postpartum period represents an opportunity to intervene, to reduce progression to T2D. Within the UK setting there is a paucity of data exploring lived experiences of GDM, especially amongst women at higher risk, such as those from minority ethnicities, as they are under-represented in existing research (3). This study aimed to understand experiences and make recommendations for primary care, to support women in reducing their progression to T2D. 1. Farrar D et al., Health Technol Assess. 2016;20(86):1–382. 2. Bellamy L et al., The Lancet. 2009;373(9677):1773–9. 3. Pham S et al., BMC Pregnancy Childbirth 2022;22(1):627.

APPROACH This was a qualitative interview study. Our recruitment strategy was designed to ensure robust representation of socioeconomically deprived and minority ethnic women. It involved embedding a researcher within Children's Centres and community services and targeting primary care recruitment in socially deprived areas. Semi-structured interviews were conducted using a theoretically-informed topic guide designed in partnership with patient representatives. The interviews were recorded and professionally transcribed. Thematic content analysis was used to identify key themes, which were verified in data sessions with stakeholders.

FINDINGS Thirty women were recruited (mean age 36 (SD 5.02), minority ethnicities 66%). Four key themes were identified: We're left at sea!; I need the GP in my corner; Developing a concrete picture; and Life gets in the way. Women described a feeling of being "left at sea" after the birth, with inconsistent messages accompanying the transition from very active GDM intervention to little support from primary care in the postpartum period. They wanted initial postpartum screening to be embedded in the care pathway at the 8-week check. They expressed a need for the GP to be aware of their GDM, reminding them of HbA1c screening and talking to them about reducing T2D risk. Most women had some awareness but wanted clear, tailored advice to be provided. Women were commonly uncertain about what HbA1c screening measured. Finally, childcare priorities meant that for all women it was hard to focus on their own health postpartum. This was particularly the case for women with depression, living in insecure housing or facing other stresses. Community services, such as Children's Centres and charities offered vital support for these women and there is potential to develop tailored education and practical activity classes to support behaviour change for mothers accessing these services..

CONSEQUENCES Our findings identified recommendations for primary care, that may help these women reduce their subsequent T2D risk.

Funding acknowledgement: The data presented are from the qualitative arm of the mixed-methods ELOPE-GDM study, which is funded by the National Institute of Health Research School for Primary Care Research.

4E.2

Under pressure and under scrutiny: supporting women's health in general practice; a qualitative study

Presenter: Sharon Dixon

Co-Authors: Francine Toye, Jennifer MacLellan, Abigail McNiven

Author Institutions: Nuffield Orthopaedic Centre, Oxford University Hospitals S Foundation Trust, Oxford, UK, (F Toye) Medical

Sociology and Health Experiences Research Group, Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, UK.(S Dixon, J MacLellan, A McNiven)

Abstract

PROBLEM The consultation for the Women's Health Strategy for England highlighted a need to understand and develop how general practice supports women's health needs. This includes timely access for assessment and treatment and considering where and how women's health services could/should be configured. General practice is currently under unprecedented strain, and the focus of adverse public and media attention.The majority of women's healthcare contacts occur in general practice, but there is little research into clinician perspectives on delivering care including potential inequalities in access to care.

APPROACH We aimed to understand the perspectives and experiences of primary care practitioners (PCPs) when supporting women's healthcare.Interpretive qualitative research set in general practice (GP) in England. Forty-six PCPs working in a range of roles and GP settings were recruited through research and professional networks. Semi-structured interviews were conducted via phone or Microsoft Teams, audio-recorded, transcribed verbatim, and analysed through Reflexive Thematic Analysis.

FINDINGS Practitioners were acutely aware of, and concerned about, social and systemic barriers to access. PCPs valued and aspired to encompassing practice that recognised and responded to complex and diverse needs, and advocated for patients. Practitioners went above and beyond to try to achieve this, describing examples of reaching out to homeless women, mitigating against language barriers, and creating safe spaces for conditions or circumstances that may be experienced as stigmatising or isolating. However, resource constraints complicated this and generated additional strain. They experienced this as a driver towards patient-practitioner relationships becoming transactional rather than relational. This risk was exacerbated by reductive media reporting, which GPs experienced as hostile. Menopause care was a powerful exemplar of this. The net effect was an adverse impact on GP well-being. Strategies to help relieve strain were valued but could generate work, for example supervision. Recognising the value of specialisation (both within primary and secondary care), the PCPs reflected on maintaining a balance between general and specialist skills. Key to maintaining this balance was knowing that working together (rather than against each other) provided care that was more than the sum of its parts. A balance between upskilling and deskilling was highlighted as a tension. Where care was shared between primary and specialist services, the potential for bi-directional learning was valued.

CONSEQUENCES Relationships and advocacy are valued as fundamental for women's health in general practice. GPs understanding of the populations they serve and commitment to equitable care could be actively recognised and valued, but is challenged by external constraints. The Women's Health Strategy for England calls for women's health hubs, but how these will interface with general practice is less clear; it is essential that core aspects of general practice are not diminished or devalued as services evolve.

Funding acknowledgement: This study was funded by the National Institute for Health and Care Research (NIHR) Policy Research Programme (NIHR202450). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

4E.3

"This is an intimate, dark, shaming space": Lived experiences of urogynaecological symptoms and help-seeking

Presenter: Abigail McNiven

Co-Authors: Francine Toye, Sabrina Keating, Sharon Dixon

Author Institutions: Nuffield Orthopaedic Centre, Oxford University Hospitals Foundation Trust, Oxford, UK, (F Toye) Medical Sociology and Health Experiences Research Group, Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, UK.(S Dixon, S Keating, A McNiven)

Abstract

PROBLEM Urogynaecological conditions, such as pelvic organ prolapse and urinary incontinence, are common and impactful. Lifestyle advice, conservative and surgical treatment options are available, but many women do not come forward for medical help.

APPROACH To understand patient experiences of urogynaecological symptoms and their bearing on help-seeking in healthcare, we interviewed 74 adults (73 women, 1 nonbinary person), aged 22-85, living in the UK with one or multiple urogynaecological conditions. Data was collected in 2021, and thematically analysed.

FINDINGS Though barriers to accessing medical care are complex and multifaceted, one significant aspect for patients living with urogynaecological problems is embarrassment. Urogynaecological symptoms involve sensitive or taboo topics in terms of bodily fluids, parts and functions, such as urine, faeces, blood, bladders, uteri, vaginas, and sex. Additionally, some patients held a sense of inevitability and normality about their experiences, meaning that they did not necessarily know about or see themselves as warranting medical help. Instead, for these individuals, their focus became self-management and limiting lifestyle activities – such as using pads of increasing absorbency, and planning life and activities around a pelvic or 'urinary leash'. In the context of a coupling of stigma and trivialisation, patients sometimes found it challenging to create or respond to opportunities to open up to healthcare professionals about urogynaecological symptoms. Patient expectations were often framed by their accumulated experiences of healthcare, especially for women's health concerns, potentially setting some up to anticipate dismissal or unsatisfactory management. For those who had raised symptoms, initial responses and experiences could reinforce or challenge these expectations.

CONSEQUENCES Stigma, taboo, embarrassment, shame, and secrecy were highlighted by participants as shaping their willingness for and experiences of engaging with healthcare. Understanding patient experiences of urogynaecological symptoms and their bearing on help-seeking is especially important for GPs, as they are often the first healthcare professionals that symptoms are broached with. Patient calls for healthcare professionals to "come with us" into "an intimate, dark, shaming space" to discuss urogynaecological symptoms, however, entail challenges. These include balancing tensions between recognising (without inadvertently reinforcing) stigmatised symptoms and 'normalising' these conditions (without deeming them inevitable or trivial).

Funding acknowledgement: This study was funded by the NIHR Policy Research Programme (NIHR202450) following peer review for scientific quality and priority assessment by patient and public representatives. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care. The funders had no role in the design and conduct of the study, including the collection, management, analysis, and interpretation of the data, and preparation and review of the manuscript.

4E.4

In what ways can GPs improve care for Women with Anal Incontinence due to Childbirth Injury?

Presenter: Abi Eccles

Co-Authors: Joanne Parsons, Anna Clements, Julie Cornish, Sarah Embleton, Michael Keighley, Jen Hall, Abigail McNiven, Chloe Oliver, Kate Seers, Debra Bick, Sarah Hillman

Author Institutions: University of Warwick, University of Oxford, MASIC Foundation, University Hospital of Wales

Abstract

PROBLEM Over 20% of women develop anal incontinence within five years of vaginal birth. Some experience problems after childbirth, whilst others' symptoms develop or worsen during menopause. Anal incontinence has undesirable and often life-changing effects on psychosocial and emotional wellbeing as women may struggle to achieve their basic activities of daily living. Less than 25% of women discuss their problems with GPs unless prompted and it takes on average 7 years to be seen by a professional with the experience and training to improve her symptoms. The literature examining GPs' and women's experiences of postnatal consultations regarding anal incontinence is lacking. This study aimed to identify barriers and facilitators to providing appropriate GP care for women experiencing anal incontinence soon after labour, or around the time of menopause.

APPROACH This qualitative study combined two phases of data collection and analysis, firstly a series of in-depth interviews with women experiencing anal incontinence caused by childbirth injuries (n=41), followed by three focus groups with GPs (n=13) stratified by experience. Thematic analysis was conducted and relevant themes from across the two datasets were examined to explore women's experiences of healthcare services and GPs' perspective about providing care for women potentially experiencing these symptoms.

FINDINGS Many women with such injuries talked about frustrations they experienced when trying to access care. They often felt that it took a long time to gain recognition and access appropriate care. Various factors appeared to contribute to this delay and missed opportunities for care. The GPs had varied levels of confidence in providing care for women with anal incontinence due to labour injuries, often related to their experiences of training and years as a GP. Mediating factors in GP care for women with anal incontinence caused by childbirth injuries centred around three key themes: Access and Pathways; Role of the GP; and Communication.

CONSEQUENCES Analysis of data from both interview and focus group datasets allowed identification of gaps in care within each overarching theme: Access and Pathways; Role of the GP; and Communication. Based on these we developed recommendations for GPs when consulting women with potential anal incontinence caused by childbirth injuries. Broadly, these related to knowledge and continuity regarding referrals; access to resources; information about tears and long-term impacts; long term follow-up; proactivity; and the balance of sensitive, yet clear, language.

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4E.5

Effectiveness of recruitment strategies to increase diversity within one trial site in a post-partum weight management intervention: the Supporting MumS Randomised Controlled Trial

Presenter: Alice Ivory & Emmanuela Osei-Asemani

Co-Authors: Dunla Gallagher, Eleni Spyreli, Caroline Free, Michelle C McKinley and on behalf of the Supporting MumS Trial Team

Author Institutions: London School of London and Tropical Medicine, Queen's University Belfast

Abstract

PROBLEM Under-served groups in society have, historically, been excluded from participating in clinical trials (NIHR, 2020). There is currently no systematic approach to address the lack of representation in clinical trials (Witham et al., 2020). Inclusion is paramount to redress inequitable health disparities, prevent further widening of inequalities, and accurately evaluate the safety of new medicines and interventions. Thus this study aimed to explore the recruitment strategies used at one site participating in the UK-wide Supporting MumS (SMS) randomised controlled trial in relation to sample diversity.

APPROACH The Supporting MumS trial is a UK-wide, multi-centre RCT that aims to examine the effectiveness of an automated text message intervention to support weight management in the postpartum period. London was chosen as one of five trial sites owing to its access to a diverse range of ethnic groups. Recruitment approaches included social media advertisement (Facebook/Instagram ads), GP surgeries and community-based approaches. For community-based recruitment, the researchers in London (AI and EOA) attended a range of council-run mum and baby groups (n=19). Six GP surgeries conducted patient database searches and sent text messages to 321 women who matched the study inclusion criteria. Finally, paid Facebook/Instagram ads were targeted to relevant users within a 9km radius of Sydenham district over 2.5 months. Participant ethnicity, indicators of socio-economic status (household income and education), and details of how participants were recruited and the recruiting researcher, were extracted from the London site trial database. Data on the sample recruited are described using descriptive statistics and a chi-squared test was used to examine if there were any differences in the sample characteristics recruited by the two London researchers, who were from different ethnic groups.

FINDINGS The London recruitment target of 189 women was met over a seven-month period. The vast majority of participants, 94%, were recruited through community-based, face-to-face methods (n=177), with another 4% (n=8) through GP surgeries, and 2% (n=4) via social media advertisement. 44% (n=84) of the sample was Black, Black British, Caribbean or African, 28% (n=53) was White, 11% (n=21) was Asian or Asian British, 10% (n=19) was Mixed or Multiple Ethnic groups, and 6% (n=6) was Other Ethnic Group. Based on a chi-square test there was no evidence that researcher ethnicity was associated with the profile of recruited participants in terms of ethnicity (p=0.810), level of education (p=0.215), or household income (p=0.448)..

CONSEQUENCES An ethnically diverse sample of women was recruited in London using targeted recruitment strategies. Of the methods used, in-person meetings in community settings were the most successful avenue of recruitment, perhaps by helping to build a sense of trust. Retention of women from different backgrounds will be examined in the UK-wide SMS trial.

Funding acknowledgement: Funded by the National Institute for Health Research, Public Health Research (NIHR PHR 131509)

4E.6

In delicate condition: A scoping review on insights to promoting uptake of antenatal vaccination.

Presenter: Dr. Stephanie McCarron

Co-Authors: Dr. Declan Bradley, Prof. Nigel Hart

Author Institutions: Queens University Belfast, Northern Ireland Medical and Dental Training Agency, Public Health Agency.

Abstract

PROBLEM Pertussis and influenza infections can cause significant morbidity and mortality in pregnancy and the neonatal period. Maternal vaccination would substantially reduce this, but vaccine uptake rates show much variation across the United Kingdom and there is scope for improvement. This scoping review aimed to understand reasons for, and approaches to, non-uptake of pertussis and influenza vaccinations in pregnant women in the UK and Ireland.

APPROACH The method of a scoping review to address the aims described was selected, as it provided a suitable approach to interpret the complex literature about maternal vaccination. MEDLINE, EMBASE, Web of Science and CINAHL databases were searched in June 2021. Searches were limited to articles published in the preceding 10 years from 2011 and in English language. Sources were selected in accordance with guidance from Joanna Briggs Institute on scoping reviews. Data extracted was charted in Microsoft Excel and results presented in descriptive form. The same search strategy was applied to update the review with records published from June 2021 to October 2022.

FINDINGS Five themes emerged from the review that included reasons for and approaches to non-uptake of pertussis and influenza vaccinations in pregnancy in the UK and Ireland. This included 1. acceptability; 2. organisational and awareness issues; 3. healthcare provider factors; 4. information interpretation and 5. pregnancy related factors. Acceptability as well as organisational and awareness issues were principal themes regarding reasons for and approaches to non-uptake of the vaccines respectively. Raising awareness and reflection on successful vaccination campaigns had potential to promote uptake, however information is lacking on the influence of social media on vaccine uptake. This may be more pertinent to women from ethnic minorities and with lower educational backgrounds, who may face greater challenges interpreting information. Pregnancy related factors associated with lower uptake included unplanned pregnancy; unscheduled antenatal care; women of younger age; nulliparous women and those that were not vaccinated in a previous pregnancy.

CONSEQUENCES The many reasons for, and approaches, to non-uptake of both pertussis and influenza vaccinations in pregnancy are complex and intertwined. Women who may feel hesitant towards vaccination need clear, comprehensible information, ideally provided their healthcare provider, in a way that is meaningful and addresses their circumstances and risk perceptions. Local and national public health awareness campaigns and interventions should particularly focus on the target groups identified in this review. Achieving this may facilitate uptake of maternal vaccination, thereby reducing morbidity and mortality associated with both diseases for pregnant women and their infants.

Funding acknowledgement: HSC Research and Development, Northern Ireland.

4E.7

A systematic review to identify the optimum implementation for HPV self-sampling in underserved communities

Presenter: Olivia Mackay

Co-Authors: Kate Lifford, Denitza Williams, Anahat Kaur Kalra

Author Institutions: Cardiff University

Abstract

PROBLEM Cervical cancer is the second most diagnosed cancer in individuals with a cervix under 45 years of age in the UK. Cervical screening using Human Papillomavirus (HPV) testing is routinely offered to individuals with a cervix between the ages of 25 and 64 years via the NHS cancer screening programmes. Cervical screening samples are largely collected in primary care settings. Over the last 10 years there has been a steady decline in participation in the cervical screening programme, and it is known that specific groups are even less likely to participate. These include those from low socioeconomic groups, ethnic minority groups, younger age groups, older age groups, those with a physical disability, those with a learning disability and those with an LGBTQ+ group identity. HPV self-sampling has been identified as a method to increase participation in non-attenders. There are different methods of implementing HPV self-sampling, for example an opt-out, mail-to-all or opt-in approach. However, it is less clear which of these is the best method of offering HPV self-sampling to underserved groups. Indeed, this may vary for the different underserved groups. The aim of this study was to review the existing evidence to identify the optimum method for implementing HPV self-sampling to increase uptake for each of these underserved groups.

APPROACH The systematic review is in progress and has been registered to Prospero (CRD42023390276). We searched six databases (Medline, Embase, Scopus, PsycInfo, Web of Science and CINAHL) through January 2023. Studies comparing the efficacy of strategies offering HPV self-sampling with other implementation strategies or the standard screening pathway in an underserved group were identified. Risk of bias was assessed using Cochrane risk of bias 2 tool for RCTs and the "Risk of Bias in Non-randomised studies – of interventions" (ROBINS-I) was used for observational studies. A narrative approach will be used for data synthesis.

FINDINGS The review is scheduled for completion in May 2023. 1,582 studies were screened at title-abstract level, 95 of these were then screened at full-text. Twenty-one relevant studies have been included to date. Twelve of these are RCTs and 9 are observational studies. Most of the studies are from high-income countries. We will report on the different implementation strategies and their effect on uptake of screening. Preliminary analysis suggests providing the option of HPV self-sampling can increase uptake across all groups. We will also report on studies that examined the acceptability of HPV self-sampling.

CONSEQUENCES Results and implications will be discussed at the conference. Several countries have introduced HPV self-sampling as a component of their national cervical screening programmes, and the UK plans to follow suit. The findings from our review will provide evidence on the best way to offer HPV self-sampling for underserved groups to increase participation.

Funding acknowledgement: N/A

4E.8

Counselling about cannabis use during pregnancy and lactation: A qualitative study of pregnant and lactating people and their clinicians

Presenter: Meredith Vanstone

Co-Authors: Meredith Vanstone, Alexandra Cernat, Anuoluwa Popoola, Elizabeth Darling, Sarah D McDonald, Tejal Patel, Morgan Black, Beth Murray-Davis, Andrea Carruthers, Janelle Panday

Author Institutions: McMaster University

Abstract

PROBLEM Cannabis use has increased since its legalization in 2018, including during pregnancy and lactation. Clinical counselling is an important factor in reducing the potential harm of perinatal cannabis use, but clinician comfort is challenged by limited clinical evidence and the lack of evidence-based harm reduction strategies. The objective of this study was to better understand how prenatal and postpartum counselling about cannabis use occurs, what patients desire, and what challenges clinicians experience.

APPROACH We used a qualitative descriptive approach to conduct semi-structured interviews with two groups: 1) people who are currently pregnant or lactating who used cannabis before becoming pregnant and had to make a decision about cessation or continuation during the perinatal period; 2) clinicians who counsel pregnant or lactating people. Participants were purposively-sampled. Patients were living in Canada and in the past year had made a decision about whether or not to use cannabis while pregnant or lactating. Clinician participants were independent health or social care practitioners in Canada, including physicians, nurses, midwives, physician assistants, lactation consultants, social workers, and doulas. Data were collected until theoretical saturation was reached.

FINDINGS We interviewed 52 pregnant and lactating people and 23 clinicians. Clinicians reported asking all patients about cannabis in order to complete an element of the standardized antenatal record. Only about half of patients recalled being asked about cannabis use, sometimes in the context of a broader question on drug or substance use. Many patients did not initiate this discussion, as they did not desire clinician input on their cannabis use and in some cases were wary of how the clinician might respond. Many clinicians recognized the potential for discomfort around this question. Where conversations about cannabis did happen, they were not always recorded. Counselling sometimes included referral to other services. Patients were concerned that if they disclosed cannabis use the clinician would report this use to child welfare agencies. Clinicians stated they would infrequently report cannabis use to these agencies, and only in cases where they suspected cannabis use would result in neglect or abuse of children. Patients desired evidence-based harm reduction strategies but clinicians had little advice to offer beyond counselling cessation, due to a lack of clinical evidence.

CONSEQUENCES This comparative study identified several barriers to counselling about cannabis, including the stigmatized nature of substance use which may prevent disclosure, a lack of evidence-based harm reduction strategies, and insufficient research about clinical outcomes. Clinicians prioritized maintaining trusting relationships to enable high quality care and harm reduction where possible.

Funding acknowledgement: Canadian Institutes of Health Research

4E.9

Pregnant women's perceptions and acceptance of vaccinations during the Covid-19 pandemic: a qualitative study

Presenter: Jo Parsons

Co-Authors: Dr Cath Grimley, Professor Debra Bick, Dr Sarah Hillman, Louise Clarke, Dr Helen Atherton

Author Institutions: Warwick Medical School; University of Warwick, Clinical Trials Unit; University of Warwick, University Hospitals Coventry and Warwickshire

Abstract

PROBLEM Pregnant women are at increased risk of hospitalisation resulting in mortality and morbidity from preventable illness, resulting in their unborn babies also being at increased risk of serious complications and potentially in utero death as a result of these maternal illnesses. Vaccinations are routinely offered to pregnant women in the UK, for influenza (flu), pertussis (whooping cough) and Covid-19, yet the uptake of these vaccinations in pregnancy remains low.This research aims to explore how pregnant women feel about vaccinations in pregnancy (flu, whooping cough and Covid-19), particularly following the Covid-19 pandemic. It also aims to examine how pregnant women feel about their health and vulnerabilities to illness as a result of the Covid-19 pandemic.

APPROACH This is a qualitative study involving semi-structured interviews with pregnant women and midwives. Interviews with pregnant women will explore their views about vaccinations (flu, whooping cough and Covid-19) since the Covid-19 pandemic, and whether the pandemic has influenced perceptions of vulnerability to illness. Interviews with midwives will explore vaccination discussions they routinely have had with pregnant women, and identify some of the barriers to vaccination that pregnant women discuss with them.40 pregnant women will be recruited via participating hospitals, searches of GP electronic patient records and community groups. 20 Midwives will be recruited via participating hospitals and midwife specific social media groups.Interviews will all be conducted remotely (using telephone or Microsoft Teams) and will be undertaken between February and May 2023. Interviews will be analysed using thematic analysis.

FINDINGS Recruitment is still ongoing for this study, but findings from interviews with pregnant women and midwives will be presented. findings will include a description of the barriers pregnant women experience when making decisions about vaccinations (informational barriers and practical barriers such as access to appointments).

CONSEQUENCES findings will identify some of the factors that affect pregnant women's decisions when deciding to have a vaccination or not, and how these decisions have been affected by Covid-19. findings will also describe whether Covid-19 has influenced how pregnant women feel about their health more generally, such as how vulnerable they feel to illness.This study will increase understanding of some of the factors influencing pregnant women's vaccination decisions. findings will inform the development of an intervention to increase vaccination uptake amongst pregnant women.

Funding acknowledgement: This study is funded by the National Institute for Health Research (NIHR) [Research for Patient Benefit (NIHR203598)].

4F.1 (Wrokshop)

Using primary care data for research purposes

Presenter: Dr Sarah Rodgers

Co-Authors:

Author Institutions:

Abstract

Aim and intended outcome/educational objectives: The aim of this workshop is to provide insight into the complexities of working with primary care for research purposes. By participating in the workshop, delegates will: 1. Understand the development, architecture and important differences between the main GP clinical

information systems and the terminologies they use. 2. Understand the process of disease coding and identify some of the data quality issues. 3. Understand the process involved when defining data requirements to meet research questions and awareness of some of the inherent pitfalls and PROBLEM s. 4. Recognise the concept, purpose and structure of a Plain English Definition. 5. Recognise the limitations and possibilities of general practice system architecture. 6. Understand how data entry techniques can support the research process. 7. Understand key data protection requirements.

Format: Delegates will be provided with a series of brief presentations from leading UK clinical health informaticians on key topics relating to the use of primary care data for research studies. Real-world scenarios relating to the use of primary care data for research purposes will be provided by the facilitators and delegates will work in small groups to address the questions posed, thus encouraging discussion and interaction. There will be opportunities throughout the workshop for delegates to share their experiences of using primary care data and to ask questions.

Content: Primary care electronic health records provide a rich source of data for undertaking high quality research studies. Benefits include quicker approaches to patient recruitment into studies and robust methods for the collection of outcome data. However, it must be remembered that the data have been captured for the purposes of primary care patient management and not for the purposes of undertaking research. This poses a number of challenges which primary care researchers need to be aware of. This workshop will provide insight into the complexities of working with primary care data for research purposes through discussion of real-world examples. This will include an overview of primary care coding and terminologies, the impact that SNOMED CT has had on the primary care record, the processes involved when defining data requirements to meet research questions and the use of GP clinical systems for opportunistic intervention, either for patient recruitment to studies or to act as a trigger to change patient care. The workshop will also raise awareness of the limitations of using primary care data for research purposes with a particular focus on issues pertaining to data quality, potential sources of bias and data extraction.

Intended audience: This workshop is intended for anyone working in the field of primary care research or those who are new to the field. No prior knowledge of primary care data is necessary to participate in the workshop.

5A.1

What are the challenges / barriers for GPs in prescribing cardioprotective medication to patients with severe mental illness (schizophrenia, bipolar disorder, major depression)? A qualitative study in Edinburgh and Glasgow health board areas.

Presenter: Dr Amanda Vettini

Co-Authors: Dr Gearoid Brennan, Professor Stewart Mercer, Dr Caroline Jackson

Author Institutions: University of Edinburgh, University of Stirling

Abstract

PROBLEM People with severe mental illness (SMI) die 10-20 years sooner than the general population, partly due to increased cardiovascular disease (CVD) risk. Following heart attack, mortality and further vascular events are more likely. Data indicates poorer outcomes may be partly due to GPs lower prescribing rates of cardioprotective medication to SMI patients. To our knowledge, no previous study has investigated GPs' views of SMI cardioprotective medication thus we explored their potential challenges.

APPROACH 15 semi-structured qualitative interviews were conducted via Teams in October-November 2022 with GPs in NHS Lothian and NHS Greater Glasgow & Clyde Health Board areas, recruited via our networks and study publicising. Qualitative data were audio-recorded, transcribed and analysed using NVivo software and thematic analysis.

FINDINGS Whilst GPs were aware that patients with SMIs had increased risks of CVD, reasons for lack of routine prescribing of cardioprotective medications in some of these patients were themed around: challenges/barriers, enablers and structural/contextual factors. Lack of funding and the general practice crisis has resulted in GPs being unable to optimally care for their SMI patients. They feel forced to 'firefight', managing only urgent health conditions, rather than using primary prevention. Prescribing cardioprotective medication was viewed as dissonant with holistic medicine, as CVD risk was perceived as outwith SMI patients' priorities. These patients are less likely to attend with overall diminished treatment engagement. Moreover, frequent unmet basic needs as well as multiple and complex needs require attempts at addressing first. Thus, GPs were highly concerned about concordance. Structural/contextual barriers included general practice being currently severely under-funded with workforce shortfalls and recruitment and retention problems. Backlogs of COVID-19 untreated patients' conditions played into an already weakened state of general practice. Resultantly, fostering the depth of doctor-patient relationship required to have 'those really difficult but really important conversations' and continuity of care is challenged. Severe problems with IT systems and technology for identifying at-risk patients and suitably screening and monitoring them was acute. problems with integrated care and communication between physical and mental health teams were cited, as well as mental health services long waiting lists. Many GPs aspire to initiating cardioprotective medication proposing potential solutions e.g. facilitating strong doctor-patient relationships via appropriate continuity of care and embedding key MDT staff such as mental health nurses and pharmacists. Addressing patients' lifestyle factors as fundamental first before medication could, or should, be considered was salient.

CONSEQUENCES The FINDINGS fill a gap in a highly under-researched area and have implications for planning and delivery of improved, inclusive and integrated healthcare, especially for vulnerable, and often excluded, patient groups such as those with SMI. Future research in this area should explore experiences of SMI patients and other practitioners.

Funding acknowledgement: Funded by the Royal College of General Practitioners (RCGP) Scientific Foundation Board and sponsored by the University of Edinburgh and NHS Lothian

5A.2

Greener Asthma Prescribing Study: A qualitative study exploring healthcare professional perspectives on reducing the prescribing of metered dose inhalers for asthma to reduce the carbon footprint of primary care

Presenter: Lauren Franklin

Co-Authors: Helen Twohig, Christian Mallen

Author Institutions: School of Medicine Keele University

Abstract

PROBLEM Climate change is the single greatest threat to human health. In 2020, the NHS developed its net-zero goals and highlighted pressured metered dose inhalers (pMDIs) as a focal point for change. pMDIs are commonly prescribed for asthma in primary

care and contain potent greenhouse gases, accounting for 3% of the entire NHS carbon footprint. Ways to reduce pMDI prescribing include tackling over-reliance on short-acting beta-agonists, optimising inhaler technique and reducing waste and switching to dry powder inhalers, which have a lower carbon footprint. Despite there being policy targets to reduce pMDI prescribing and clinical guidance to support greater use of DPIs, there is little evidence to support the implementation of this guidance and realisation of these targets in primary care. It is also unknown whether primary care clinicians have any apprehension about these prescribing changes. This study aims to explore healthcare professional perspectives on reducing the prescribing of pMDIs for people with asthma to reduce the carbon footprint of primary care. The study objectives are: To explore practice nurses, GPs and clinical pharmacist perspectives on what influences their decisions on prescribing of asthma inhalers and how these decisions are made within a consultation. To explore primary health care professionals' awareness of the environmental impact of pMDIs and how this influences their behaviour. To explore primary health care professionals' beliefs, motivations, concerns and confidence around switching to lower global warming potential (GWP) inhalers.

APPROACH We conducted semi-structured interviews with general practitioners, practice nurses and clinical pharmacists from general practices across the North of England and West Midlands. The interviews were carried out via Microsoft Teams. The topic guide was developed with input from patients with asthma, and from HCPs from each professional group and was iteratively developed as interviews progressed, using a constant-comparative approach. Interviews were audio-recorded and transcribed. Data is currently being analysed using thematic analysis via NVivo 12.

FINDINGS Early findings suggest that primary healthcare professionals are aware of the carbon emissions associated with inhalers and have been encouraged within their PCNs to prescribe more DPIs. Time, burn-out and fear of patient refusal, have been identified as barriers preventing clinicians from changing their prescribing habits. Where prescribing changes did occur, financial incentives, such as the inclusion of DPI targets within the IIF, were identified as the key driver for change. Full findings will be presented at the conference.

CONSEQUENCES This research provides a greater understanding of the perspectives of primary care clinicians on sustainable healthcare and the factors that influence inhaler prescribing. It emphasises the role of financial interventions in changing prescribing habits and highlights the barriers that need to be overcome in clinical practice to achieve the NHS' carbon net-zero goals.

Funding acknowledgement:

5A.3

Prescription medication sharing in England: A population-based telephone survey

Presenter: Dr Deborah McCahon

Co-Authors: Dr Shoba Dawson

Author Institutions: Centre for Academic Primary Care, University of Bristol

Abstract

PROBLEM Prescribing of medicines is a major therapeutic intervention occurring largely in primary care. When taken as prescribed, medicines have the potential to improve health and quality of life. However, if not taken correctly, medicines can be associated with harm. The inappropriate use of prescription medicines has significant resource implications for the health service and is associated with a range of adverse health consequences for patients. Sharing of prescription medicines is a form of inappropriate medication use. Medication

sharing is defined as the lending or borrowing of prescription medicines where the recipient of those medicines is someone other than the person for whom the prescription is intended. Prescription medication sharing outside of the UK is common with reported prevalence rates for borrowing range from 5% to 52% and loaning from 6% to 23%. The prevalence of non-recreational prescription medication sharing in the UK setting is unknown. Therefore, the aim of this study is to determine the prevalence and predictors (non-modifiable and modifiable factors) of loaning and borrowing of prescription medication.

APPROACH A population-based telephone survey with a nationally representative sample of 3000 adults (aged 18 years or more). The survey was used to capture non-modifiable risk factors including age, gender, ethnicity, highest education level, socioeconomic status and household size alongside medication sharing status (e.g., whether the respondent has lent or borrowed prescription medicines in the previous 12 months and/or in their lifetime), type of medication shared, frequency of sharing in their lifetime and the last 12 months. Hypothetical attitudinal statements with 5-point Likert scale response options (ranging from 1 strongly disagree to 5 strongly agree) were used to assess modifiable behaviours. This included perceptions of the benefits and safety of medication practices and circumstances in which people think it is acceptable to share.

FINDINGS findings from the multivariate logistic regression analysis will be presented. This includes associations between predictor variables such as demographics, perceptions of safety/benefit and situations with whether the respondent engages in sharing behaviour, separately for loaning and borrowing behaviours will be discussed.

CONSEQUENCES Identification of types of medicines shared and characteristics of those most likely to engage in prescription medication sharing practices, will help inform the design of future interventions aimed at reducing potential harms resulting from these behaviours.

Funding acknowledgement: NIHR School for Primary Care Research

5A.4

Prescribing selective serotonin reuptake inhibitors (SSRIs) for women of reproductive age, during pregnancy or breastfeeding: a systematic review of local formulary guidance in England and Wales.

Presenter: Elizabeth Lovegrove

Co-Authors: Dr Alice Maidwell-Smith, Professor Beth Stuart, Professor Miriam Santer

Author Institutions: Primary Care Research Centre University of Southampton, Hampshire Hospitals NHS Foundation Trust, Queen Mary University of London

Abstract

PROBLEM Depression is the second most common chronic condition affecting women of reproductive age and this population are frequently prescribed selective serotonin reuptake inhibitors (SSRIs). When SSRIs are used during pregnancy, they can potentially cause congenital malformations, post-partum haemorrhage (PPH) and persistent pulmonary hypertension in the newborn (PPHN). Local guidance for prescribers should reflect these risks so that they can be conveyed to women of reproductive age if they are prescribed SSRIs. In UK primary care, prescribing formularies are the main mechanism by which prescribers are provided with local medicines advice. We sought to explore whether guidance within local prescribing formularies refers to the potentially teratogenic effects of SSRIs and/or advises what counselling should be provided to women of reproductive age when they are prescribed these medications.

APPROACH Aim: To identify and compare all prescribing formularies in England and Wales, with respect to prescribing SSRIs in women of reproductive age and/or during pregnancy and breastfeeding. Method: A systematic keyword search of all Clinical Commissioning Group (CCG) websites in England (later termed Integrated Care Boards (ICBs)) and Local Health Board (LHB) websites in Wales was undertaken over one year from December 2021 to identify local prescribing formularies. Data was extracted on formulary structure, content and source of prescribing guidance for SSRIs in women of reproductive age, during pregnancy and breastfeeding. All formularies were extracted and reviewed by the lead reviewer and a 20% random sample by a second reviewer. Results were compared and discrepancies resolved by discussion and/or involvement of a third reviewer if required. The protocol was registered with the Research Registry, reference 1279.

FINDINGS 74 individual prescribing formularies were reviewed. 14.9% (11/74) provided links to the Medicines and Healthcare Regulatory products Agency (MHRA) guidance on congenital abnormalities associated with the SSRIs fluoxetine or paroxetine, 28.4% (21/74) to guidance on PPH risk and 1.4% (1/74) to guidance on PPHN. 12.2% (9/74), 23% (17/74) and 21.6% (16/74) of formularies provided their own local guidance for women of reproductive age, during pregnancy and breastfeeding, respectively. This local guidance was often outdated and frequently included recommendations that conflicted those provided nationally. 21.9% (16/73), 13.7% (10/73) and 17.8% (13/73) of formularies did not provide any guidance, in the form of linked external guidance (e.g. National Institute for Health and care Excellence guidance) or internal local guidance, regarding SSRI use in women of reproductive age, during pregnancy and breastfeeding, respectively.

CONSEQUENCES Our results suggest that prescribers, and therefore women, may be poorly informed about the risks of SSRI use in women of reproductive age, during pregnancy and breastfeeding. This may place women and their babies at increased risk of unintentional SSRI exposure during pregnancy and the adverse effects associated with this.

Funding acknowledgement: EL is supported by the National Institute for Health Research (NIHR Academic Clinical Fellowship).

5A.6

Prescription medication sharing for non-recreational purposes: A systematic review of the literature

Presenter: Shoba Dawson

Co-Authors: Dr Hans Johnson, Dr Deborah McCahon

Author Institutions: Centre for Academic Primary Care, University of Bristol

Abstract

PROBLEM Prescription medication sharing is defined as the lending or borrowing of prescription medications where the recipient of those medicines is someone other than the person for whom the prescription is intended. Sharing of prescription medication can cause significant harm to the individuals who engage in these practices. Adverse consequences include increased risk of side effects, delayed health seeking, masking of the symptoms and severity of disease. Prevalence estimates vary across different populations, and peoples' reasons for sharing and their perceptions of risks from sharing are poorly understood. This systematic review aimed to provide a better understanding of the types of medications shared, reasons for sharing, and the perceived benefits and risks of sharing.

APPROACH Medline, EMBASE, PsycINFO, CINAHL and Cochrane library were searched from inception of databases to February 2023 using a combination of medical subject

headings and free-text terms. Any primary study design that investigated non-recreational sharing of prescription medicine in people of any age. Two authors independently screened the articles, extracted data using a standardised extraction form and assessed methodological quality using the Mixed Methods Appraisal Tool. PROSPERO ID CRD42021252209.

FINDINGS The search yielded 3503 records after deduplication of which 53 full-text citations were assessed for eligibility and 19 studies (23 papers) met the inclusion criteria. Seven studies were from the USA, three from New Zealand, one each from Croatia, Saudi Arabia, Malaysia, Nigeria, Philippines, Australia, Ireland, Uganda, and South Korea. A total of 14 studies reported that painkillers were most commonly lent/shared, followed by antibiotics (n=8) and allergy medication (n= 8). Prevalence of sharing ranged from 13-78%. Common reasons for sharing were running out of medication (n=7); cost (n=7) and emergency (n=6). Perceived risks included borrowed medicine was ineffective, adverse drug reactions, loss of medication instructions and misdiagnosis. Perceived benefits included resolution of the problem, time and money saving and maintenance of good relationships with friends/colleagues.

CONSEQUENCES findings suggest that medication sharing is a common behaviour and involves a wide range of medicines for a variety of different reasons across different countries and settings. This review highlights that there is insufficient data on reasons for medication sharing, how people decide to engage in this behaviour and whether they are aware of the potential risks, alongside a lack of any research in this topic area from the UK setting.

Funding acknowledgement: This study was part funded via a grant from the Royal College of General Practitioners Scientific Foundation (Ref: 2019-26)

5A.7

Multidisciplinary medication reviews and deprescribing in primary care for older people living with frailty

Presenter: Dr Kinda Ibrahim

Co-Authors: Eloise Radcliffe, Lucy Murphy, Alejandra Recio Saucedo, Clare Howard, Claire Sheikh, Paul Rutter, Sue Latter, Mark Lown, Lawrence Brad, Simon Fraser, Katherine Bradbury, Maria Chorozoglou, Helen Roberts, Kinda Ibrahim

Author Institutions: University of Southampton; University of Portsmouth; Westbourne Medical Centre, Bournemouth; Hampshire and Isle of Wight Integrated Care Board; Wessex Academic Health Science Network

Abstract

PROBLEM A third of older people take five or more regular medications (polypharmacy) increasing their risk of adverse events, hospital admission and death, with higher risk among people living with frailty. To address this, medication reviews to identify and stop/reduce inappropriate medications (deprescribing) involving a multidisciplinary approach in primary care are recommended. Aims: To understand what makes multidisciplinary medication review and deprescribingwork in primary care for older people living with frailty.

APPROACH An exploratory qualitative study involving focus groups and interviews was conducted with healthcare professionals (HCPs) working in primary care, and interviews with patients aged 65 and over taking 5 or more medicines, and their informal carers. Transcripts were analysed thematically.

FINDINGS Thirty-six participants were recruited, including 23 HCPs (e.g. GPs, Pharmacists, Advanced Nurse Practitioners) from six practices participating in five focus groups and four individual interviews, ten

patients and three carers participating in interviews. findings highlighted the need for primary care teams to have capacity to undertake both reactive and proactive medication reviews, with the need for systems to identify high-risk patients (e.g. those living with frailty, 10 or more medications). Clinical Pharmacists' roles are essential and ensuring that Pharmacists are well-integrated into the primary care team can increase confidence to deprescribe amongst the multidisciplinary team (MDT). Clear, defined roles and good communication between members of the MDT was key, facilitated by asynchronous digital communication. Some HCPs identified the need for specific training on deprescribing to increase their confidence in stopping medications safely. findings identified the need to involve patients and their carers in the deprescribing process, and that patient and carer trust in HCPs and continuity of care are important aspects of this. Reported barriers to deprescribing included unfamiliarity of patients with the role of practice pharmacists, patient's concerns around stopping medicines viewed as essential to their well-being, and reluctancy to stop medication initiated by a secondary care consultant. findings suggest that these can be addressed by explaining to patients (and their carers) the rationale for deprescribing, considering their goals and preferences, and involving them in shared decisions about their medications, and having systems in-place for patient monitoring and follow-up. Starting with 'quick wins' (whereby HCPs start with a simple deprescribing change that can lead to noticeable improvements in symptoms by patients) and offering deprescribing as a 'drug holiday', can also facilitate trust.

CONSEQUENCES Good communication and collaboration between an MDT, and in particular the integration of pharmacists are key facilitators for the medication review and deprescribing process. Deprescribing should be approached as a longitudinal process, involving different members of the MDT based on their particular expertise. Involvement and engagement of patients and carers is key, particularly for older people living with frailty.

Funding acknowledgement: This study is funded by the National Institute for Health and Care Research ARC Wessex.

5A.8

The I-WOTCH study; A RANDOMISED CONTROLLED TRIAL OF A GROUP BASED INTERVENTON TO SUPPORT OPIOID TAPERING

Presenter: Harbinder Sandhu

Co-Authors: On behalf of the I-WOTCH Researchers

Author Institutions: University of Warwick

Abstract

PROBLEM The harms of opioid use for chronic non-malignant pain are well documented. There is a pressing need for effective interventions to help people using opioids to taper safely. We did a randomised controlled trial to test whether a multi-component group-based self-management intervention can reduce opioid use and improve pain-related disability, compared to usual care.

APPROACH We recruited people taking strong opioids for chronic non-malignant pain, on most days over the preceding three months, from general practices in England. We randomised participants to a three-day group intervention emphasising skill-based learning and education, supplemented by one-to-one support, delivered by a nurse and a lay person, or to usual care. We had two primary outcomes; the Patient-Reported Outcomes Measurement Information System Pain Interference Short Form (8A) (PROMIS-PI-SF-8A) and the proportion of participants who discontinued opioids at 12 months. Secondary outcomes included quality of life (measured

by the EQ-5D). In depth process evaluation and qualitative interviews were completed.

FINDINGS Between July 2017 and January 2019 we recruited 608 participants with chronic non-malignant pain from 191 general practices; 81% had low back pain, 52% chronic widespread pain, and 93% multi-site pain. The median daily morphine equivalent dose was 46mg (IQR 25 to 79), 14% were using ≥ 120mg morphine equivalent dose per day. We delivered 35 group interventions at 25 community locations (median group size 9 (IQR 5 to 11)). There was no difference on the PROMIS-PI-SF-8A scores: mean difference, -0.52 [95% CI -1.94 to 0.89], p=0.15). At 12 months, 65/225 (29%) of intervention participants and 15/208 (7%) usual care participants had stopped opioids (odds ratio 5.55 [95% CI 2.80 to 10.99], absolute difference, 21.7% [95% CI, 14.8 to 28.6], p<0.001). Serious Adverse events occurred in 5% (16/303) and 8% (25/305) and respectively of usual care and intervention participants.

CONSEQUENCES The I-WOTCH intervention helped one in five additional people stop opioids with no adverse effect on perceived pain interference with daily life activities. We have developed an intervention which is deliverable in primary care. Please Note: The results are provided for review purposes only and in confidence. The results are currently under review for publication and not yet published. If the abstract is accepted for SAPC, please can I request that we are informed to give consent before the abstract and final results are published in any conference related material.

Funding acknowledgement: The Trial was funded by the National Institute for Health and Care Research, (Health Technology Assessment).

5A.9

Efficacy and safety of sacubitril/valsartan in the treatment of heart failure: A systematic review incorporating unpublished clinical study reports

Presenter: Dr David Byrne

Co-Authors: Dr Frank Moriarty, Dr Fiona Boland, Prof Tom Fahey

Author Institutions: Royal College of Surgeons in Ireland

Abstract

PROBLEM Sacubitril/valsartan is a first in class angiotensin-receptor neprilysin inhibitor used in the treatment of chronic heart failure. Several limitations have been highlighted with this novel medication's pivotal phase III trial, PARADIGM-HF. The primary outcome in PARADIGM-HF was a composite of death from cardiovascular cause or first hospitalisation for heart failure. Our study systematically reviews and synthesizes all available RCT evidence on the efficacy and safety of sacubitril/valsartan in chronic heart failure, including unpublished sources of clinical trial data from Clinical Study Reports (CSRs).

APPROACH We conducted a systematic search of literature databases, grey literature, regulatory drug documents and clinical trial registries, and we requested CSRs from the European Medicines Agency (EMA) and Clinical Study Data Request (CSDR). Two authors (DB and FM) independently screened all citations and screened titles and abstracts of remaining studies for full text suitability. Both authors then extracted data in duplicate from publications, clinical trial registries and CSRs separately. We used CSR data in preference as the presumed most reliable source, followed by journal publication and then trial registry data. We conducted a meta-analysis using CSR-informed estimates, using generic inverse variance (GIV) with random effects statistical models. Two authors (DB and TF) completed a risk of bias (RoB) assessment of included studies, using the Cochrane RoB

tool. We used the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) methodology to report the certainty of evidence from included studies.

FINDINGS We identified 3,744 records in total. From these we identified 15 relevant clinical trials, of which 9 had results on clinical trial registries, and we obtained CSRs for three studies. The hazard ratio for the primary outcome of composite of cardiovascular death or first hospitalisation for heart failure was 0.99 (95% CI 0.70-1.4; p=0.959), for first hospitalisation for heart failure was 1.00 (0.69-1.44; p=0.997) and for cardiovascular death was 0.87 (0.62-1.22; p=0.410). These results showed a reduction in efficacy compared with the original pivotal trial. For common safety outcomes, there was a greater risk of symptomatic hypotension with sacubitril/valsartan (RR 1.44; 1.21-1.71, p<0.001) and of hyperkalaemia (RR 1.95; 1.10-3.48, p=0.023). The risk ratio (RR) for myocardial infarction was 1.02 (95% CI 0.84-1.23, p=0.84) and for atrial fibrillation was 1.05 (0.97-1.14, p=0.639), which is in contrast to the results from PARADIGM-HF which reported significantly reduced risk with sacubitril/valsartan for these two outcomes..

CONSEQUENCES Our meta-analysis found no evidence of a significant difference between sacubitril/valsartan and comparator for the original primary efficacy endpoint and a greater risk with sacubitril/valsartan for selected safety outcomes. Our results showed a reduction in the effect estimate for sacubitril/valsartan for 3 main efficacy outcomes compared with the original PARADIGM-HF trial, with a change in statistical significance to these outcomes now being non-significant.

Funding acknowledgement: This study is part of a doctoral project funded by the Health Research Board of Ireland as part of the RightCare Collaborative Doctoral Award (funding reference CDA-2018-005). The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

5B.1

How can we make care for people at risk of multimorbidity more inclusive?: FINDINGS from the SYMPHONI study.

Presenter: Carolyn Chew-Graham

Co-Authors: Lauren Gray, Laurna Bullock, Clare Jinks, Zoe Paskins, Carolyn Chew-Graham

Author Institutions: School of Medicine, Keele University, Midlands Partnership Foundation Trust

Abstract

PROBLEM People with inflammatory rheumatological disorders (IRDs) are at high risk of developing multimorbidity, specifically cardiovascular disease and mood problems. UK guidelines advocate annual reviews for people with Rheumatoid Arthritis (RA), although not other IRDs. Current reviews in primary care are often condition-specific, focusing on existing morbidities rather than identification and management of future risk, and may not include advice to support behaviour change. A 2021 review of NHS HealthChecks highlight that some vulnerable groups do not access them and there should be a focus on risk prevention.

APPROACH The SYMPHONI study aimed to explore perspectives on reviews to identify and manage risk of multimorbidity. People with IRDs completed individual semi-structured interviews by telephone or online platform. HCPs (including primary and secondary care clinicians) participated in online focus groups. Data were transcribed verbatim and analysed using inductive thematic analysis. Ethical approval was obtained.

FINDINGS 15 people with IRDs were interviewed. 3 focus groups were conducted. Four themes were identified regarding reviews: content, preparation, delivering a holistic review and intended outcomes. Content: People described current reviews as a 'tick-box' exercise, with challenges aligning agendas: HCPs reported targets from Quality Outcomes Framework left little time for patient agenda to be addressed and created challenges in providing a holistic review. Variable attitudes to considering future risks were identified, ranging from whether people wanted all, some or no knowledge of their risk for other conditions influenced by whether these could be prevented. Preparation: Pre-review preparation was important to maximise effectiveness. Written information was important to understand the review aims, align agendas and for the HCP to understand the patient context, saving time and ensuring person-centred care. Participants recognized the challenge of ensuring materials are inclusive of under-served patient groups who may face difficulties accessing preparation materials. Delivery: People with IRDs preferred face-to-face appointments over digital, highlighting the perceived need for physical assessment but the importance of patient preference/choice was highlighted. Group consultations were perceived as potentially useful for information sharing and social support, many people reported reluctance to discuss topics such as mental health in a group setting. Outcomes: It was considered important that outcomes from a review (including actions for a patient or HCP) should be clearly understood for a review to be perceived as beneficial, and follow-up essential in ensuring actions were addressed.

CONSEQUENCES Moving reviews beyond a "tick-box" requires preparation by both patient and practitioner to ensure they are person-centered to maximise utility and perceived value whilst ensuring they are targeted at those patient groups most likely to benefit.

Funding acknowledgement: The study was funded by NIHR CRN West Midlands Impact and Innovation Funding. 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.

5B.2

Understanding measurement of postural hypotension: a nationwide survey of primary care practice in England

Presenter: Sinéad TJ McDonagh

Co-Authors: Sinéad TJ McDonagh, Rosina Cross, Jane Masoli, Judit Konya, Gary Abel, James Sheppard, Bethany Jakubowski, Cini Bhanu, Jayne Fordham, Katrina Turner, Sallie Lamb, Rupert Payne, Richard McManus, John L Campbell, Christopher E Clark

Author Institutions: University of Exeter, University of Oxford, King's College London, University College London, Mid Devon Medical Practice, University of Bristol

Abstract

PROBLEM Postural hypotension is the sustained reduction of systolic blood pressure of at least 20mmHg or diastolic blood pressure of 10mmHg within three minutes of standing. It is associated with falls, all-cause mortality and cognitive decline. Postural hypotension diagnostic criteria require lying-to-standing blood pressure measurements and testing is recommended in older adults or individuals with symptoms or diabetes. Postural hypotension is common, with prevalence estimated at 19% in older primary care patients. However, it is infrequently (<1%) recorded in routine English primary care practice data, suggesting postural hypotension testing and/or recording is under-utilised in this setting; the reasons for such limited postural hypotension testing and/or recording have not yet been explored in detail. The aim of this study was to understand current

postural hypotension measurement and management strategies in primary care practices across England.

APPROACH Clinical Research Networks circulated an online survey to primary care staff involved in measurement of blood pressure from 10th August until 8th December 2022. Demographics and responses were summarised as percentages and/or median (inter-quartile ranges (IQR)) and chi2 tests. Mixed effect logistic regression models are underway to examine response variation according to professional characteristics and practice demographics. Final analyses will be presented at the conference.

FINDINGS Replies from 703 practitioners in 242 practices were received; predominantly from doctors (51%), nurses (28%) and healthcare assistants (HCAs; 11%), plus pharmacists, paramedics and other roles; median age 45 (IQR 38 to 53) years, 72% female. Overall, doctors (97%) and nurses (92%) reported checking for postural hypotension more often than HCAs (82%) or pharmacists (80%; $p<0.001$). They all usually check when symptoms are present (97%). Other reasons for checking - patients aged over 80 years (24%); hypertension reviews (17%); medication reviews (12%) or diabetes reviews (11%) – were all more commonly undertaken by allied health professionals than by doctors ($p<0.001$). Standing blood pressure measurements are regarded as feasible, usually (77%) following sitting; only 22% use lying-to-standing measurements. 64% observe a rest period (median 5 (2 to 5) minutes) before sitting or lying measurements and 1 (IQR 1 to 2) standing blood pressure measurements are made, usually (66%) within the first minute of standing.

CONSEQUENCES FINDINGS suggest that most postural hypotension assessments in primary care do not meet current guideline criteria. The results from this survey are expected to inform and influence future national guidelines to support detection of postural hypotension.

Funding acknowledgement: National Institute for Health and Care Research (NIHR) School for Primary Care Research (SPCR) - project no. 580. The views expressed are those of the authors and not necessarily those of the NIHR, the NHS or the Department of Health.

5B.3

Understanding Measurement of Postural Hypotension in Primary Care – A qualitative APPROACH.

Presenter: Rosina Cross

Co-Authors: Sinéad TJ McDonagh1, James Sheppard2, Gary Abel1, Rupert Payne1, Katrina Turner3, Richard McManus2, John Campbell1, Jane Masoli1, Judit Konya1, Jayne Fordham, Sallie Lamb1, Christopher E Clark1

Author Institutions: 1Primary Care Research Group, College of Medicine and Health, University of Exeter 2 Nuffield Department of Primary Care Health Sciences, University of Oxford 3Bristol Medical School, Population Health Sciences, University of Bristol 4Mid Devon Medical Practice

Abstract

PROBLEM A drop in blood pressure (BP) when moving from sitting, or lying, to standing is called postural hypotension (PH). PH is associated with future cognitive decline, falls and increased mortality. These PROBLEM s represent a significant burden to the NHS; their risks can be reduced if PH is identified early, in order to facilitate relevant interventions. PH is often asymptomatic, therefore, a systematic approach to detection is required. However, this does not currently occur in English primary care settings. Our related survey found that 8% of staff do not consider PH when measuring BP; whilst most do check in the presence of symptoms only a minority consider PH for any other guideline

recommended indication. Reasons for limited PH detection and recording in English primary care settings have not been researched in detail. We are undertaking qualitative interviews to better understand how PH is tested for and diagnosed, and the factors that affect how this is done. This study explores the barriers to, and facilitators of, improved uptake of PH assessment in English primary care settings.

APPROACH We are conducting in-depth semi-structured interviews exploring how multidisciplinary primary care health professionals, involved in BP measurement, check for and manage PH in general practice. Participants are being identified from our related national survey exploring measurement and management of PH. Participants are being purposively sampled to maximise sample variance across professional role, age, sex, time at the practice, GP practice characteristics, geographical location and whether they do or do not check for PH. The interview topic guide is designed to determine barriers to, and facilitators of, improved uptake of PH assessment in primary care. We are exploring practitioners' understanding of who should be tested for PH, views on the potential acceptability of undertaking PH assessments using sit-to-stand and/or supine-to-stand approaches, diagnostic thresholds applied, and treatment options following diagnoses. Individual remote semi-structured interviews are in progress using Microsoft Teams. Interviews are being transcribed verbatim, checked for accuracy, and anonymised. Thematic analysis is underway using NVivo (QSR International Pty Ltd. 2020).

FINDINGS Interviews are currently in progress. Interim results suggest that, staff check for PH when patients report fatigue or have a chronic condition, such as diabetes. Despite awareness of guidelines, various diagnostic definitions are provided, and measurement protocols vary between participants. A sit-to-stand measurement is regarded as being more feasible than supine-to-stand measurements due to time limitations and to mobility of patients. Full findings will be presented to the conference.

CONSEQUENCES To our knowledge, this is the first study to explore barriers to, and facilitators of, PH assessment in English primary care settings. FINDINGS from this study will inform national guidelines and a future clinical trial to detect, and guide the management of, people living with PH.

Funding acknowledgement: This study is funded by National Institute for Health and Care Research, School for Primary Care Research

5B.4

Skin Lesions Made Easy: A Case Study on Using Participatory APPROACHes to include Patients, Clinicians, and Members of the Public to Improve Dermatology Referrals

Presenter: Laura Alvarado Cruz

Co-Authors: Laura Alvarado Cruz, Emre Tayakisi, Piyush Mahapatra, Tim C H Hoogenboom

Author Institutions: Open Medical Ltd.

Abstract

PROBLEM Neoplastic skin lesions often require a dermatology referral to rule out malignancy or arrange treatment. The initial reviews of these cases are performed in a primary care setting. General practitioners (GPs) often triage cases, determine urgency and collect pertinent information for specialist assessment and referral. There is a risk of information loss at this step, and it has been shown that the quality of skin cancer referrals is often suboptimal (The King's Fund 2010, NHS England 2022), resulting in duplication of work as dermatology departments repeat the information gathering process. Our aim is to improve the quality of referrals through increased patient engagement in order to

facilitate high-quality, high-throughput dermatology reviews without increasing primary care workload. This work was conducted as part of a larger research activity to improve the management of skin lesions that require dermatology review.

APPROACH A teledermatology questionnaire (TDQ) was developed in partnership with our Public and Patient Involvement and Engagement committee formed by 4 lay members and consultant dermatologists. The aim was to improve the quality of referrals without introducing additional burden to the GP workload. The TDQ was developed with a qualitative participatory approach, which included the collection of clinical and demographic data to reach a decision on lesion management. Feedback from four patients and members of the public was collected through questionnaires and focus groups. Qualitative data analysis was performed in accordance with the six phases for thematic analysis suggested by Braun and Clarke 2006. The TDQ was implemented in a teledermatology service, and patients were asked to complete a further questionnaire on their experience in completing the form and the teledermatology service in general.

FINDINGS The TDQ was modified in response to an iterative feedback cycle. Various questions were rephrased and educational material was developed, in partnership with patients, and added to explain two questions. 99% of patients completed the TDQ prior to their teledermatology appointment. 90 out of 101 patients felt that the TDQ was easy to complete.

CONSEQUENCES Including multiple stakeholders in the development of a means to supplement a GP referral resulted in a questionnaire that was accepted and used by the vast majority of patients. The questionnaire received positive reception and was widely used by patients. This illustrates the vital role of public and patient involvement and engagement in improving the quality of research and clinical referrals.

Funding acknowledgement: This work was supported by the Small Business Research Initiative (SBRI) with the grant number SBRIC01P3030, and was conducted within the remit of the proposed project for the funding.

5B.5

CONSEQUENCES of Over-Diagnosing Hypothyroidism in an Ageing United Kingdom population (CODHA UK)

Presenter: Mia Holley

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

Author Institutions: The University of Sunderland, Newcastle University

Abstract

PROBLEM Hypothyroidism is a common condition with approximately 3-5% of the UK population suffering. Most people diagnosed with hypothyroidism are prescribed thyroid hormone replacement, typically levothyroxine. The number of prescriptions for levothyroxine is increasing each year in the UK. Subclinical hypothyroidism is diagnosed when a patient has elevated thyroid-stimulating hormone levels. There is evidence for rising thyroid-stimulating hormone levels with age, but despite this age-specific reference ranges for diagnosing hypothyroidism are not used. Therefore, we may be over-prescribing elderly patients with levothyroxine, giving worse cardiovascular and bone health outcomes.The aim of this study is to compare the cardiovascular (diagnosis of angina, myocardial infarction, stroke, peripheral vascular disease, or stent/revascularisation procedure) and bone health (diagnosis of osteoporosis, fragility fractures, or minimal trauma fractures) outcomes between people treated with levothyroxine with mildly elevated thyroid-

stimulating hormone levels compared to those not receiving levothyroxine despite mildly elevated thyroid-stimulating hormone levels.

APPROACH There will be two studies conducted. Firstly, a retrospective cohort study using electronic patient records held in The Health Improvement Network database. Secondly, an emulated target trial study will be conducted using the same patient records. A systematic review has also been completed as part of the background for this study. Both the cohort study and emulated target trial study will analyse patients aged 50 years and over with a recorded thyroid-stimulating hormone level of at least 4.0mIU/l. Preliminary counts from The Health Improvement Network show that 280,525 patients in the database are aged over 50 with an elevated thyroid-stimulating hormone level between 2006 and 2021. Of those patients, 128,452 also have a hypothyroidism diagnosis.

FINDINGS Preliminary work conducted at a large rural general practice in Northumberland, England has shown an excess of patients prescribed levothyroxine without a diagnosis of hypothyroidism. A systematic review completed as background work found only 3 small-scaled studies on the topic, with a pooled odds ratio of 1.11 (95% confidence interval 0.84 – 1.45). This systematic review indicates that levothyroxine may be associated with detrimental bone health and cardiovascular outcomes in elderly subclinical hypothyroid patients, however, the pooled analysis on the limited studies available is inconclusive.

CONSEQUENCES The main outputs from this study will be reports (funder, local and national policy makers) and academic publications, as well national and international conference presentations. The findings of this study aim to influence policy to introduced age-specific reference ranges for thyroid-stimulating hormone levels. The results from this study will be presented in the 2023-24 academic year.

Funding acknowledgement: This research is funded by a grant from the National Institute of Health Research (NIHR) Applied Research Collaboration (ARC) for the North East and North Cumbria (NENC).

5B.6

Incident dementia risk among patients with type 2 diabetes receiving metformin versus alternative antihyperglycaemic agents: a retrospective cohort study using UK primary healthcare records.

Presenter: William Doran (1)

Co-Authors: Louis Tunnicliffe (1), Rutendo Muzambi (1), Christopher Rentsch (1), Krishnan Bhaskaran (1), Liam Smeeth (1), Carol Brayne (2), Dylan Williams (3), Nish Chaturvedi (3), Sophie Eastwood (3), Susanna Dunachie (4), Rohini Mathur (5), Charlotte Warren-Gash (1

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Abstract

PROBLEM 4.2 million individuals have type 2 diabetes in the UK and the prevalence is increasing due to physical inactivity, obesity and population ageing. Diabetes is a key risk factor in later life for dementia, but it is unclear whether this association is modifiable with antihyperglycaemic therapies like metformin.

APPROACH This historical cohort study used UK electronic health records from the Clinical Practice Research Datalink. We followed individuals diagnosed with diabetes aged ≥40 years-old with no history of dementia or cognitive impairment from first prescription of metformin or alternative oral antihyperglycaemic drug (index date) between 1990 and 2019. We identified Read-coded diagnoses of incident all-cause dementia (primary outcome) and mild cognitive impairment (MCI) (secondary outcome). Our single-failure survival analysis used Cox regression with age as the underlying time scale and adjusted for all available confounders. We assessed for interaction with age and gender using the Likelihood Ratio Test (LRT), and conducted sensitivity analyses restricting to individuals initiating therapy post 2004 and 2012 and excluding early dementia diagnoses up to 2 years post index date.

FINDINGS We identified 211,396 eligible individuals (57.2% male; median age 63, IQR 54-71 years) with a median follow-up of 5.4 years. 179,333 (84.8%) were metformin users, who were younger and more likely to be overweight, but had less recorded cardiovascular disease. Metformin users experienced a lower risk of incident dementia and MCI, adjusted HR (aHR) 0.86 (95% CI 0.79 – 0.94, n 146,266) and aHR 0.92 (95% CI 0.86 – 0.99, n 146,883) respectively. We found evidence of effect modification by age-group for dementia (LRT p 0.03) and MCI (LRT p 0.0014): metformin users aged 40-79 years experienced a meaningful relative risk reduction of dementia with HR 0.77 (95% CI 0.68 – 0.85, n 136,770) compared with older individuals with an estimated null effect HR 0.95 (95% CI 0.87 – 1.05, n 26,126). Estimates from sensitivity analyses were consistent with the main analysis. We identified potential exposure misclassification because metformin use was so ubiquitous: 95.3% of all participants were prescribed metformin at least once.

CONSEQUENCES We confirmed that metformin use is associated with a lower risk of incident dementia and MCI in adults with diabetes compared with alternative antihyperglycaemic therapy in a large, demographically-representative UK population. To our knowledge, this is the largest observational study to date, but we acknowledge limitations caused by missing data, exposure misclassification and confounding by indication. Our finding of effect modification by age is consistent with current literature. This protective association has the potential to contribute to global dementia prevention strategies and merits further investigation with robust observational studies to strengthen causal inference. Possible strategies include propensity scoring, investigation for dose-response relationships for metformin and assessment of differences in patient characteristics driving possible confounding by indication.

Funding acknowledgement: CWG is supported by a Wellcome Career Development Award (225868/Z/22/Z)

5B.7

Should adults with recurrent acute tonsillitis have a tonsillectomy?

Presenter: Frank Sullivan

Co-Authors: Prof. Jillian Morrison, Prof Scott Wilkes, on behalf of the NATTINA study team

Author Institutions: Universities of St Andrews, Glasgow and Sunderland

Abstract

PROBLEM Tonsillectomy remains a common procedure but lacks an evidence base for recurrent acute tonsillitis in adults. In the UK and Europe, a reduction in tonsillectomies has coincided with a rise in acute adult hospital admissions for complications of tonsillitis. The NAtional randomised control Trial of Tonsillectomy In Adults (NATTINA) aimed to

assess the clinical and cost effectiveness of tonsillectomy in.

APPROACH A multicentre, randomised controlled trial with embedded economic evaluation conducted in 27 hospitals in the UK. Participants met National Health Service (NHS) eligibility criteria on severity of symptoms and were randomised 1:1 to either tonsillectomy within 8 weeks, or pragmatic conservative management. The primary outcome measure was the total number of sore throat days, reported weekly over 24 months following randomisation. The primary analysis was intention-to-treat (ITT). The economic evaluation estimated the incremental cost per quality-adjusted life year (QALY) gained.

FINDINGS The median number of sore throat days over 2 years post randomisation in the tonsillectomy group was 23 (IQR 11, 46) and in the conservative group 30 (14, 65). The ITT analysis indicated that participants randomised to tonsillectomy had an incidence rate ratio of 0·528 (95% CI: 0·428, 0·650, p<0·001) times the rate of total sore throat days of conservative management participants. Tonsillectomy was also cost-effective with an incremental cost per QALY of £4136.

CONSEQUENCES Over 24 months, adult tonsillectomy participants suffered almost 53% fewer sore throat days than those treated conservatively. Tonsillectomy was found to be cost-effective in the management of adults with recurrent sore throats.

Funding acknowledgement: National Institute for Health Research (UK), Health Technology Assessment programme

5B.8

Herpes zoster and risk of incident Parkinson's disease in US Veterans: a matched cohort study

Presenter: Louis Tunnicliffe

Co-Authors: Louis Tunnicliffe1, Rimona S. Weil2, Christopher T. Rentsch1,3,4*, Charlotte Warren-Gash1*, *=Co-senior authors

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Abstract

PROBLEM The complex aetiology of Parkinson's disease (PD) is poorly understood. While some acute, severe infections may increase future PD risk, the role of herpes zoster (HZ) is unclear. Previous studies have provided conflicting evidence on the relationship between HZ and PD. While two matched cohort studies using the Taiwanese National Health Insurance Database over similar time periods found up to 80% in increased PD risk after HZ, a nested case-control study using US Medicare claims data showed a decreased risk of 12% after HZ. We therefore aimed to replicate the approach used in the Taiwanese studies to investigate the relationship between HZ and incident PD in the largest integrated healthcare system in the US – the Department of Veterans Affairs.

APPROACH We performed a matched cohort study using electronic health record data from the Veterans Aging Cohort Study-National (VACS-National). Patients with incident HZ aged ≥40 years from 2008 to 2018 were matched with up to five individuals without HZ by age, sex, race/ethnicity, geographic site, and calendar time. The primary outcome was a new diagnosis of PD defined by one outpatient or inpatient ICD-9/10 code. We used Cox regression to assess any association between HZ and PD, adjusting for

demographic and clinical characteristics. In secondary analyses, we excluded outcomes that occurred within 6, 12, and 24 months of follow-up (to mitigate potential of reverse causality) and stratified the HZ group by whether they received antiviral therapy (AVT) within 7 days of HZ diagnosis.

FINDINGS 198,099 patients with HZ were matched to 976,660 patients without HZ (median age 67.3 years (IQR 61.4-75.7), 94% male) and followed for a median duration of 4.2 years (IQR 1.9-6.6). Overall incidence of PD was 1.90 per 1000 person-years. In primary analysis, HZ was not associated with PD diagnosis (adjusted HR 0.95, 95% CI 0.90-1.01). FINDINGS were similar when excluding outcomes within 6 months (HR 0.95, 95% CI 0.90-1.01), 12 months (HR 0.96, 95% CI 0.90-1.02) and 24 months of follow-up (HR 0.99, 95% CI 0.92-1.06). Risk of PD did not vary by receipt of AVT (HR 0.95, 95% CI 0.88-1.04 for AVT; HR 0.96, 95% CI 0.89-1.03 for no AVT).

CONSEQUENCES HZ was not associated with increased risk of PD in this large US Veteran cohort. This finding persisted throughout all secondary and sensitivity analyses. Differences in results between our study and previous studies could be due to methodological choices that were not well defined in previous studies, including how control groups were selected. Ideally, future studies would include longer follow-up to avoid reverse causation due to PD's long prodromal phase.

Funding acknowledgement: National Institute on Alcohol Abuse and Alcoholism (NIAAA), Wellcome Career Development Award (225868/Z/22/Z)

5B.9

How do components of social connection interact in their associations with all-cause and CVD mortality? A UK Biobank cohort analysis.

Presenter: Hamish Foster

Co-Authors: 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: School of Health and Wellbeing, University of Glasgow, School of Cardiovascular and Metabolic Health, University of Glasgow, School of Mathematics and Statistics, University of Glasgow

Abstract

PROBLEM Social connection is a complex social phenomenon comprised of functional (e.g., loneliness), structural (e.g., social isolation), and quality (e.g., relationship strain) components. Each component of social connection is associated with higher all-cause mortality and cardiovascular disease. However, different components may interact in their combined associations with adverse health outcomes and could help identify higher risk groups. We aimed to explore associations between components of social connection – friends and family visit frequency (FFVF), participation in weekly group activities, living alone, and perceived loneliness – and all-cause and CVD mortality, and to examine how these components interact with one another to modify associations with adverse health outcomes.

APPROACH Data: UK Biobank - 502,536 adults recruited 2006–10, age 37-73. Baseline self-reported exposures: three structural social connection components: FFVF (6 category ordinal variable), weekly group activity (yes/no), and living alone (yes/no); 2 functional components: frequency of ability to confide (6 category ordinal variable), and often feels lonely (yes/no). Outcomes: all-cause (ACM) and CVD mortality (CVDM) ascertained via linked national registries. Cox proportional hazard models, adjusted for sociodemographic and health confounders, used to examine combined associations and interactions for outcomes. Sensitivity analyses

excluded those with prior CVD/cancer or who died within 2 years of recruitment.

FINDINGS Participants with full data (458,136 [91.2%]) were included. After median 12.6 years follow-up, there were 33,135 (7.2%) deaths, of which 5,112 (1.1%) were CVD deaths. Each component was independently associated with both outcomes. For FFVF, incrementally stronger associations (higher risk) were seen from a frequency of visits of less than monthly. In combined associations, compared to least isolated and not lonely, the association with outcomes generally strengthened stepwise with each additional component. Those with lowest FFVF, no weekly group activity, lived alone, and not lonely had strongest associations with ACM (HR 95%CI 2.34 [1.65-3.30]). However, there was considerable overlap of mortality estimates for those with lowest FFVF irrespective of other components. There was a significant interaction between FFVF and living alone for ACM; compared to highest FFVF, HRs (95% CIs) for lowest FFVF was 1.33 (1.22-1.46) in those not living alone and 1.77 (1.61-1.95) in those living alone.

CONSEQUENCES Each social connection component is important. However, lowest FFVF and living alone were associated with greatest mortality. The interaction between FFVF and living alone indicates that those with no friends or family contacts who also live alone are at particularly high risk of mortality and could benefit from targeted intervention. FFVF of less than monthly may represent a threshold effect which could inform interventions. While UK Biobank is a large and rich prospective data set it is not representative of the UK population. Associations may not be causal, although similar results for the sensitivity analyses add weight against reverse causality.

Funding acknowledgement: HMEF is supported by Medical Research Council Clinical Research Training Fellowship entitled 'Understanding interactions between lifestyle and deprivation to support policy and intervention development' (grant number MR/T001585/1).

5C.1

What does “housebound” mean?

Presenter: Polly Duncan

Co-Authors: Polly Duncan, Nathan Yung, Shoba Dawson, Karen Sargent, Ailsa Cameron, Chris Salisbury, Laura Howe, Rupert Payne.

Author Institutions: University of Bristol

Abstract

PROBLEM There is no consensus definition for “housebound” internationally or in the UK. Research in other countries has shown that housebound people have more mental and physical health problems than other people and are less likely to have their healthcare needs met. In the UK, about one in five people aged 85 years or over are thought to be housebound (around 340,000 people). This number is set to double by 2041 and treble by 2066. Despite this, GPs are doing fewer home visits than before. In 2019, because of high workload pressures, GP representatives voted to remove visits from their NHS contract. This project aims to find a consensus definition of “housebound” for use in UK healthcare research.

APPROACH We have completed a systematic review to identify definitions of housebound within the peer reviewed and grey literature. We (PI and lay co-facilitator, KS) then interviewed seven housebound people and five carers to explore which definitions of housebound were most relevant to them and any that raise concerns. For each definition, we created an evidence summary, including the context (e.g. country, year, type of study/article), description of housebound and the way in which housebound people were identified. The evidence summaries will be presented alongside views from the

housebound people and carers to an expert panel, comprising around ten health and social care professionals and researchers, who will undertake a consensus exercise to agree a definition which can be used in UK research. This will be completed by April 2023.

FINDINGS For the systematic review (PROSPERO 2022 CRD42022332023), 847 titles/abstracts were screened and 52 definitions of housebound were identified. Interview participants were generally positive about GP records flagging up that someone was housebound because this meant that they were not expected to attend the GP surgery and were prioritised for some treatment, such as vaccinations. Views towards the word 'housebound' were mixed, with half of participants expressing negative views of the word and its meaning. They commented that it was a 'scary word', 'not a pretty word', 'a label' and 'old fashioned', and described feeling 'bound in chains', 'trapped', 'shut in' and 'a prisoner'. Half of the participants thought the word 'housebound' was acceptable, describing it as 'the best we got' and 'a matter-of-fact word'. Several of the carer participants considered themselves to be housebound by virtue of not being able to leave the house due to their caring commitments.

CONSEQUENCES Housebound people are an under-researched group. This is the first of a series of projects that will help us understand more about the characteristics, healthcare utility and unmet healthcare needs of housebound people. These studies will provide important evidence to policy makers and will help in planning services and providing better healthcare in the future.

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5C.2

A scoping review on multimorbidity clustering and its effect on treatment burden and the utilisation of health and social care services in the United Kingdom

Presenter: Lucy Kaluvu

Co-Authors: Paola Dey, Mohammed Moinuddin, Rowan Pritchard-Jones, Greg Irving

Author Institutions: Edge Hill University; St Helens and Knowsley Teaching Hospitals NHS Trust

Abstract

PROBLEM Multimorbidity has been linked to high rates of GP use, unplanned hospital admissions, emergency visits, medication use and healthcare costs. Little is known regarding the uptake of social care. There is limited evidence on how long-term chronic conditions (LTCs) accrue, interrelate and cluster, and associated risk factors. The scoping review aimed to collate and map existing evidence (key factors, definitions, concepts, and evidence gaps) on multimorbidity clustering, treatment burden and the utilisation of health and social care services.

APPROACH The Joanna Briggs Institute (JBI) approach and the Arksey and O'Malley framework methodologically guided the scoping review. An online search was conducted in 2022 and updated in 2023 to identify published studies (1970-2023) in PubMed, Cochrane Library, CINAHL, Medline and Social Care Online databases. Key concept terms were multimorbidity, clusters, health service use, social care use, treatment burden. Two reviewers conducted the article screening, quality assessment and analysis.

FINDINGS Search results identified 2254 database studies and 31 studies from other sources. Title and abstract screening excluded 1339 studies due to a lack of focus on

multimorbidity (1150), non-UK based studies (184), and studies with a wrong population group (5). Fifty-one studies, majority of which were conducted in England and majorly within primary care settings, were included. Multimorbidity clusters ranged from 3 to 20 with diabetes, hypertension, and asthma as the most central LTCs. The main clusters were "cardiovascular," "mental health," "dependency," "musculoskeletal" and "pain-related." Depression (young demographic) and diabetes and chronic heart disease (CHD) (old demographic) were the first LTCs in the order of acquisition. In the most deprived areas, depression commenced the acquisition order while diabetes and CHD were the first LTCs in the acquisition order in the least deprived areas. Cluster transitions were prompted by ageing and the level of deprivation. The highest rates of consultation, hospital admission and prescription use were found in clusters with depression, anxiety and pain (18-44 years), clusters with pain, psychoactive substance misuse and alcohol use (45–64 years), clusters with hypertension, hearing loss, depression, CHD, and pain (65–84 years), and clusters with CHD, pain, atrial fibrillation and heart failure (>85 years).Treatment burden was associated with young age, being female, high number of primary care appointments, multiple medication use, and having more than 4 LTCs.

CONSEQUENCES The evidence on the timing and the acquisition order of LTCs is crucial when tailoring treatment programs that target different disease combinations at their stage of accrual. Studying the trajectories of clusters over time offers a unique perspective on the entry points of LTCs within the multimorbidity cascade. This is key to organising multimorbidity care for the at-most risk patient groups and when identifying principal domains of treatment burden.

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5C.3

Clusters of Long-Term Conditions and Adverse Health Outcomes in People with Multimorbidity

Presenter: Stefanie J. Krauth

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Abstract

PROBLEM Multimorbidity, the presence of two or more long-term conditions (LTC) in patients, is becoming the norm rather than the exception in healthcare practice. Yet, it is currently unclear how best to classify multimorbidity beyond counting the number of long-term conditions (LTCs), nor do we understand the relationship of multimorbidity classification (based on types of LTC combinations) with health-care resource use, hospitalisations, or mortality in the UK. A better understanding of clusters of LTCs and their association with health outcomes may be important for the development of effective interventions targeted at patients with multimorbidity.Objectives: 1. To analyse how clusters of LTCs in different age groups relate to adverse health outcomes, including primary care use, number and duration of hospitalisations, and mortality in multimorbid patients. 2. To investigate what additional

information, if any, can be gained from using clusters over counts of LTCs in understanding the risk of adverse health outcomes.

APPROACH Latent Class Analysis was used to identify clusters of LTCs in different age groups (18-36, 37-55, 56-73, >73) in two large community cohorts: UK Biobank (n= 498,936), and the Secure Anonymised Information Linkage Databank (SAIL) (n= 1,552,084). Latent class membership was assigned using posterior probabilities. Incident rate ratios were computed for the number and duration of hospitalisations, primary care use, and all-cause mortality over a 10-year period, using negative binomial and Poisson regression modelling.

FINDINGS The clusters that were associated with the most severe adverse health outcomes differ in their LTC-profile between young & middle-aged patients to older & elderly patients. In the two younger age groups, clusters including mental health & pain disorders and discordant multimorbidity as main components had the highest rates of adverse health outcomes whereas clusters including cancer, and complex multimorbidity were more strongly associated with adverse health outcomes in the older age groups. These FINDINGS were largely consistent across the two cohorts. After adjusting for number of LTCs, sex, age, deprivation, and lifestyle factors, different clusters of LTCs showed distinct associations with adverse health outcomes in all age groups with significantly differing incident rate ratios (IRR) for hospitalisations, primary care use, and all-cause mortality. IRRs for all-cause mortality in young adults aged 18-36 in SAIL increased with increasing number of LTCs. After adjusting for number of LTC counts, young adults in the cluster “depression & substance abuse” showed an all-cause mortality IRR of 6.42 (p=<0.01) compared to participants without multimorbidity while the cluster “Asthma & Depression” had an all-cause mortality IRR of 1.40 (p<0.01) in the same age group.

CONSEQUENCES Our FINDINGS suggest that the specific combinations of LTCs may offer additional, clinically, and economically important information over LTC counts alone in the risk stratification of patients with multimorbidity.

Funding acknowledgement: This work was funded by the National Institute for Health Research, UK

5C.4

The experiences of remote consulting for people with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) and fibromyalgia in primary care

Presenter: Helen Leach

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Abstract

PROBLEM Restrictions due to the Covid-19 pandemic resulted in a sudden shift to a predominantly remote consulting model in primary care from March 2020. Little evidence exists examining the experience of remote consulting for people living with chronic fatigue syndrome / myalgic encephalomyelitis (CFS/ME) or fibromyalgia, with the current literature focusing on the challenges faced by clinicians and people living with these conditions. Clinical guidance highlights the importance of building therapeutic relationships and personalising care, but it is unclear how this translates into a remote or virtual consulting space.This study aims to explore the experiences of people consulting with a primary care clinician for symptoms relating to their chronic fatigue/myalgic encephalomyelitis or fibromyalgia using remote methods, and develop recommendations for primary care clinicians and patients to assist them when engaging in

this type of consultation. Digital and remote consulting will encompass both synchronous (telephone and video) and asynchronous methods (online forms and email).

APPROACH Semi-structured interviews are being recorded and analysed thematically using a Foucauldian theoretical framework. Participants have been recruited across the West Midlands from a range of backgrounds. The Foucauldian framework has been used previously when exploring the experiences of remote consulting. It enables the analysis to consider both the concept of 'power' within the experiences of participants along with how their previous experiences, 'the history of the present', influence those discussed in the interview.

FINDINGS This presentation will build on the poster presentation presented at SAPC SW as a work in progress; currently recruitment is in progress and analysis of interviews will be completed by Summer 2023. Early preliminary themes have included how the choice of clinician is as important as the choice of consultation itself, particularly when interacting with clinicians who are felt to 'believe' or 'not believe' in the symptoms and experience of illness. A further theme has focused on the interaction within the consultation, the 'transactional' nature of a remote encounter and whether therapeutic relationships can be developed through these modalities.

CONSEQUENCES This work builds on the increasing amounts of literature exploring the impact and appropriateness of remote and digital consulting in primary care. It provides further evidence towards determining which patient groups may, or may not, be best suited for certain consultation modalities; this study evaluates this question within a novel population that is associated with some complexity. Not only is this work is in line with the RCGP policy priorities of developing relationship based care and improving the care of people living with long term conditions, it is of relevance for clinicians who encounter, and care for, people living with CFS/ME/fibromyalgia in the community. Recommendations from the FINDINGS will be created for use by patients and clinicians alike and disseminated.

Funding acknowledgement: RCGP Scientific Foundation Board BMA Clare Wand Fund

5C.5

Identifying clusters of multiple long term conditions and their associations with quality of life.

Presenter: Lewis Steell

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Abstract

PROBLEM Effectively managing the complex needs of people living with multiple long-term conditions (MLTCs) is a key healthcare priority. People living with MLTCs encompass heterogeneous disease profiles, yet multimorbidity classification has focused primarily on counting number of co-existing LTCs, rather than combinations or clusters of LTCs. Identifying LTC clusters and their associations with health and healthcare outcomes may facilitate development of targeted interventions and services. Objectives1. Identify age-stratified clusters of MLTCs and investigate their associations with health-related quality of life (HRQoL) in two population-based UK cohorts. 2. Compare the association between clusters of MLTCs and HRQoL to the association between LTC count and HRQOL.

APPROACH Latent class analysis (LCA) was applied to baseline data from the UK Biobank and Understanding Society (US) datasets, to identify clusters of MLTCs in four age-strata: young (18 – 36 years [US only]), middle-aged (37 – 54 years), older (55 – 73 years) and elderly (74+ years [US only]) adults. People who self-reported ≥2LTCs were included in LCA. Optimal number of latent classes determined using model parsimony and clinical interpretation. Associations between LTC clusters and counts with HRQoL (EQ-5D Index scores) at approx. 5-year (US) and 10-year (UK Biobank) follow up were investigated using tobit regression models, adjusted for sociodemographic covariates/baseline HRQoL. People with no multimorbidity (zero/one LTC) were the reference group.

FINDINGS Composition of LTC clusters differed across age strata. Depression was highly prevalent across clusters in young/middle-aged adults. Painful conditions , arthritis, and hypertension were prominent in clusters identified across middle-aged/older/elderly adults. All identified LTC clusters were associated with lower HRQoL compared to those with no multimorbidity. In young/middle-aged adults, three clusters with depression as an anchoring LTC (i.e. >50% prevalence) were associated with large deficits in HRQoL (beta coefficients: -0.134 to -0.101). High prevalence of painful conditions and arthritis were associated with lower HRQoL across several LTC clusters from middle-age onwards. In US only, clusters with high prevalence of coronary heart disease were identified in middle-aged/older/elderly adults and were associated with the worst HRQoL scores at follow up (beta coefficients: -0.294, -0.143 & -0.104, respectively). Associations between LTC counts and HRQoL revealed poorer HRQoL scores in all age-categories as number of LTCs increased. For middle-aged/older adults, having ≥4 LTCs was associated with greater deficit in HRQoL than membership of any LTC cluster. In young adults, similar associations were found for having ≥3 LTCs.

CONSEQUENCES The magnitude of negative associations between MLTCs and HRQoL differs according to the cluster of LTCs and by age. However, having a high number of co-existing LTCs may detriment HRQoL more than the LTC cluster. Taking LTC clusters into consideration could improve the development of more targeted interventions for people living with MLTCs.

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5C.6

An academic primary care research agenda for multimorbidity: a Delphi consensus study

Presenter: Jonathan Stokes

Co-Authors: Peter Bower, Susan M Smith, Bruce Guthrie, Thomas Blakeman, Jose M Valderas, Chris Salisbury

Author Institutions: University of Glasgow, The University of Manchester, Trinity College Dublin, University of Edinburgh, National University of Singapore, University of Bristol

Abstract

PROBLEM Multimorbidity has been identified as a priority research topic, globally. Research priorities from a patient's perspective, and research funders', have been set. However, the perspective from primary care has not yet been formalised. The academic primary care perspective is likely to be vital for informing this topic. Most patients with multimorbidity receive the majority of their care in the primary care setting, and this research is of

direct relevance to GPs and the wider workforce. We aimed to identify and prioritise an academic primary care research agenda for multimorbidity.

APPROACH Three-phase priority setting study with primary care multimorbidity researchers from the UK and other high-income countries. (i) Initial open-ended survey question to generate a long list of questions, (ii) face-to-face workshop to distil/expand these questions, each with researchers from NIHR School for Primary Care Research (SPCR) centres; (iii) final Delphi consensus survey with 27 international multimorbidity researchers over two rounds.

FINDINGS 25 primary care researchers from eight of the nine SPCR centres responded to the initial survey, generating 85 unanswered questions. 18 participants attended the workshop. Discussions focused, primarily, around the theme of 'complexity', in terms of multimorbid patients, biopsychosocial factors driving prevention and outcomes, the sectors that need to align to treat, and the research methods and data to adequately stratify and capture effects. We included 31 questions in round one of the Delphi. 27 of the 50 round one invitees responded (54% response rate), and 24 of the 27 to round two (89% follow-up rate). 10 questions reached final consensus for research prioritisation. The final list of prioritised questions can broadly be grouped into two, (i) questions relating to new and adapted models of care, and (ii) questions relating to new and adapted research methods and data. Those dealing with models of care tended to have a higher proportion of respondents endorsing prioritisation.

CONSEQUENCES These priorities offer funders and researchers a basis upon which to build future grant calls and research plans. Avoiding complexity, both in practice and in research design, is likely no longer an option for improving our systems of care and particularly, for prevention of disease.

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5C.7

How do ME/CFS patients decide what interventions to try and who to listen to? An interpretive descriptive study

Presenter: Meredith Vanstone

Co-Authors: Cassandra Kuyvenhoven, Mehreen Chowdhury, Zara Hasan, Lana Amoudi, Dena Zeraatkaar, Jason Busse

Author Institutions: McMaster University

Abstract

PROBLEM Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is characterized by unexplained persistent and disabling fatigue. There is ongoing debate within the medical community about the influence of psychosocial and physiological factors and people living with ME/CFS often experience stigmatization. Management of ME/CFS is often challenging, and patients may be presented with a wide range of treatment options. The current study explores how participants who experienced sustained symptom improvement understand the genesis of that improvement, and how they decided which treatments or interventions to try.

APPROACH This Interpretive Description study involved semi-structured qualitative interviews (n=32) with people who live in high income Global North countries with developed health systems. Eligible participants were diagnosed with ME/CFS by a health care professional and identified as having experienced a sustained improvement

in symptoms. We identified how participants found information on, and made decisions about, potential therapeutic interventions to address their symptoms. Participants were recruited through social media, ME/CFS patient organizations, and clinical or research networks. Interviews were conducted by phone or video-conference, with an interview guide that was iteratively refined to incorporate emerging analytic insights.

FINDINGS Six participants reported complete recovery; 26 endorsed partial recovery. Every participant dedicated significant time, energy, and effort to learning about and engaging in different therapies (e.g., prescribed medication, diet changes, graded exercise therapy, complementary and alternative medicine, nutritional supplements, cognitive behavioural and psychotherapeutic interventions, faith-based interventions). Those who attended a healthcare practitioner and felt their experiences were not validated were reticent to implement practitioners' recommendations. When a healthcare practitioner offered a high degree of validation, patients were more likely to follow their suggestions, even when those suggestions incurred significant cost. Online communities could be a legitimizing resource, although some described the advice received in these communities as warning against the interventions which were ultimately the most helpful. Pacing was a strategy commonly used to manage symptoms, but was not described as related to recovery. Participants who endorsed full recovery had embraced graded activity (physical and mental) along with some sort of psychological or neurological work.

CONSEQUENCES By exploring individual perceptions of the recovery process, we generated knowledge that informs clinical practice, aids in identifying potential therapeutic interventions, and better supports patient-centered treatment or rehabilitation for patients with ME/CFS. In particular, the findings point to the importance of establishing a therapeutic alliance which may be achieved in part by validating a patient's illness experience.

Funding acknowledgement: This study was funded by an anonymous philanthropic donation to McMaster from an individual. The identity of the donor is unknown to the researchers and the donor had no influence on study design, conduct, or decision to publish.

5C.8

Process evaluation of a pragmatic, multicentre pilot randomised controlled trial (RCT) in primary care: Tailored Intervention for COPD and Co-morbidities by Pharmacists and Consultant Physicians (TICC PCP)

Presenter: Karen Wood

Co-Authors: Georgia Smith, Richard Lowrie, Jennifer Anderson, Jane Moir, Andrew McPherson, Dave Anderson, Elaine Rankine, Donald Noble, Lynda Attwood, Gillian Cameron, Aziz Sheikh, Frances Mair

Author Institutions: General Practice and Primary Care, School of Health and Wellbeing, University of Glasgow; NHS Greater Glasgow and Clyde; University of Edinburgh, NHS Lothian

Abstract

PROBLEM The prevalence of Chronic Obstructive Pulmonary Disease (COPD) and associated hospitalisations are increasing. Evidence suggests care for people with moderate-to-severe COPD is sub-optimal, particularly in relation to prescribing and management of comorbidities. Making greater use of the increasing number of pharmacists working in primary care, an Independent Prescriber Pharmacist role may help improve the quality of care of people with moderate-to-severe COPD and comorbidities.

APPROACH Pilot randomised controlled trial (RCT) in NHS Greater Glasgow and Clyde and NHS Lothian of an intervention aimed at improving health and care of people with moderate-severe COPD and comorbidities. Participants were recruited from hospital-based respiratory clinics. 55 participants randomly allocated to Pharmacist intervention in addition to Usual Care, 55 randomised to Usual Care. Intervention participants received an NHS pharmacist home-based intervention for up to one year. Pharmacists holistically assessed participants' health and social care needs. Working closely with respiratory consultants and GPs, they prescribed, referred to other health and social care services as appropriate, individualising support to the participant's needs and priorities. Our process evaluation involved qualitative telephone interviews with 10 Health Care Professionals (HCPs)/study staff, and 20 intervention participants. Semi-structured interviews explored perception/acceptability of trial procedures. Interviews were audio-recorded and transcribed verbatim. Data analysed thematically; framework matrices used to compare perspectives of participants from areas of high and low socio-economic status (SES). Data conceptualised through a Normalisation Process Theory lens.

FINDINGS The intervention was viewed positively by participants and HCPs/study staff. Changes made to care perceived as beneficial to most participants - included medication changes, increased understanding of COPD and medications, improved breathing/exacerbation management, provision of home aids/adaptations, regular check-ups, additional scans and tests. However, a small number of participants perceived the intervention to have had a limited impact on them. While trial procedures were seen as broadly acceptable, HCPs and study staff encountered some challenges in recruitment (staff and patients), training, workload, workspace, IT access, and data collection/input. Several barriers (e.g. IT infrastructure challenges) and facilitators (e.g. potential benefits of integration into multi-disciplinary teams) to future implementation of the intervention were identified. Analysis of SES suggests pharmacists were able to make changes for all participants but made more improvements for participants from areas of lower SES.

CONSEQUENCES This pharmacist intervention was well received and thought to be beneficial by participants and their HCPs. Some refinement of intervention and trial procedures would allow for smoother implementation and may overcome challenges encountered. Attention to those barriers and facilitators to future implementation identified should promote implementation on a larger scale. In resource constrained contexts, consideration could be given to targeting the intervention to those living in areas of lower SES.

Funding acknowledgement: Chief Scientist's Office and Chiesi.

5C.9

Treatment burden in COPD - FINDINGS from a pragmatic, multicentre pilot randomised controlled trail (RCT) in primary care: Tailored Intervention for COPD and Comorbidities by Pharmacists & Consultant Physicians (TICC PCP)

Presenter: Karen Wood

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Abstract

PROBLEM People living with moderate-to-severe Chronic Obstructive Pulmonary Disease (COPD) may experience high levels of treatment burden, particularly if they have comorbidities. Treatment burden refers to the 'work' involved in managing health conditions and the impact on patients' wellbeing. This work can be complicated by care deficiencies. The capacity of people with COPD to cope with complex treatment regimens and self-management tasks varies according to factors such as socioeconomic status, health literacy, education, social supports and physical/mental abilities. However, there is limited evidence about the treatment burden experienced by people with COPD and co-morbidities.

APPROACH Pilot randomised controlled trial (RCT) of a home-based pharmacist intervention for people with moderate-to-severe COPD and comorbidities in NHS Greater Glasgow and Clyde and NHS Lothian. 110 participants recruited from specialist respiratory consultant led clinics. Baseline questionnaire data collected in person, including Patient Experience with Treatment and Self-management (PETS) scale (60 item, 12 domain validated patient reported measure of treatment burden). Higher PETS scores indicate greater treatment burden. Participants randomly allocated to Pharmacist independent prescriber intervention for up to one year in addition to Usual Care, or Usual Care. Intervention participants received holistic care (e.g. prescribing/referral to other services/support in making lifestyle changes/management of COPD/other health conditions) from Pharmacist home visit. Qualitative telephone interviews conducted with 10 Health Care Professionals (HCPs)/study staff and sub-sample of 20 intervention patients. Semi-structured interviews explored experiences of living with and managing COPD and comorbidities. Interviews audio-recorded and transcribed verbatim. Data were analysed thematically and conceptualised through a Normalisation Process Theory lens and with reference to the Cumulative Complexity Model (CCM).

FINDINGS 110 patients completed the baseline questionnaire, 59% were female, mean age was 67 years. Mean number diagnoses were: respiratory 2.8; non-respiratory 7.6; and mental health 1.1. PETS domains which indicated high levels of treatment burden included those relating to limitations on role/social activity, difficulties with healthcare services, medical appointments and relationships with others. Qualitative data further illustrated participants' experiences of treatment burden and also identified factors which may lessen burden such as family support and good relationships with HCPs.

CONSEQUENCES This study provides new insights into areas of treatment burden experienced by those living with moderate-to-severe COPD and comorbidities. Collaborative home visits by independent prescriber pharmacists were valued and have the potential to positively impact treatment burden. Measures of treatment burden can provide improved understanding of self-management experiences and could be included as a key intervention target in RCTs.

Funding acknowledgement: Chief Scientist Office and Chiesi

5D.1

Communicating weight loss advice in primary care: Using conversation analysis to develop online education resources for clinicians

Presenter: Charlotte Albury

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Abstract

PROBLEM The PROBLEM . Communicating effectively about weight loss with people living with obesity is a key concern for primary care staff. Whilst guidelines recommend that primary care staff should offer advice and support opportunistically, evidence shows this rarely happens. Staff report that they do not know what to say and are concerned about causing offence. A crucial difficulty is that existing education, training, and guidance relies on retrospective reports about what to say. Consequently, they mostly share general advice, such as 'be respectful', rather than specifying how this might be realized in practice. This means primary care staff do not have access to the actual communication strategies most likely to support effective conversations, including what works best under the time and organisational constraints of the primary care setting. Primary care staff have called for more detailed training to raise the topic of weight and offer advice in ways which are well received and effective.

APPROACH The approach We conducted a three-year project (TalkWeL) to identify evidence of how best to communicate brief weight loss advice with people living with obesity, and to develop online educational resources for primary care staff. We used conversation analysis (CA) to analyse 237 recorded interactions between clinicians and patients with obesity, where clinicians offered brief weight loss advice. CA is a well-established method for studying social interaction and enables creation of an evidence base of effective practice, generated from real interactions. We identified specific conversational patterns used by clinicians that patients responded to well in the consultation, and which were linked to patent-reported satisfaction afterwards. We ran workshops with a diverse group of people living with obesity, carers, primary care staff (including GPs, health and wellbeing coaches, and nurses), and collaborators from the Royal College of GPs, and government Office for Health Improvement and Disparities. During workshops the groups (a) guided analysis (b)prioritised our most important results, and (c) suggested key design elements for the educational resources. We developed draft resources and then ran further workshops with patients, primary care staff, and collaborators to iterate these findings.

FINDINGS Online educational resources comprise an interactive training resource and one-page, downloadable, illustrated guidance. Training includes real audio clips of clinicians and patients talking together, and highlights examples of best practice. Following multi-stakeholder input the training programme includes different difficulty levels, optional quizzes (and certificates), and brief modules.

CONSEQUENCES Implications. Using evidence from real consultations ensures educational materials highlight specific communication strategies which have been shown to be well received and effective, under the real time and organisational constraints of the primary care setting. Involving patients, clinicians, and policy makers in the development process maximised the training's usability and acceptability.

Funding acknowledgement: This work is funded by the British heart Foundation (BHF).

5D.2

Can capacity limitations in primary care undergraduate placements be addressed using a blended learning APPROACH?

Presenter: Catherine Neden

Co-Authors: James Curtis

Author Institutions: Kent and Medway Medical School

Abstract

PROBLEM Placements in general practice play an important role in undergraduate medical education and have a strong influence on students and junior doctors choosing careers in general practice. However GP educators report that practice workloads and lack of space are major challenges impacting medical student placements. Without increasing capacity these issues are expected to worsen as increasing numbers of learners compete for limited space.

APPROACH Kent and Medway Medical School (KMMS) students undertake six one-week-long placements in general practice in both their first and second years termed 'immersion weeks'. Each immersion week has a theme which corresponds with on-campus learning in systems-based modules. In the 2022/23 academic year the immersion week structure was changed, with one day of the week replaced with a half day of campus teaching and a half day of 'asynchronous learning'. The asynchronous learning comprises an e-learning lesson created using the Xerte Online Toolkit and hosted on the university virtual learning environment. The content is designed to complement students' learning on placement while referencing their on-campus learning in systems-based modules. Each lesson includes a mixture of case-discussions, multimedia, and interactive elements which students can complete at their own pace. All year one and two students were invited to complete a feedback survey after the third immersion weeks. Data on completion rates was recorded automatically within the virtual learning environment.

FINDINGS 121/131 (92%) year one students completed at least one asynchronous lesson and 107 (82%) completed all three. 104/106 (98%) year two students completed at least one asynchronous lesson and 98/106 (92%) completed all three. 78/131 (60%) year one and 85/106 (80%) year two students responded to the survey. On a 5-point Likert scale 52/78 (67%) of year one students and 63/85 (74%) year two students either agreed or strongly agreed with the statement 'the asynchronous material was helpful in supporting my learning'. In the free text comments students reported that they found the asynchronous learning to be a useful way of consolidating knowledge ahead of the placement and found it beneficial that they could complete it at their own pace. However issues with technology caused frustration for some.

CONSEQUENCES Most students found the asynchronous learning material helpful in supporting their learning. This highlights the potential for a blended learning approach to undergraduate primary care placements combining e-learning with traditional face-to-face teaching. Such an approach has the potential to ease pressures on capacity in primary care without compromising the quality of teaching and learning.

Funding acknowledgement: No funding received.

5D.3

Mapping the Impact of Early Primary Care Placements on Medical Students' Professional Development

Presenter: Dr Sian-Lee Ewan

Co-Authors:

Author Institutions: Ulster University

Abstract

PROBLEM Policy makers have advised a shift in the balance of healthcare and education delivery from secondary to primary care (GMC and MSC, 2017; Thompson, 2016). This aligns with the development of integrated medical curricula with the promotion of early clinical placements. During the Covid-19 pandemic early clinical placements were paused or changed to virtual alternatives. As we emerge from public health restrictions medical schools are reviewing how and in what format to reintroduce early clinical placements thus raising the question what is the rationale for these early clinical placements? Whilst the impact of early primary care placements on increasing the GP workforce is well established, less is known about how they impact medical students' professional development. The aim of this study is the investigate what is known in the research about how early primary care placements facilitate medical students' professional development.

APPROACH A scoping review was performed according to the 6-step framework as described by Arksey and O'Malley (2005) and enhanced by Levac et al. (2010). Searches were carried out on Ovid MEDLINE, EMBASE and Web of Science databases and records screened at abstract and full text levels. Data was extracted from articles for inclusion and numerical and thematic analysis performed employing constructivist epistemology.

FINDINGS 23 articles met the criteria for inclusion at an international level; 12 of these were in the last 4 years. 2483 participants were involved over 18 of the primary studies and the most frequent method used was questionnaires (n=6) or semi-structured interviews (n=6) as a single study method. 32 initial codes related to the impact of early primary care placements on medical students' professional development were identified and organised into 5 overarching themes; modification of attitudes, knowledge, skills, professional identity and career aspirations. The most frequently represented themes were modification of knowledge and skills with professional identity was the least common and more recent theme in the literature.

CONSEQUENCES The impact of early primary care placements in medical education is an under researched but growing area of interest reflecting the direction of health and education policy. The modification of attitudes, knowledge, skills, professional identity, and career aspirations facilitate medical students' professional development through their impact on professional competencies and professional identity formation. These effects were beneficial to students irrespective of their future specialty choice and several concepts were identified as unique to primary care. These findings inform the rationale for the inclusion and prioritisation of early primary care placements.

Funding acknowledgement:

5D.4

How does the General Practice curriculum understand health inequality?

Presenter: Leonard Grant

Co-Authors:

Author Institutions: University of Winchester

Abstract

PROBLEM Reducing health inequalities (differential health outcomes and experiences based on social determinants) has long been a public health priority. General Practitioners (GPs) are generally understood to have an important role in improving health disparities between social groups through not only their medical practice but also their influence on national and local policy agendas. GPs are in a unique position as the effects of the social

determinants of health are something they can both observe directly and are confronted with daily. Perhaps because of this, there is a drive towards including teaching on health inequalities and the social determinants of health in undergraduate medicine and in GP specialist training.The aim of this whole study was to conduct a critical analysis of the curriculum relating to health inequalities and to examine the narratives and assumption contained within undergraduate and GP training on health inequalities. This particular part of the study is focused on curriculum and practice documents. Future work will involve semi-structured interviews with GPs in training and in practice.

APPROACH Through a search of key sources (General Medical Council, Royal College of General Practitioners, British Medical Association, Society for Academic Primary Care, Royal College of Physicians, British medical schools, gov.uk) a number of curriculum documents, practice guides and textbooks which relate to health inequalities were identified. The data was analysed using a dialectical materialist method drawing on Marxist and feminist theories which aim to find connections and patterns in the data with specific reference to the wider political, societal and economic context.

FINDINGS Early findings show that although the social determinants of health framework has the potential to extend inquiry towards the fundamental political economy of contemporary Britain, it tends to stop short of this and understands the determinants as disarticulated risk factors. This leads to a tendency towards an understanding of health inequalities as being largely or wholly a matter of individual behaviour. Where structural forces are mentioned these are often presented abstractly, without cause.

CONSEQUENCES Future teaching on health inequalities should include a thorough theoretical understanding of why and how health inequalities persist in Britain including explanations for how individual behaviour is sometimes constrained. This analysis will also highlight the ways in which primary care practice could be meaningfully adjusted and to lessen the focus on individual change. Future work can move beyond documenting and analysing the effects of the social determinants of health and GPs can direct their policy influence towards the fundamental drivers of inequality.

Funding acknowledgement:

5D.5

What helps patients access online services in primary care? Free-text analysis of patient responses to the Di-Facto survey

Presenter: Nada Khan

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Author Institutions: Exeter Collaboration for Academic Primary Care, University of Exeter

Abstract

PROBLEM The NHS and general practice are increasingly adopting digital services to facilitate access to primary care services. These services can impact both positively and negatively upon patient experiences, and access to digital services is not equal amongst all groups. As part of a wider project (the Di-Facto study) our team conducted a patient survey amongst English primary care practices to investigate patient views of digital facilitation. This work reports the free-text responses from the patient survey to summarise patient perspectives on the use of web-based services.

APPROACH The Di-Facto patient survey was distributed to practices in eight clinical commissioning groups (CCGs) in England between 2021-2022. We examined the free-text responses to two questions which asked patients, 'What can the practice do to help

you access the online services' and 'Is there anything else you would like to add about online services and the support at the practice to help you use them'. We used a qualitative reflexive thematic analysis based on a six-stage process to analyse the responses. FINDINGS 3051 patients responded to the Di-Facto survey, and 2246 respondents provided a free-text response. We present our findings in two major themes. Firstly, respondents described how the technology, such as practice website design, confusion over multiple digital apps, data and security and concerns about eConsult offerings impacted on use of web-based services. Respondents also described practice level barriers, such as a lack of or inconsistent provision, which prevented optimal use of web-based services. The second major theme describes what worked for respondents in terms of their interactions with digital services. Respondents described personal and technical barriers that impacted on their use of digital services. Some respondents felt that online services worked well for them, and described what they would use these services for, and provided suggestions describing what would help them access more online services. Other respondents felt that web-based services were not a replacement for face-to-face interactions with a doctor.

CONSEQUENCES This analysis of free-text responses to a large patient survey highlights the system, practice, and person level barriers and facilitators to use of digital services in primary care. We will discuss the implications of the results in the design of and access to digital services in primary care.

Funding acknowledgement: National Institute for Health Research

5D.6

General Practitioner preferences and use of evidence in clinical practice: a mixed methods study

Presenter: Emer O'Brien

Co-Authors: *Emer O'Brien 1, Aisling Walsh 1, Fiona Boland 1, Claire Collins 2, Velma Harkins 2, Susan M. Smith 1,3, Noirin O'Herlihy 2, Barbara Clyne 1, Emma Wallace 1,4

Author Institutions: 1 RCSI University of Medicine and Health Sciences, 2 Irish College of General Practitioners, 3 Trinity College Dublin, 4 University College Cork.

Abstract

PROBLEM General practitioners (GPs) aim to provide patient centred care combining clinical evidence, clinical judgement and patient priorities. Despite the widespread availability of clinical guidelines and the need for translation of evidence to support patient care, there are barriers to guideline use in general practice, including the availability of specific guidelines that address the complex care presenting to primary care. Determining GP requirements regarding evidence-based guidance, and their preferences on guideline topics and dissemination can help bridge the evidence to practice gap and support clinical decision making. The aims of this study were to: 1) ascertain the needs and preferences of GPs regarding evidence-based guidance to support patient care 2) prioritise content for future evidence-based guidance and 3) to optimise evidence-based guidance structure and dissemination.

APPROACH This was a convergent parallel mixed methods study. A national GP survey was administered to 3496 Irish GPs through the GP professional body (Irish College of General Practitioners) in December 2020 and GP focus groups were conducted in April/May 2021. Integration of the quantitative and qualitative findings was undertaken at the interpretive level.

FINDINGS A total of 509 respondents completed the survey representing a response rate of 14.6%, which is in line with previous national surveys. Seven focus groups were

undertaken with 40 GP participants. The national survey indicated that prescribing updates, interpretation of results, chronic disease management and older person care were the preferred topics for future evidence based guidance. Study participants indicated they require quick access to up-to-date and relevant evidence summaries online for use in clinical practice. Access to full reviews of topics for the purpose of continuing education and teaching was also a priority. Multiple modes of dissemination via email alerts, podcasts, videos and webinars were suggested to increase uptake of guidance in practice.

CONSEQUENCES To support the implementation of evidence based clinical practice, GPs require quick access to online, integrated and up-to-date evidence-based resources. They require evidence-based guidance that reflects the disease burden of the primary care population they care for and a multifaceted approach to dissemination of evidence is preferred. Our findings support development and implementation of evidence-based guidance on prioritised topics and the use of multimodal approaches for dissemination.

Funding acknowledgement: HRB/Irish College of General Practitioners Applied Partnership Award Ref: HRB APA-2019-001

5D.7

Exploring perceptions of doctors in GP specialty training with specific learning difficulties undertaking clinical and work place-based assessments for GP licensing: interview study

Presenter: Dr Julie Pattinson

Co-Authors: Julie Pattinson, Joseph Akanuwe, Kim Emerson, A. Niroshan Siriwardena

Author Institutions: University of Lincoln, RCGP

Abstract

PROBLEM Increasing numbers of doctors in training have specific learning difficulties (SpLDs), where failure to provide reasonable adjustments or accommodations can disadvantage them academically. There is limited evidence for how SpLDs affect performance in different types of licensing exams, particularly in Workplace-Based Assessment (WPBA). We explored perceptions of GP speciality trainees (GPSTs) with SpLDs on the challenges of clinical and WPBA for general practice licensing, and strategies for overcoming these.

APPROACH We used a qualitative design employing Systematic Grounded Theory using inductive methods aimed towards theory development, involving the three steps of open, axial and selective coding. We recruited GPSTs through a national advert and social media, and following informed consent, interviewed them individually online via Teams using a semi structured schedule, recording and transcribing these verbatim. We interviewed 18 GPs with SpLDs at various stages of training, both male and female, with primary medical training in the UK or overseas, across different UK GP training schemes with dyslexia and comorbid disabilities.

FINDINGS We identified seven themes: 1. Late detection: Identifying SpLDs in doctors with an overseas primary medical qualification, was sometimes more difficult and often occurred later because of lack of screening in their home country, together with language and cultural barriers. 2. Need for early diagnosis: A formal educational psychological assessment was needed and previous failed exam attempts were not discounted before a formal diagnosis of dyslexia. 3. Difficulties in learning and assessment: Difficulties processing information made training and assessment more difficult. 4. Educational environment: Note taking was challenging in hospital

environments where consultants were critical when this was slow, whereas working in a GP setting was more supportive. 5. Emotional impact and wellbeing: GPSTs with SpLDs reported low self-esteem, stress and anxiety. 6. Reasonable adjustments: Extra time was helpful for consultations, exams and workplace assessments, and dictation software helped GPSTs complete the e-portfolio. 7. Solutions: These included, raised awareness and training for educational supervisors on dyslexia to provide appropriate support, reduce stigma and ensure understanding of their trainee's way of learning; recommendations for peer support such as social forums for trainees with SpLDs; prompts for supervisory check-ins; benefits of disclosing dyslexia to trainers; educational equipment; adaptions to marking schemes "because I can ask a question, and part of the marking scheme is that you don't repeat because obviously if you repeat, it sounds like you've not been listening"; lengthening consultation and exam times, clearer guidance on clinical assessments; and compliance with these highlighting that supervisors were "going against the guidelines for someone with a disability and "not following the recommendations".

CONSEQUENCES This study identified a range of problems and specific strategies required to support and overcome the challenges related to clinical and WPBA of doctors with specific learning difficulties in GP 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 RCGP.

5D.8

Performance of doctors with specific learning difficulties in the UK GP licensing Applied Knowledge Test data interpretation questions

Presenter: Aloysius Siriwardena

Co-Authors: Vanessa Botan, Chris Elfes, Kate Neden, James Larcombe

Author Institutions: University of Lincoln, Royal College of General Practitioners

Abstract

PROBLEM Specific Learning Difficulties (SpLDs) affect the way information is learned and processed and can have a significant impact on learning including reading and writing as well as data interpretation. Substantial numbers of students who have a SpLD enrol in medical and GP training, but they can be disadvantaged in certain assessments, particularly if reasonable adjustments for their needs are not provided. The aim of this study was to evaluate and compare performance of SpLD candidates and candidates with no declared SpLD on all four different categories of data interpretation questions: text only, table, chart, and calculation.

APPROACH We used a retrospective study design examining data comprising candidates' results from the UK GP licensing Applied Knowledge Test (AKT). Ten percent of questions in the AKT are on evidence-based practice including data interpretation and the critical appraisal skills needed to interpret research data. Data interpretation questions were selected and divided into the four categories (text only, table, chart, calculation). Proportions of correct responses were calculated for each category and each candidate. Descriptive statistics of distributions and comparison tests were run between candidates declaring a SpLD and those without. Multivariable predictive models were run for each data interpretation category to establish if having a declared SpLD was a predictor of performance after accounting for ethnicity and country of primary medical qualification (PMQ).

FINDINGS Out of a total of 18,925 candidates who undertook the AKT23 to AKT44, 920

candidates had a declared learning difficulty representing 4.9% of the sample. On average, candidates with a SpLD performed significantly better on chart-type questions when compared to the other three data interpretation question categories ($p<0.001$). They also performed significantly better on chart-type questions compared to candidates without a SpLD ($p=0.001$). Having a SpLD was no longer a significant predictor of better performance on chart-type questions (B= 0.00, 95%CI -0.01, 0.01, $p=0.310$) after accounting for ethnicity and country of PMQ. On average, candidates with a SpLD had a similar performance on data interpretation type questions when compared to candidates without a SpLD.

CONSEQUENCES Candidates with a declared SpLD tended to perform better on chart-type data interpretation questions but this difference was no longer valid when considering other demographic factors. The tendency to perform better on this question category may be linked to the use of graphic organisers and visual displays as strategies to improve reading skills in those with a SpLD and reliance on graphic schemes to improve readability. Overall, these results indicate that different data interpretation question types do not affect performance of candidates with SpLD on the AKT.

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 RCGP.

5D.9

Patient involvement in primary care medical education: how might their active participation be enhanced?

Presenter: Doyin Alao

Co-Authors: Bryan Burford, Hugh Alberti, Susan Moloney, Helen Finnamore, Gillian Vance

Author Institutions: Newcastle University

Abstract

PROBLEM The 'patient's voice' is increasingly emphasized in educational strategies [1,2]. However, much of this has focussed on patients who have been recruited to have a primary educational role [3,4]. Students also benefit from contact with 'real-time' patients who have diverse health needs. The involvement of these patients does not usually extend to having an active part in the encounter. Evidence on how to promote their active involvement is limited.As undergraduate curricula evolve to incorporate more teaching in primary care, educators will increasingly need to draw on these real-time patients, and hence GPs need to know how best to actively involve their patients.This study aimed to identify ways to enhance the active involvement of real-time patients in undergraduate medical training in primary care.

APPROACH A qualitative study was conducted involving a half-day workshop with patients (n=14), students (n=8), as well as GP tutors and faculty members (n=14) in Newcastle University. This included small group discussions, co-facilitated by researchers and patients, which considered practical solutions to barriers identified from research: consent practices, ambiguity among patients about their role, and opportunities for feedback. Data included transcripts from audio recordings and written notes on flip charts. These were analysed using reflexive thematic analysis. Codes were generated inductively and deductively and discussed with the research team. These were refined and organised into themes.

FINDINGS Patients may be encouraged to actively participate by raising awareness of medical education, enhancing practice

processes, and developing patient roles during the teaching consultation.Raising patients' awareness of medical education and students is essential to facilitate relationships and information exchange during teaching consultations. Patients need clear, relevant, and visible information materials, disseminated using various media which are accessible to a wide range of patients. Normalising teaching within general practice by including the word 'teaching' in the surgery name may encourage and prepare patients to actively participate.Enhancing the practice processes of involving patients in teaching is crucial to enhance their experiences and active roles. For instance, ensuring adequate consent practices that enable patients to make an informed choice makes them feel empowered and enhances the quality of interactions with students. Similarly, acknowledging their contributions makes them feel valued and encourages future participation.During teaching consultations, patients' roles may be developed by inviting them to perform active roles and establishing good relationships.

CONSEQUENCES Real-time patients are invaluable to primary care teaching, but perhaps due to the hierarchical nature of medicine, need to feel empowered to educate students. Their role may be supported by enlightening them about medical education; enhancing the processes of seeking approval and acknowledging their contributions; establishing good relationships; and inviting them to actively participate. This study provides feasible and practical recommendations to enhance patients' active involvement in primary care teaching.

Funding acknowledgement: This study was supported by EngageFMS seed-corn funding, Newcastle University

5E.1

The Changing Face of Primary Care in a Pandemic: a comparison of primary care systems before and 'after' the Covid-19 Pandemic

Presenter: Susan Browne

Co-Authors: Dr Hannah Scobie, Dr Susan Browne, Dr David Blane, Dr Tracy Ibbotson, Ms Lynn Laidlaw, Prof Paul Bowie, Prof Kate O'Donnell, Prof Sara Macdonald

Author Institutions: General Practice and Primary Care, University of Glasgow, NHS Education for Scotland

Abstract

PROBLEM The COVID-19 pandemic led to the rapid reconfiguration of primary care services. In line with government guidance, routine activities were suspended; face-to-face consultations were limited, and remote consultations quickly became standard practice. While this wholescale shift in response to COVID-19 demonstrates the ability of primary care to deliver remote consultations, little is known about the patient safety. consequences of such a shift. There are legitimate concerns about the long- term impact on the diagnosis and treatment of potentially life-threatening illnesses such as cancer and stroke, and disruption to other important preventive and long-term condition care. Alongside the reconfiguration of services for patients, clinical and non-clinical staff experienced significant alterations to roles and responsibilities and faced the challenge of rapidly changing national guidance. The aim of this study is to explore the nature and experience of primary care reconfiguration in response to the Covid-19 pandemic; and to examine the. Consequences of remote consultations for patient safety.

APPROACH A multi-site focused ethnographic study of 12 primary care practices describes the process of primary care reconfiguration, changes to primary care systems and patient and professional views of safety issues in the

context of remote consulting. Practices were purposively sampled to represent a range of characteristics, and include small and large practices, practices serving affluent, mixed, and deprived populations, as well as those situated in remote, rural and urban communities. Semi-structured interviews with clinical and non-clinical primary care staff from each practice were conducted. Interviews focused on the practice culture and communication, the approach to significant adverse events, experiences of reconfiguration, and the quality of care / patient safety since service reconfiguration to remote consulting.

FINDINGS The speed of reconfiguration had a lasting impact on practice systems. Direct and dramatic impacts were described by both clinical and non-clinical staff. Despite not seeing patients face to face, all staff described increased work loads. Non-clinical staff in particular reported an extension of their role. Ad-hoc triage arrangements operated by reception staff were introduced, such arrangements have been maintained beyond the pandemic period. Impacts on patient groups were also identified including the shift to remote consultation, accessibility of services and 'missing' patient groups.

CONSEQUENCES The reconfiguration of primary care systems as a result of the COVID-19 pandemic has had direct impact on both practice staff, and accessibility of health services for patients, with this impact enduring beyond pandemic restrictions.

Funding acknowledgement:

5E.2

Have the drivers of general practice appointment volumes changed as a result of the Covid-19 pandemic?

Presenter: Tianchang Zhao

Co-Authors: Rachel Meacock, Matt Sutton

Author Institutions: University of Manchester HOPE

Abstract

PROBLEM This paper aims to quantitatively identify the demand- and supply-side drivers of general practice appointment volumes, and investigate whether these have changed since the Covid-19 pandemic. Although the number of consultations was significantly reduced in the short run by lockdowns and other restrictions, consultation volumes may have increased in the long run due to the advancements driven by the pandemic, such as the implementation of remote consultation systems.

APPROACH We conducted a panel data regression analysis of consultation volumes at the 106 Clinical Commissioning Groups (CCGs) in England over two periods of 22 months each, covering March 2018 to December 2019 and March 2021 to December 2022. The periods were chosen to avoid national lockdowns and have common seasonality in the pre- and post-covid periods. The monthly CCG-level numbers of attended appointments per registered patient were regressed against workforce composition and the proportion of patients over 65 using a fixed-effects panel data regression model.

FINDINGS In the period before the pandemic, the number of full-time equivalent GPs working in the CCG was the only significant predictor of appointment rates. A 1% increase in FTE GPs was associated with a 0.174% increase in appointments per patient. However, after the lockdowns, the main contributor to appointment rate changes was the proportion of registered patients that were over 65. A one percentage point increase in the proportion of patients over 65 was found to be associated with a 0.123% increase in the appointment rate.

CONSEQUENCES The results show that prior to pandemic appointments were mostly limited by staff supply, whereas after the

lockdowns appointment rates were driven by patient factors. This may indicate that patients are more likely to get appointments when needed as the numbers of staff working in general practice have been increasing over the last 5 years. However, the inclusion of COVID vaccination appointments in the dataset may also explain this phenomenon as elderly patients are more likely to be targeted for vaccinations. Further research is required once more post-covid data that are not affected by vaccination programme becomes available.

Funding acknowledgement: Tianchang Zhao is funded by a NIHR School for Primary Care Research PhD Studentship.

5E.3

Satisfaction with remote GP consultations during the COVID-19 pandemic: a population survey of UK adults

Presenter: Kate Lifford

Co-Authors: Detelina Grozeva, Rebecca Cannings-John, Harriet Quinn-Scoggins, Yvonne Moriarty, Ardiana Gjini, Mark Goddard, Julie Hepburn, Jacqueline Hughes, Graham Moore, Kirstie Osborne, Michael Robling, Julia Townson, Jo Waller, Victoria Whitelock, Katriina L Whita

Author Institutions: Cardiff University, Public Health Wales, Health and Care Research Wales Support Centre, Cancer Research UK, King's College London, University of Surrey.

Abstract

PROBLEM The use of remote consultations within UK general practice has become widespread since the COVID-19 pandemic. Prior to the pandemic, inequalities in usage of remote primary care consultations were identified. With increased use of remote primary care consultations it is important to understand patients' perceptions and experiences of remote consultations and any resulting inequalities. Studies examining demographic variation in satisfaction with remote primary care consultations during the pandemic have not shown a clear pattern of results. The aim of this present study was to examine satisfaction with remote GP consultations during the pandemic and associations with key demographic characteristics.

APPROACH Cross-sectional online survey data were collected from a sample of UK adults between February and March 2021, as part of a wider study. The sample included 1426 participants who reported seeking help for health problems in the previous six months. Self-reported satisfaction with remote GP consultations (seven items) and demographic data (nine items) were gathered from the survey. Principal components analysis was used to create a satisfaction scale, followed by univariable and multivariable analyses to examine associations with demographic characteristics.

FINDINGS Six items formed the satisfaction with remote GP consultations scale with good internal consistency (α=0.86). Mean satisfaction score was close to the scale mid-point (mean=15.4, SD=4.29, range 6-24 with higher scores indicating higher satisfaction). Education and country of residence were statistically significantly associated with satisfaction. Participants educated to degree level or above reported greater satisfaction with remote GP consultations than those with mid-level (B=-0.82, 95% CI -1.41, -0.23) and low-level or no qualifications (B=-1.65, 95% CI -2.29, -1.02). Participants living in Wales reported greater satisfaction than those living in Scotland (B=-1.94, 95% CI -3.11, -0.78).

CONSEQUENCES Further research is needed to understand the behavioural and social factors underpinning the association between education and satisfaction with remote GP consultations. However, the FINDINGS can inform both the use and adaptation of remote GP consultations. Adaptations may be needed

to support those with lower levels of education in using remote consultations to improve their satisfaction. Where feasible offering face-to-face consultations may need to be considered as an alternative for this group. Addressing the variation in satisfaction between those with different educational levels is important for ensuring equitable primary care.

Funding acknowledgement: This work was supported by Economic and Social Research Council as part of UK Research and Innovation's Rapid Response to COVID-19 grant number ES/V00591X/1.

5E.4

'You can be in hell and they still refuse to help': Racially and ethnically minoritised patients with Long Covid highlight poor experiences of primary care

Presenter: Tom Kingstone

Co-Authors: Nisreen A. Alwan, Rebecca Band, Carolyn A. Chew-Graham, Patrycia Gaszczyk, Dipesh Gopal, Tom Kingstone, Alexa Wright, Damien Ridge

Author Institutions: University of Southampton; University of Southampton; Keele University; University of Westminster, Queen Mary University of London, Keele University, University of Westminster, University of Westminster

Abstract

PROBLEM Around 2 million people in the UK experience Long Covid – a patient-preferred term - ongoing, multiple symptoms following a COVID-19 infection. Racially and ethnically minoritised communities experience higher morbidity and mortality following acute COVID-19 infections, but how such groups experience Long Covid is not known.

APPROACH We explored experiences of Long Covid in racially and ethnically minoritised people, including healthcare experiences, and the extent to which the offered care matched perceived needs. We used purposive sampling to recruit 29 minoritised participants from multiple sources, achieving a good balance of genders, ethnicities, ages, and socioeconomic categories. Ethical approval was granted by the University of Westminster ethics committee (ETH2122-1074). Semi-structured interviews, reflexivity and constant comparison analysis was employed for data collection. Interview transcripts were analysed via inductive thematic analysis. We set up a patient advisory group, made up of individuals from minoritised backgrounds who live with Long Covid or who care for someone living with Long Covid. They have been involved in study design, participant recruitment and interpretation of results They will be invited to contribute to dissemination activities (e.g., advising on activities and/or participating in our dissemination of findings) to raise awareness of minoritised experiences of Long Covid.

FINDINGS Racism in healthcare was highlighted throughout the narratives, with participants believing they were treated with less empathy and more harshly than their white counterparts. This created a sense of a lack of safety in consultations. Most of our participants described struggling to get help from primary care, as well as experiencing trivialisation and 'gaslighting'. Nevertheless, some participants reported recognition and proactive support (e.g., especially from racially minoritised practitioners, or if they had better understanding of how to navigate the healthcare systems (e.g., as healthcare practitioners themselves). Participant narratives elaborated on the perceived power they believe GPs wielded over them including referrals and prescriptions, but especially in terms of whether their suffering was legitimised or dismissed. Those with resources frequently fought to access care to meet their needs, or had advocates. Others researched their own treatment plans through self-

management and private care, for example. Participant narratives have been shared with members of our patient advisory group. Their reflections and experiences resonated with participant narratives resonated. Patient advisory reflections and experiences will be incorporated into ongoing analysis.

CONSEQUENCES Our findings suggested recognition of suffering is frequently withheld, yet this legitimisation would, in itself, go a long way to ease the suffering of racially and ethnically minoritised patients living with Long Covid. Raising awareness of such inequalities and the need to focus on better relationships with racially minoritised patients would be a first step to solve the immediate concerns of participants.

Funding acknowledgement: National Institute for Health and Care Research - Research for Patient Benefit programme We would like to include some of our patient advisors as co-authors if this abstract is accepted.

5E.6

How does the impact of Covid-19 affect the work of an organisation supporting vulnerable migrants' access to healthcare?

Presenter: Antje Lindenmeyer

Co-Authors: L. Lessard-Phillips, J. Phillimore, L. Fu

Author Institutions: University of Birmingham

Abstract

PROBLEM Covid-19 disproportionally affects people who are already vulnerable; this is particularly the case for those with BAME backgrounds (Bhatia 2020). Changes made to health care provision due to Covid have created additional barriers to accessing healthcare, especially for recently arrived and undocumented migrants (Knights 2021). Organisations such as Doctors of the World (DOTW UK) aim to help excluded people to access healthcare; however, they also have had to make a substantial change from a face to face drop-in clinic to a telephone-based remote service because of Covid restrictions.

APPROACH As part of a wider study profiling the wellbeing of DOTW UK service users (Lessard-Phillips et al., 2022), we obtained a sample of 96 open text case notes completed during the pandemic (in April and July 2020) and interviewed 5 DOTW UK volunteers. Interviews were transcribed, and all data was imported into N-vivo to support data management. We conducted a content analysis of the case notes and identified domains and themes for a qualitative "domain summary" analysis (Braun & Clarke 2019) from the interview data.

FINDINGS Volunteers discussed a substantial change in their work due to being unable to see service users face to face. This led to increased difficulties in discussing service users' current situation (including making sure they were safe) and being unable to pick up non-verbal cues. They also felt that it was easier for service users to develop a trusting relationship when they could interact with volunteers and other service users in a clinic environment. Helping service users to register with a GP also became more difficult, as practices had also changed to remote working and for some, registration was only possible online. The case notes also illustrate increasing difficulties in registering patients (practices saying they are not taking new patients due to Covid, online only registration for some, language barriers and lengthy processes for sending documents). We found examples for digital exclusion where service users did not have reliable access to devices, data or wi-fi. Case workers also supported service users with Covid related issues (signposting to 111 services, shielding, access to food). CONSEQUENCES Our analysis supports the wider picture of increased barriers for the most vulnerable migrants and outlines the added difficulty for organisations supporting them. We also found that

removing face-to-face interaction had a strong impact both by impeding the volunteers' in-depth understanding of the service user's current situation and by making it more difficult for the service user to access health care. This will remain important as more remote ways of working have been at least partly retained by many GP practices to cope with an increased post-pandemic workload.

Funding acknowledgement: The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds research that informs social policy, primarily in Education, Welfare, and Justice. It also funds student programmes that provide opportunities for young people to develop skills in quantitative and scientific methods. The Nuffield Foundation is the founder and co-funder of the Nuffield Council on Bioethics, the Ada Lovelace Institute and the Nuffield Family Justice Observatory. The Foundation has funded this project, but the views expressed are those of the authors and not necessarily the Foundation. Visit www.nuffieldfoundation.org

5E.7

How have pandemic-related spatial changes affected patient and staff experiences of accessing primary care? A qualitative study during the Covid-19 pandemic.

Presenter: Lindsey Kent

Co-Authors: Jonathan Hammond, Jennifer Voorhees, Jessica Drinkwater, Rebecca Goulding, Simon Bailey, Kath Checkland

Author Institutions: RG JH JV JD LK KC Centre for Primary Care and Health Services Research, School of Health Sciences, University of Manchester. SB: Centre for Health Service Studies, University of Kent

Abstract

PROBLEM Physical spaces in primary care changed significantly due to the Covid-19 pandemic. Some changes were driven by health protection guidance, while other changes were unique. These varied changes reflect the diversity of the primary care built-environment in England, the characteristics and impact of which are understudied.This study examines the impact of physical space changes on patient and staff experiences of access to primary care. We aim to identify which spatial factors affect access and provision of care, and where spatial changes have relevance to wider policy, such as health care inequalities and equitable access to primary care.

APPROACH A participatory approach was taken with a Community Based Research Team (CBRT) comprising patients, GPs and local stakeholders contributing to all aspects of the project. The dataset includes qualitative observations and informal interviews at six general practices and one Primary Care Network premises in Greater Manchester (45 hours, average three visits per site, March—June 2022). Sites varied in size, location (urban/rural), deprivation level and in contractual arrangements. A rapid multi-site ethnographic approach to analysis was used. Summaries were produced of site observations from field notes, with themes identified by individual researchers. Further analysis was undertaken with the CBRT.

FINDINGS We observed significant, evolving changes to physical spaces, including the creation of defensive spaces, sometimes with physical barriers (locked doors, grilles, use of alternative exits). The environments in which people seek care shape experiences, and people within practices also shape the communal spaces they occupy, which reflects findings that:

- Closer access to familiar staff, without barriers, was associated with warmer and more positive interactions and more rapid facilitation of requests around access and care.

- The loss of familiar physical landmarks and spatial signifiers led to confusion for some patients, particularly those who were elderly or had additional needs, frustrating efforts to seek care. This exacerbated inequalities in access.

- Defensive spaces exacerbated an 'us and them' dynamic that led patients to feel unheard and staff to feel threatened. This power imbalance affected interpersonal relationships.

- Confusing signage and the removal of comforting or controllable aspects of spaces appeared to exacerbate anxiety and uncertainty, affecting both staff and patients.

CONSEQUENCES Changed physical spaces disturbed the 'human fit' between patients and staff and thus the process of accessing care, as described in Voorhees' model of access (Voorhees, 2022). The implications of this are likely to be unevenly distributed, risking exacerbating health inequalities. Supporting practices to critically examine their spatial arrangements may be a simple means of improving patient and staff experiences of access. This study will inform the development of freely available resources to support practices and networks in considering how their spaces can influence access.

Funding acknowledgement: This project is funded by the NIHR Policy Research Programme (NIHR202311). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

5E.8

Vaccine effectiveness against COVID-19-related hospital admissions and deaths in the immunocompromised population: A retrospective, population-based cohort study in England

Presenter: Daniel T.H. Chen

Co-Authors: Copland E, Hirst J, Mi E, Dixon S, Coupland C, Hippisley-Cox J

Author Institutions: University of Oxford

Abstract

PROBLEM Individuals who are immunocompromised represent a vulnerable population at risk for severe COVID-19 outcomes. However, little research has been done on COVID-19 vaccine uptake and effectiveness of in people with conditions of immunocompromise. We aimed to describe COVID-19 vaccine uptake in the population and determine vaccine effectiveness in preventing severe COVID-19 outcomes in immunocompromised population using a nationally representative, population-based cohort in England.

APPROACH We used the QResearch primary care database using records from people aged 12 or older during the study period (December 1, 2020, to April 11, 2022). Vaccine uptake was the proportion of the immunocompromised population (people taking immune-modifying drugs or chemotherapy treatments, organ transplantation or dialysis) that received one or more COVID-19 vaccinations. A matched case-control design was used to estimate odds ratios (OR) for the calculation of vaccine effectiveness (100%*[1-OR]) for severe COVID-19 outcomes (COVID-19-related hospitalisation and death) in people who had been vaccinated versus those who had not, accounting for vaccine doses and time periods since vaccination.

FINDINGS The analysis included 583,541 people with conditions of immunocompromise. Among this population, 546,885 (93.7%) were vaccinated, and 36,656 (6.3%) were unvaccinated. During the follow-up period, 17,886 immunocompromised patients were hospitalised and 5,478 died due to COVID-19. In this population, vaccine effectiveness against COVID-19 hospitalisation was 62% (95% CI 52–70;

compared to the unvaccinated) after 6 to 14 weeks of the first vaccination; 77% (72–81) after 6 to 14 weeks of the second dose; and 78% (73–82) after 6 to 14 weeks of receiving the third dose, before waning to 59% (43-71) after the 14th week. Across all doses, vaccine effectiveness against COVID-19-related death in the immunocompromised population was highest 2 to 6 weeks after vaccinations: 76% (70-81) after the first dose; 90% (85-93) after the second dose; and 91% (89-94) after the third dose compared to those unvaccinated. Protection against COVID-19-related death continued to remain high after receiving the third dose (85% [79-89] after 18 weeks of vaccination).

CONSEQUENCES Our findings suggest that COVID-19 vaccines are highly effective at preventing COVID-19 hospitalisation and death in immunocompromised people, who should be encouraged to take up COVID-19 vaccinations to reduce their risk of severe COVID-19-related outcomes. This study is, to our knowledge, the largest study assessing COVID-19 vaccine effectiveness in an immunocompromised population. Stratified analyses of vaccine effectiveness in different subgroups of immunocompromised conditions and by time periods of different dominant COVID-19 variants are ongoing.

Funding acknowledgement: This work was funded by the Wellcome trust, Blood Cancer UK and grants from Cancer Research UK (CR-UK), Oxford.

5E.9

Modifying a manualised Behavioural Activation intervention for use with older adults at risk of depression and loneliness during the COVID-19 pandemic

Presenter: Carolyn Chew-Graham

Co-Authors: David Ekers, Elizabeth Littlewood, Della Bailey, Dean McMillan, Kate Bosanquet, Peter Coventry, Andrew Henry, Eloise Ryde, Claire Sloane, Anna Taylor, Gemma Travis-Turner, Margaret Ogden, Judith Webster, Simon Gilbody

Author Institutions: Keele University, University of York, University of Leeds, Patient and Public Involvement group (BASIL and MODS studies)

Abstract

PROBLEM Depression in older adults (aged 60 years and over) is often under-diagnosed and under-treated. Older adults are less likely to access mental health services due to perceived stigma, lack of awareness about services and fear of being a burden. Older adults are more likely to have long-term physical conditions which increases the risk of depression, and worsens outcomes of all conditions. Older adults may be socially isolated or experience loneliness, both of which can increase the risk of depression and lead to exclusion from society. Behavioural Activation (BA), within a Collaborative Care framework ,is an effective evidence-based intervention for depression in older adults and people with multiple long-term conditions (MLTCs). In addition, BA can be delivered by non-specialist practitioners. The research team were working on a programme of work (MODS) to develop and test an intervention to improve the outcomes of older adults with MLTCs and depression. In March 2020, the COVID-19 pandemic was declared and the team achieved 'Urgent Public Health COVID-19 status' to modify the MODS intervention to instead tackle depression and loneliness in older adults who were isolating due to COVID-19 restrictions.

APPROACH Ethics approvals obtained. We will describe the modification and refinement of a BA intervention for older adults at risk of depression and loneliness due to Covid-19 mitigations. We will describe earlier stages of development of the intervention for the MODS trial, focusing on the contributions of our Patient and Public Involvement Advisory group (PPI AG) and the consensus work with

stakeholders that supported the intervention modification, Support Worker training materials and training package. All this work was conducted face-to-face. This developmental phase was conducted within the conceptual framework for complex interventions as outlined in the Medical Research Council Complex Interventions Framework. From March 2020, refinement of the BA intervention for BASIL (Behavioural Activation for Social IsoLation), with PPI AG and consensus group work, and training of Support Workers all conducted online.

FINDINGS We will describe the challenges and facilitators we encountered modifying an intervention for use to reduce depression and loneliness in older adults during the COVID-19 pandemic. A qualitative evaluation during the initial BASIL feasibility study enabled us to further refine the intervention for the full randomised trial (BASIL+). Additional post-feasibility study modifications were discussed and agreed with the PPI AG and stakeholders.

CONSEQUENCES We now have a BA intervention, materials for older adults and Support Workers and a training package for Support Workers which can be used for older adults at risk of depression and loneliness which could be appropriately used outside of COVID-19 restrictions. Our qualitative evaluation within the BASIL+ trial has enabled us to further modify our intervention for the MODS full randomised trial which is currently recruiting.

Funding acknowledgement: NIHR PGfAR Ref RP-PG-0217-20006

5F.1 (Workshop)

Reimagining equitable primary care: Actionable insights to address inequalities in health and healthcare

Presenter: Anna Gkiouleka

Co-Authors:

Author Institutions:

Abstract

Aim and intended outcome/educational objectives: In this interactive workshop the organisers will share an evidence-based action framework and guiding principles on ways to address health inequalities through primary care. The recommended framework and principles were produced through two independent studies led by Dr John Ford (EQUALISE, University of Cambridge) and Dr Ben Jackson (FAIR STEPS, University of Sheffield) which provide complementary evidence from the published academic and grey literature and consensus from stakeholders. During the workshop, the organisers aim to explore two questions: 1) How the integrated findings of the studies can be translated into context specific examples of action across local contexts e.g., general practices, primary care networks, integrated care systems and national bodies? 2) What dissemination strategies, channels, and materials are needed in order these example actions to be achieved? Attendees will gain an understanding of evidence-based guiding principles on what works to address health inequalities through primary care. They will have the opportunity to inform the dissemination agenda of the two studies with topics and challenges that are relevant to their context. By sharing their experience and learning they will also have the opportunity to expand their professional networks and explore potential shared initiatives.

Format: The workshop will start with a 10-minutes presentation of the integrated findings of the EQUALISE and FAIR STEPS studies. Then attendees will work in small groups for 30 minutes in order to reflect on the two questions described above and summarise their points for each question on a spreadsheet. Organisers will not participate in the groups but will be available to answer questions and offer clarifications. For the last 20 minutes, the small groups will share their

reflections in an open discussion among participants and organisers. Content The workshop will focus on the questions around the application and the dissemination of the integrated findings of the EQUALISE and FAIR STEP study across local contexts. Both studies have reviewed international literature and produced transferrable conclusions. EQUALISE study reviewed which kind of interventions or aspects of general practice can decrease or increase inequalities using a realist methodology, while FAIR STEPS study used mixed methods including an integrative review, and a Delphi survey to understand and prioritise interventions in primary care to address health inequalities. The studies were conducted independently and both integrated patient, public and expert feedback. Related publications: Ford JA, Gkiouleka A, Kuhn I, Sowden S, Head F, Siersbaek R, Bambra C, Harmston RR, Manji S, Moseley A, Wong G. Reducing health inequalities through general practice: protocol for a realist review (EQUALISE). BMJ Open. 2021 Jun 15;11(6):e052746.

Intended audience: Practitioners, policy makers, researchers and patient advocates interested in what works to address health inequalities through general practice and primary care.

6A.1

Developing and Validating a Multivariable Lung Cancer Risk Prediction Model that identifies high-risk smokers in areas with a higher incidence of disease: ECLS and UK Biobank.

Presenter: Lamorna Brown

Co-Authors: Frank Sullivan, Tom Kelsey, Utkarsh Agrawal

Author Institutions: University of St Andrews,

Abstract

PROBLEM In the UK, lung cancer (LC) is a leading cause of cancer related death, accounting for 21% of all cancer related mortality. Clinical trials have found that Low-Dose Computer Tomography (LDCT) can benefit those at risk, reducing LC mortality by 20%. To aid in implementing LC screenings using LDCT, modelling has been carried out to identify an appropriate target population for screening. However, most predictive models examining risk in smokers, use trial data that contains information which may be challenging and expensive to collect. This study uses both trial and electronic health record data to investigate further possible risk factors and determine the significance of established risk factors in a lung cancer risk model for smokers.

APPROACH Data on current and former smokers from deprived practices in Scotland were obtained from the Early Cancer of the Lung Scotland (ECLS) trial (N=12,139). This data was linked with the same participants administrative electronic health records. Due to the small number of LC cases, synthetic minority oversampling (SMOTE) was used to balance the dataset. Stepwise logistic regression was used to obtain measures of effect and select predictors. The model was then validated on data from the UK Biobank (N = 75,710). The same techniques were used to balance the Biobank dataset.

FINDINGS The model performed well with an average AUC of 0.91, a sensitivity of 81.2% and a specificity of 87.8%, in the ECLS dataset. Demographic (e.g. age, smoking status, gender) and clinical predictors (e.g. hospitalised for heart disease, hospitalised for COPD) were included in the final model. The validated model also performed well, although the AUC decreased to 0.84, with a sensitivity of 87.6% and a specificity of 67.5%..

CONSEQUENCES This study found that variables extracted from health records contributed significantly to risk model performance and accuracy. As such, the study was able to identify new risk factors for inclusion in LC risk models; whether a participant had stayed in hospital over the study period and whether they had been hospitalised for heart disease or COPD. The risk model presented here could help guide decision making over current lung cancer screening criteria.

Funding acknowledgement: This research was funded by The Melville Trust for the Care and Cure of Cancer.

6A.2

The effect of multimorbidity on diagnostic interval for lung cancer and mesothelioma: a cohort study using data from the Clinical Practice Research Data link.

Presenter: Imogen Rogers

Co-Authors: Max Cooper, Anjum Memon, Elizabeth Ford

Author Institutions: Department of Primary Care and Public Health, Brighton and Sussex Medical School

Abstract

PROBLEM Cancer survival rates are relatively worse in the UK than most other European countries, and this is at least partly due to delays in diagnosis. Understanding the factors

contributing to diagnostic delay is crucial to efforts to reduce it. Multimorbidity been suggested to contribute to diagnostic delay via two mechanisms – comorbidities placing "competing demands" on the clinician's time reducing the chance of possible cancer symptoms being investigated, and "masking conditions' offering plausible alternative explanations of cancer symptoms. This work investigates the effect of multimorbidity on diagnostic interval for lung cancer and mesothelioma in patients in the UK.

APPROACH Patients with incident lung cancer or mesothelioma aged at least 65y in 2019 were identified in the Clinical Practice Research Datalink, those with at least two years of continuous registration between 1990 and 2016 were included. Diagnostic interval was defined as the time from first presentation with a symptom suggestive of lung cancer or mesothelioma to the diagnosis date (symptoms up to 12 months before diagnosis were considered). Co-morbidities considered were coronary heart disease, depression and anxiety, heart failure, hypertension, chronic kidney disease, osteoporosis, dementia, serious mental illness, epilepsy and diabetes, possible masking conditions considered were asthma, chronic obstructive pulmonary disease, chronic fatigue syndrome and a recent (within 2 years) prescription for an angiotensin-converting-enzyme inhibitor. Other factors considered included gender, age at diagnosis, year of diagnosis, background consultation frequency from 24 to 12 months before diagnosis, increase in consultation frequency in the year before diagnosis, presenting symptom and lifestyle variables (smoking status, drinking status, and BMI category). Associations between predictors and diagnostic interval were investigated using linear regression.

FINDINGS Complete data were available for 10424 lung cancer/mesothelioma patients. In adjusted analyses diagnostic interval was longer among patients with masking conditions, increasing by 27.6 (95%CI 22.9 – 32.4) days and 72.0 (65.6, 78.4) days in patients with one and two or more masking conditions respectively compared to those with none. Number of co-morbidities was not associated with diagnostic delay in adjusted analyses. However, both background consultation frequency and an increased consultation rate in the year before diagnosis were independently positively associated with diagnostic interval, which was 23.0 (17.8 28.3) days higher in those with an increased consultation rate. Diagnostic interval was also increased by 12.5 (5.8, 19.2) days in ever-smokers versus non-smokers, and by 24.4 (14.0, 34.7) days in underweight patients versus those in the normal weight range.

CONSEQUENCES The presence of masking conditions offering alternative explanations for lung cancer/mesothelioma symptoms is associated with delayed diagnosis. Patients with higher consultation frequencies also had longer diagnostic intervals, suggesting competing demand may be an issue. Strategies to reduce diagnostic interval in these patients should be considered.

Funding acknowledgement:

6A.3

'Picking up the pieces' - primary care practitioners' experiences of cancer care reviews: a qualitative study

Presenter: Dipesh Gopal

Co-Authors: Stephanie J. C. Taylor (1), Ping Guo (2), Nikolaos Efstathiou (2)

Author Institutions: 1. Centre for Primary Care, Wolfson Institute of Population Health, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, Yvonne Carter Building, 58 Turner St, London E1 2AB, 2. School of Nursing and Midwifery, Institute of Clinical Sciences,

University of Birmingham, Edgbaston, Birmingham, B15 2TT

Abstract

PROBLEM One role of primary care in the UK is to deliver cancer care via financially incentivised conversations: 'cancer care reviews' (CCRs). There has been a smaller workforce, increased patient demand, and CCR policy changes alongside lack of research on CCRs since 2015. There is a need to explore how primary care staff deliver cancer care through CCRs, especially since the start of the coronavirus disease 2019 (COVID-19) pandemic. This study aimed to explore primary care staff experiences with CCRs and identify their view of CCRs, how they conduct CCRs and their perceived value of CCRs.

APPROACH An exploratory qualitative descriptive approach was used to collect data via remote semi-structured interviews with primary care staff after gaining informed consent. Interview transcripts were analysed using reflexive thematic analysis. Ethical approval was granted by the Health Research Authority (HRA, RG_22-039).

FINDINGS Fifteen primary care staff were interviewed [11 general practitioners (GPs), 3 practice nurses, and 1 physician associate]. Four themes were identified: 1) evolving perceptions of cancer; 2) complex delivery of cancer care reviews; 3) changes to cancer care review delivery during the COVID-19 pandemic; 4) ways to complement cancer care. Primary care staff identified the way that cancer was perceived which impacted how CCRs were delivered. Cancer care involves holistic care, helping decode jargon, signposting and providing unmet care needs. The COVID-19 pandemic resulted in remote CCR delivery. Staff suggested community cancer teams to provide cancer care alongside existing services.

CONSEQUENCES Financial incentives helped achieve a care standard and CCRs were a small part of how cancer care was delivered discretely throughout the year. Templates acted as a guide rather than a rigid structure as CCRs were tailored to patient needs. The COVID-19 pandemic affected cancer diagnosis and treatment, with some CCR delivery occurring remotely. Staff adopted the new 3- and 12-month format CCRs in response to the COVID-19 pandemic. Clinical training may benefit from better training on cancer as a long-term condition and how cancer is perceived by people from diverse ethnic backgrounds.

Funding acknowledgement: Dipesh Gopal is an In-Practice Fellow supported by the Department of Health and Social Care and the National Institute for Health and Care Research. The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health.

6A.4

Can community pharmacies help to reduce health inequalities in early cancer detection?

Presenter: Judit Konya

Co-Authors: CE Clark, RD Neal, M Carter, G Dongo, J Campbell

Author Institutions: University of Exeter

Abstract

PROBLEM One in two people in the United Kingdom will be diagnosed with cancer during their life The key to cancer treatment success and better clinical outcomes is early detection. Most commonly, patients present to general practice with cancer symptoms, however, they may present to other healthcare providers, such as community pharmacies. Community pharmacies are accessible healthcare providers, who can contribute to the prevention, screening and early diagnosis of cancer.Patients in deprived areas, compared to those who live in more affluent areas, experience a higher disease burden of cancer and their experience of accessing general

practice services is less favourable. Therefore, we aim to explore approaches or interventions to early cancer detection in community pharmacies, and whether there is a difference between deprived and more affluent areas in i) the nature of the approaches being offered, ii) clinical outcomes, iii) the perceived barriers and facilitators to the delivery of such approaches, and iv) service users' and stakeholders' experiences.

APPROACH We are undertaking a systematic review; the protocol is registered with PROSPERO. We are searching MEDLINE, EMBASE, CINAHL, PsychINFO and the Cochrane Central Register of Controlled Trials (CENTRAL) electronic databases. Relevant UK websites such as the Pharmaceutical Journal or Cancer Research UK will also be searched. We are including articles published from 2015 onwards, without language restriction, that report any interventions or programs in community pharmacies to aid early cancer detection. Inclusion criteria are intentionally broad, without restriction by study design. Quality is being assessed with the Mixed Methods Appraisal Tool. Two independent reviewers are screening titles and abstracts, then reviewing included full texts using Covidence (Veritas Health Innovation, Melbourne, Australia) and extracting data to an Excel data extraction form. Extracted data will vary by type of included paper but includes: setting (country and socio-economic status), study characteristics, methods, and clinical and behavioural outcomes.We are adopting a narrative approach to data synthesis. If suitable numerical outcome data such as referral or detection rates emerge, we will undertake meta-analysis where appropriate. Due to the anticipated heterogeneity of study methods and settings, analyses will a priori be conducted using random effects meta-analyses. We aim to undertake subgroup analyses, as the data permit, to compare outcomes from pharmacies serving affluent and deprived populations.The review will be reported according to the PRISMA statement, with narrative findings reported according to the ENTREQ guidance.

FINDINGS We will present review findings to the conference.

CONSEQUENCES This review will inform the future design of a trial targeting early cancer detection in community pharmacies, tailored to the needs of local populations, with the aim of reducing health inequalities and contributing to an improvement of population health.

Funding acknowledgement: This work is funded by the NIHR School for Primary Care Research.

6A.5

Socioeconomic Inequalities in the Diagnosis and Treatment of Ovarian Cancer in the United Kingdom: A Systematic Review and Narrative Synthesis

Presenter: Benjamin Pickwell-Smith

Co-Authors: Sarah Greenley, Michael Lind, Una Macleod

Author Institutions: Hull York Medical School

Abstract

PROBLEM Survival inequalities exist for patients diagnosed with ovarian cancer living in England's most socioeconomically deprived areas. Delays in diagnosis and treatment can contribute to these inequalities. Studies evaluating delays amongst patients from deprived areas appear limited, but a Danish study demonstrated that women from households with smaller incomes had experienced system delays. Inequalities in treatment received between socioeconomic groups can further exacerbate survival differences, and studies have demonstrated the presence of such inequalities in non-universal healthcare settings. It is thus

essential to evaluate socioeconomic inequalities across the cancer care continuum in the United Kingdom (UK). This is the first systematic review to evaluate diagnostic and treatment inequalities for patients diagnosed with ovarian cancer living in the UK.

APPROACH MEDLINE, EMBASE, CINAHL, CENTRAL, Web of Science, AMED and PsycINFO were searched from inception to January 2023. The grey literature was extensively searched, including HMIC, BASE, NHS Evidence and Google Advanced Search, hand-searching of relevant websites and forwards/backwards citation searching. Two reviewers independently screened all studies. Previous reviews were used to refine the search terms, and the search strategy was validated using a test set. Observational UK-based studies were included if they reported measures of socioeconomic status and system interval or treatments received. Study risk of bias was assessed using the QUIPS tool, and a narrative synthesis was conducted. The review was reported according to PRISMA 2020 and registered with PROSPERO [CRD42022332071].

FINDINGS Ten of the 2,876 identified references were included in the review, nine from England and one from Northern Ireland. Two studies evaluated the system interval without evidence of an association between socioeconomic status and system delay. Meanwhile, eight studies evaluated treatments received, demonstrating a reduced likelihood of surgery and chemotherapy for patients from the most deprived area.

CONSEQUENCES There were socioeconomic inequalities in treatments received for patients with ovarian cancer, but no evidence of inequalities across the system interval. However, there were limitations across all studies. Notably, the two studies that evaluated time periods across the system interval used data that is now a decade old and waiting times have since deteriorated. Furthermore, not all ovarian cancers were captured, especially those diagnosed by non-managed routes. Ovarian cancer is challenging to suspect; patients are at risk of delays in the patient and primary care intervals, with the potential for further delays across the system interval. We, therefore, need a robust methodology to measure system intervals for all patients diagnosed with ovarian cancer. We need to measure these intervals specifically for patients from deprived communities to ensure policy changes do not exacerbate any existing inequalities. We consequently need a systems approach to tackle delays, with effective partnerships between all stakeholders across the National Health Service to balance timely diagnosis with the finite resources available.

Funding acknowledgement: This work was funded by Yorkshire Cancer Research (award reference number HEND405PhD).

6A.6

Novel decision support intervention to support choice in cervical screening modality: SUCCEED or In-clinic or self-sampling for HPV: Supporting person-centred choice for cervical screening

Presenter: Dr Eleanor Clarke

Co-Authors: Dr Denitza Williams, Dr Kate Lifford, Professor Katherine Brain, Professor Adrian Edwards, Professor Fiona Wood, Dr Natalie Joseph-Williams and Dr Rhiannon Phillips

Author Institutions: Cardiff University, Cardiff Metropolitan University (Dr Rhiannon Phillips)

Abstract

PROBLEM Cervical cancer is the second most diagnosed cancer in women under 45 years old in the UK. Cervical screening using Human Papillomavirus (HPV) testing is routinely offered to individuals with a cervix between 25 and 64 years old in the UK via NHS cancer screening programmes, mostly through

primary care. The cervical screening eligible population could for the first time have a choice of cervical screening modality; in-clinic or self-sampling. This may overcome some barriers of attending cervical screening. Removing some sampling from healthcare services could reduce pressures on primary care, though the impact of this choice would need to be explored. NICE guidelines recommend shared decision making in everyday care including the use of quality-assured patient decision aids. To date, no intervention has integrated behaviour change techniques with decision support principles to support equitable participation in cervical screening, whilst also promoting informed person-centred screening modality choice. This project aims to:

- Identify optimal methods of communicating cervical screening programme changes.
- Understand the needs of individuals eligible for cervical screening regarding a decision support tool when presented with a choice of cervical screening method.

APPROACH A qualitative co-production approach will be used. Up to 30 semi-structured interviews with a diverse sample of cervical-screening eligible participants, focusing on underserved populations, will be asked about communication preferences and decision support needs. Stakeholders (up to 20) including GPs and practice nurses, will be interviewed for their perceptions of the implications of choice and implementation of interventions to support choice on the service journey.Interviews will be recorded and transcribed verbatim. Thematic analysis during data collection will enable the use of 'information power' so that data collection will stop when no significant new themes are identified. Regular team meetings, including with public involvement partners, will review coding and analysis development.A novel theory-informed Logic Model of the active components required for an intervention for preference-based decision support about screening modality will be developed.

FINDINGS Cervical-screening eligible participants are currently being recruited, with data collection due to start in March 2023. Data collection progress and early interview findings will be presented.

CONSEQUENCES Outputs will identify key ingredients for the development of a novel behaviour change and decision support tool for supporting choice in cervical screening method. FINDINGS will build the platform for future research by identifying a logic model, communication strategy and stakeholder consortium for the subsequent development of novel integrated behaviour change and decision support interventions within a new screening programme provision. Ultimately this would aim to support equitable uptake and person-centred choice for screening modality in cervical screening across demographic groups. This can serve to lower cancer inequalities.

Funding acknowledgement: Funded by Cancer Research UK

6B.1

Does dietary advice based on food allergy tests improve disease control in children with eczema? Trial of food allergy IgE tests for Eczema Relief (TIGER) study protocol

Presenter: Catherine Woods

Co-Authors: Matthew Ridd, Stephanie MacNeill, Yumeng Liu, Miriam Santer, Tom Blakeman, Hannah Wardman, Ingrid Muller, Joanna Coast, Kirsty Garfield, Robert Boyle, Rosan Meyer, Isabel Skypala, Shoba Dawson, Hannah Morgans, Julie Clayton, Sara Brown, Hywel Williams

Author Institutions: University of Bristol, University of Southampton, University of Manchester, Imperial College London, University of Nottingham, University of

Edinburgh, Royal Brompton & Harefield Hospitals

Abstract

PROBLEM Many parents worry that a food allergy is the underlying cause for their child's eczema and ask doctors about allergy tests. Most GPs refer to a specialist for these but wait times are long and use of allergy tests varies. A previous trial suggested that infants with eczema who have a positive allergy test for egg may benefit from an egg-free diet, but a larger, better-designed study is needed. The aim of this study is to determine the clinical and cost effectiveness of test-guided dietary advice versus standard care, for eczema management.

APPROACH Pragmatic, multi-centre, parallel group, individually randomised controlled trial (ISRCTN52892540), with internal pilot and nested economic and process evaluations. Children (<2 years) with mild or worse eczema will be recruited from ~84 GP surgeries and randomised 1:1 to comparator or intervention groups. All participants will receive our "Good eczema care" leaflet. Those in the intervention group will also undergo skin prick tests to milk, wheat, egg and soy, and advised to eliminate any foods to which they are sensitised for 4 weeks. The primary perspective of a health economic analysis will be NHS. A cost-utility analysis will compare quality-adjusted life years (QALYs) gained for the child and main carer to costs incurred by the NHS. Additionally, costs from NHS and non-NHS perspectives will be related to a range of outcomes in a cost-consequences approach. A nested process evaluation will employ qualitative and quantitative methods to assess intervention fidelity, clarify causal mechanisms, and identify contextual factors associated with variation in outcomes. We will conduct in-depth interviews with ~15 GPs, ~15 Research and Practice Nurses, and ~30 parents. Nurse training sessions will be observed and recruitment visits audio-recorded. We will explore quantitatively potential mediators of adherence and intervention outcomes.

FINDINGS 493 participants will be followed up over 36 weeks. The primary outcome is eczema control, measured by the parent completed RECAP, collected four-weekly over 24 weeks. Secondary outcomes include: eczema symptoms; quality of life; adverse events; breastfeeding status and diet; growth; parental anxiety. The primary analysis will be a multilevel mixed model framework with observations over time nested within participants.

CONSEQUENCES This study will fill an evidence gap of importance to patients and carers, and reduce variation in practice and associated harms.

Funding acknowledgement: Funded by the NIHR HTA (NIHR133464). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

6B.2

What is the relationship between socio-economic factors and self-reported health in adolescents?

Presenter: Frank Sullivan

Co-Authors: Ms.Katrin Metsis and Dr.Andrew Williams

Author Institutions: Universities of St Andrews

Abstract

PROBLEM Evidence on health inequalities is mostly collected on younger children and adults; therefore, socio-economic predictors of adolescent health are not well understood. Physical morbidity is not common among adolescents and young people (YP); however, many health conditions are initiated in those life stages. This project includes four inter-related studies that will improve the understanding of the relationship between

socio-economic factors and self-reported health (SRH) at ages 10-24; and whether and how this relationship is associated with future health outcomes.

APPROACH First, the 2001 and 2011 Census microdata from Scotland, England, and Wales were used. Bivariate analysis and logistic regression were applied to examine SRH by the socio-economic status (NS-SEC) of the family reference person, controlled for gender, age, household deprivation, and the UK country. The second study examines the change in the SRH from 2001 to 2011; data from the Scottish Longitudinal Study (SLS) is being analysed by bivariate analysis and gender-stratified multivariate logistic regression. The third study will link SLS data to administrative prescribing data to analyse the relationship between SRH status and the uptake of prescription medicines using sequence analysis. Fourth, a systematic review of qualitative studies that explore YP's conceptualisation of health is in progress.

FINDINGS The results of the 2001 and 2011 Census data analysis are reported below. Odds are relative to the higher managerial and professional group and are statistically significant ($p<0.001$). YP from all NS-SEC groups, except the lower supervisory and self-employed group in 2001, had higher odds of reporting poor health. YP from never worked or long-term unemployed households were 2.4 times more likely to report poor health; the respective figure in 2011 was 3.1 In 2001, respondents from households where the reference person's occupation cannot be grouped had 2.8 times higher odds of reporting poor health (data not available for 2011). YP from semi-routine and routine households had 21% higher odds to report poor health in 2001; the odds were 74% higher in 2011. The results of the analysis of the SLS data and systematic review will be available by the time of the conference.

CONSEQUENCES Analysis of the Census data shows that socio-economic patterning of SRH is evident among Young People; we hypothesise that this will also be visible in the change of SRH over time and in the uptake of prescription medicines. The interpretation of quantitative results will be supported by the synthesis of qualitative studies that explore YP's conceptualisations of health.

Funding acknowledgement: Internal university PhD studentshipo.

6B.4

Young people's priorities for the self-management of distress after stoma surgery due to inflammatory bowel disease: a consensus study using online nominal group technique

Presenter: Benjamin Saunders

Co-Authors: Kay Polidano, Lucy Bray, Tamsin Fisher, Nadia Corp, Megan McDermott-Hughes, Adam D Farmer, Carolyn A Chew-Graham

Author Institutions: Keele University, Edge Hill University, University of Malta, University Hospitals of North Midlands NHS Trust

Abstract

PROBLEM Young people, aged 16-35, who have a stoma due to inflammatory bowel disease (IBD) commonly experience distress, due to body image concerns, sexual difficulties, reduced social functioning and lowered self-esteem. General Practitioners (GPs) are a first point of contact for addressing this distress; however, it has been found that stoma-related distress is commonly undetected and/or sub-optimally managed in this group. Interventions that support young people to self-manage distress may be beneficial. To inform a future intervention, this study aimed to gain consensus among young people with an IBD stoma on their priorities for the self-management of stoma-related distress.

APPROACH Two online consensus group meetings were carried out in July 2022, using Nominal Group Technique (NGT), a systematic APPROACH to building consensus which follows a distinct set of stages.

FINDINGS Nineteen young people with a stoma due to IBD took part in one of two online NGT meetings (group 1= 10 participants; group 2= 9). Fifteen participants were female and four male, aged between 19 and 33, located throughout England, Scotland and Northern Ireland. Eleven participants had a stoma as a result of Ulcerative Colitis (UC), seven due to Crohn's Disease and one due to indeterminate IBD. Twenty-nine topics were generated by participants, seven of which reached consensus of >80%, that is, a mean average of >5.6 on a 7-point Likert scale. These were: receiving advice from young people with lived experience of stoma surgery; advice on/ addressing concerns about romantic relationships, sex and intimacy; information about fertility and pregnancy related to stoma surgery; stoma 'hacks', e.g. useful everyday tips regarding clothing, making bag changes easier etc.; reflecting on and recognising own emotional response to surgery; tips on managing the stoma during the night; and processing trauma related to the illness and surgery journey.

CONSEQUENCES findings extend previous research on young people's experiences of stoma surgery, by successfully generating consensus on priorities for managing distress related to surgery and living with a stoma. Priorities were identified that have not previously been reported in the literature, including the need for information about fertility and pregnancy. Increasing awareness among primary care professionals of these priorities can improve the identification and management of distress in this population. This may reduce the possibility that distress will escalate into co-morbid depression and can potentially have an impact in reducing antidepressant prescribing for this group. findings will also inform a digital self-management resource that will be co-produced with young people with an IBD stoma and healthcare professionals, which has the potential to reduce distress in young people with an IBD stoma, and improve their quality of life and clinical outcomes.

Funding acknowledgement: This work was funded by the National Institute for Health Research (NIHR) School for Primary Care Research (SPCR) grant number: 516.

6B.6

Barriers to healthcare for people with a learning disability from ethnic minority backgrounds: perspectives of self-advocates and carers.

Presenter: Katie Umpleby

Co-Authors: Nicola Cooper-Moss, Christina Roberts, Sam Clark, Christie Garner, Jabeer Butt, Umesh Chauhan

Author Institutions: University of Central Lancashire, Learning Disability England, Race Equality Foundation

Abstract

PROBLEM Existing literature has reported that people with a learning disability from ethnic minority backgrounds experience inequalities in relation to health outcomes and healthcare. A mixed-methodology project was conducted which aimed to identify the barriers to healthcare that are experienced by this population. One component of this project involved conducting experience-based co-design (EBCD) workshops to explore the factors which contribute to these disparities in healthcare and to better understand how such inequalities can be reduced.

APPROACH The findings of a systematic review were taken to a group of 'experts by experience'. These were presented to participants to ascertain how lived experiences relate to academic FINDINGS and

to consider ways in which care could be improved. Twenty participants (13 self-advocates, 5 family carers and 2 support workers) contributed to three workshops. People who could not attend the workshops provided their thoughts about the themes with the research team. The workshops were audio recorded, transcribed and thematically analysed.

FINDINGS Sub-themes were generated from 8 core themes. These cores themes included discrimination, COVID-19, community and family networks and transitional care. Our findings suggest that people from ethnic minority backgrounds with a learning disability experience disparities in healthcare. Reported barriers to responsive and inclusive care included: a lack of effective communication resulting from a failure by clinicians to modify their communication style, a lack of easy read information and a lack of information during periods of transition. In culmination, these experiences led to some carers fearing for the future for their loved ones. Some participants experienced discrimination, however due to the intersectional nature of discrimination, recognising and understanding the source was difficult. People reported instances of reasonable adjustments not being adhered to. Some participants provided personal experiences of services where they acknowledged that they may have been treated differently due to their ethnic background. Examples discrimination included being spoken to in a distasteful or derogatory way, being denied access to treatment that was deemed to be beneficial or being prompted to pay for services which were expected to be free. People also reported a lack of culturally appropriate support services and self-advocacy groups.

CONSEQUENCES The intersection of disability and ethnicity results in compounded discrimination. Such discrimination exacerbates inequalities in access and experiences of healthcare for people with a learning disability from ethnic minority backgrounds. However, recognising and understanding the source of discrimination can be difficult for people. These disparities can be reduced by clinicians having effective communication and an enhanced understanding of learning disability. Understanding an individual's needs from the first point of contact is important for the allocation of resources.

Funding acknowledgement: NHS Race and Health Observatory

6C.2

The under-representation of minority ethnic groups in academic general practice

Presenter: Alice Howe

Co-Authors:

Author Institutions: Queen Mary University London

Abstract

PROBLEM The general practice (GP) training programme is one of the most diverse, with more than half being from an ethnic minority and over half being female (GMC workforce report 2022). However, in GP academia, over 85% of GP professors are White and 61% are male. There are approximately 43 academic clinical fellow (ACF) jobs in GP, each year, across the UK, which are often the gateway to a career in GP academia. This work aims to explore if trainees in ACF posts are ethnically representative of those in general training posts, using speakers at the National NIHR GP Academic Clinical Fellows Annual Conference as a proxy.

APPROACH Using the conference programmes and online searches, demographic information on the conference speakers, from the years 2018 to 2022 inclusive, was obtained and compared to the data on the demographics of GP trainees and academics. A freedom of

information act was also requested from Health Education England (HEE) for the demographic data of GP ACF's for the corresponding years.

FINDINGS Over the five years, between 2018 and 2022, there was an average of 40 speakers at the conference. On average, Black females were the least represented (n=0.4, 1%), with four of the five years not having a Black female speaker at all. Black males were the second least represented group (n=0.6, 1.5%). Asian males (n=2, 5%) and Asian females (n=3.8, 9.5%) were also poorly represented, compared to White males (n=12.2, 30.3%) and White females (n=20.2, 50%). Data from HEE on the demographics of ACF trainees from 2022 showed that 27 (71%) of the 38 (excluding 5 who did not state their ethnicity) ACF's were White (with an even gender split).

CONSEQUENCES General Practice attracts more ethnic minorities than most other specialties. However, we are not seeing the same representation at an academic level, worsening the higher up the academic ladder you go. This work shows that more needs to be done to recruit and retain ethnic minorities into ACF posts and beyond. We need to understand the reasons for under-representation in GP academia and aim to make it more representative of the specialty.

Funding acknowledgement: No funding

6C.3

What barriers exist in delivering healthcare to Indigenous people living with multimorbidities in settler-colonies and how can culturally appropriate care improve outcomes: a narrative review of aetiology and management

Presenter: Dr Harm Van Marwijk

Co-Authors: Amen Idahosa, Harm Van Marwijk, Lauren Hardie-Bick

Author Institutions: Brighton and Sussex Medical School

Abstract

PROBLEM There is a global increase in the prevalence of individuals living with chronic health conditions, particularly among the most marginalised groups such as Indigenous people in Australia, Canada, New Zealand and the United States of America. These communities have historically faced discrimination, racism and a loss of human agency. Multimorbidity is the presence of two or more health conditions occurring simultaneously and the treatment of multimorbidities requires a concerted effort to personalise primary care. Indigenous populations in the aforementioned settler-colonies face many barriers to healthcare that leads to an increase in multimorbidity and mortality. Some of these barriers include but are not limited to; a lack of comprehensive primary care, remoteness to secondary care centres, increased health discrimination and socioeconomic deprivation.

APPROACH A narrative review methodology was used (Ferrari, 2015). This approach highlights the key concepts and overview of the available literature. This narrative review aims to understand what barriers exist in delivering healthcare to Indigenous people living with multimorbid conditions and what can be done to improve access to culturally appropriate care. The CINAHL Plus, Medline and Google Scholar databases were searched in the English language. The search strategy yielded 21 studies in Australia, Canada, New Zealand and the United States of America of Indigenous populations living with multimorbidity. The search strategy was limited to including at least diabetes or cardiovascular disease as one of the multi-morbid conditions and the inclusion of the perceived barriers to healthcare as evidenced by the authors.

FINDINGS The results of this narrative review provide evidence for deficiencies in primary

care, a lack of accessibility of healthcare in remote areas, poor public health initiatives and a lack of culturally appropriate care. Multimorbidities affects a growing number of the global population. This increases in Indigenous populations in developed countries who were subject to colonisation. A focus on culturally appropriate care and strong public health initiatives can improve health outcomes in these communities..

CONSEQUENCES Poor accessibility to comprehensive and culturally appropriate primary and secondary care can lead to less than favourable health outcomes in Indigenous populations living with multimorbidities. There is a need for informed and inclusive care in communities that are often overlooked by health policy makers. Indigenous populations have higher rates of multimorbidity, poor nutrition, socioeconomic deprivation and are often lost to follow up post hospitalisation.

Funding acknowledgement:

6C.4

Barriers to healthcare faced by people with a learning disability from ethnic minority populations: unpicking the effects of COVID-19

Presenter: Christina Roberts

Co-Authors: Umesh Chauhan, Katie Umpleby, Nicola Cooper-Moss, Nicola Ditzel

Author Institutions: University of Central Lancashire

Abstract

PROBLEM People with a learning disability face inequalities in their access to care, experience of care and health outcomes. Those from ethnic minority backgrounds who have a learning disability face a 'double discrimination', experiencing barriers to healthcare from two sources as members of two marginalised groups. The COVID-19 pandemic highlighted the extent of ethnic disparities in health outcomes and people with a learning disability were identified alongside those from ethnic minority backgrounds as high-risk groups of complications or death related to COVID-19. We aimed to explore the role of COVID-19 in terms of access, experience and outcomes of healthcare in people with a learning disability from ethnic minority backgrounds using a mixed methodology guided by a working group of self-advocates and carers. This is part of a wider project about barriers to healthcare in people from ethnic minority backgrounds with a learning disability.

APPROACH We wanted to know what existing research says about the effects of COVID-19, whether there are differences in deaths of COVID-19 and what the experiences and views were of self-advocates. Methods included 1) a scoping review analysing existing literature, 2) quantitative analysis of deaths using Learning from lives and deaths (LeDeR) data and 3) workshop findings of people with lived experience. We will present the elements of our findings that explored the role of COVID-19 and the additional barriers to healthcare it presented to people with learning disability from ethnic minority backgrounds.

FINDINGS 1) We found that there was limited existing literature exploring the effect of the COVID-19 pandemic on people who were both recognised as having a learning disability and came from an ethnic minority, however, we did find the literature documenting people from an ethnic minority background and people with a learning disability were at higher risk of contracting COVID-19. We found literature exploring vaccination rates and attitudes in people from ethnic minority backgrounds with a learning disability, which found differences in attitudes towards vaccination between ethnic groups. 2) In our analysis of LeDeR data, we found that COVID-19 became the leading cause of death across all ethnic groups, but variation between

ethnic groups in the proportion of people who died of COVID-19. 3) Our workshop FINDINGS suggest that the pandemic led to reduced access to services and a sense of loneliness and uncertainty. They found vaccine hesitancy, with self-advocates describing mistrust, fear and complacency as barriers to vaccination.

CONSEQUENCES Our findings suggest that people from ethnic minority backgrounds with a learning disability were disproportionately affected by the COVID-19 pandemic in numerous ways. They suffered poor health outcomes and were at higher risk of hospitalisation, complications and death based on both learning disability and ethnicity. Our findings from workshops suggest existing access difficulties were worsened by the pandemic.

Funding acknowledgement: NHS Race and Health Observatory

6C.5

Holistic health and social care outreach for people experiencing homelessness with recent non-fatal overdose: the Pharmacy Homeless Outreach Engagement Non-medical Independent prescribing Rx (PHOENIx after overdose) pilot randomised controlled trial

Presenter: Richard Lowrie

Co-Authors: Andrew McPherson, Frances S Mair, Vibhu Paudyal, Becky Blair, Cian Lombard, Steven Ross, Jane Moir, Kate Stock, David Brannan, Andrea Williamson

Author Institutions: Pharmacy Services, NHS Greater Glasgow and Clyde, Scotland. General Practice and Primary Care, School of Health and Wellbeing, College of Medical, Veterinary and Life Sciences, University of Glasgow, Scotland. School of Pharmacy, University of Birmingham, England. Simon Community Scotland Street Team, Scotland. The Marie Trust, Glasgow.

Abstract

PROBLEM The large and growing public health crises of drug related death disproportionately impacts people experiencing homelessness, who are already severely disadvantaged because of multiple exclusion, intersecting physical and mental health problems and adverse social circumstances. There are no 'off the shelf' interventions known to prevent overdose, delay emergency service contacts or improve other health outcomes in people experiencing homelessness at high risk of fatal overdose.

APPROACH Multicentre pilot RCT (with accompanying process and economic evaluations) of an assertive outreach intervention delivered by pairs of NHS Independent prescriber pharmacists and third sector homelessness workers (Simon Community Scotland or Marie Trust) (PHOENIx). Operating under the governance of specialist Homelessness Health Service GPs in Glasgow, Pharmacists assess health, treat, prescribe and refer to other health care while Third sector workers assess and address welfare benefits, housing, social prescribing. Patients set their priorities during visits every 2 weeks for 7 months. Participants are homeless with a history of at least one non-fatal overdose in the previous 6 months. Independent researchers collect baseline data before randomisation to either PHOENIx plus Usual Care (UC) or UC; follow-up at 6 and 9 months. Our aim is to inform a subsequent definitive RCT by achieving progression criteria: recruitment of ≥100 participants within 4 months;≥ 80% participants with data collected (at baseline and follow up); ≥60% receiving the intervention; and ≥60% remaining in the study at 6 and 9 months. Secondary outcomes include rates and time to: overdose; hospitalisations; emergency department attendance; treatment uptake for physical health, mental health and problem drug use; health related quality of life; frailty and treatment burden (workload of self-management and impact on well-being).

FINDINGS 128/130 eligible participants were recruited from 20 Glasgow homeless venues between May and September 2021. Mean age 42 years (SD 8.4); 71% male. At baseline, participants used a median of 3(IQR 2-4) illicit drugs, street valium being the most widely used street drug (87%). Participants had overdosed 3.2(SD 3.2) times in the 6 months prior to recruitment, despite 90% receiving prescribed opioid substitution treatment and 10% receiving prescribed diazepam. Participants had a mean of 2.2(SD 1.3) mental health problems and 5.4(SD 2.5) physical health problems; 50% in treatment for physical and mental health PROBLEM s. 62 allocated to PHOENIx, 66 to UC. Seven participants were withdrawn due to protocol violation soon after randomisation; 12 lost capacity or died. At 6 and 9 months, 96/113(85%) and 88/109(81%) received in-person follow up (mean 9.6(SD 1.9) months per participant. 113/113(100%) and 109/109(100%) respectively, had data collected from clinical records. 60/62(97%) PHOENIx group participants received at least one in-person consultation with mean of 14.9(SD 9.9) per patient.

CONSEQUENCES Progression criteria were met. Health/social care outcomes will be available in July, to inform research and practice for the UK's most destitute citizens.

Funding acknowledgement: Drug Deaths Task Force (Scottish Government) and NHS Greater Glasgow and Clyde Pharmacy services

6C.6

Experiences of HIV Pre-Exposure Prophylaxis (PrEP) users in Wales during the COVID-19 pandemic – A qualitative interview study.

Presenter: Zahraa Khammas

Co-Authors: David Gillespie, Adam Williams, Jane Nicholls, Fiona Wood

Author Institutions: Ms Zahraa Khammas Cardiff University Cardiff, Dr David Gillespie Centre for Trials Research Cardiff University, Mr Adam Williams Centre for Trials Research Cardiff University, Dr Jane Nicholls Cardiff and the Vale University Health Board, Prof Fiona Wood Division of Population Medicine and PRIME Centre Wales Cardiff University

Abstract

PROBLEM Background: HIV pre-exposure prophylaxis (PrEP) is a medication taken by HIV negative individuals to prevent HIV. It has been available in Wales since 2017. The COVID-19 pandemic impacted all aspects of social life and health services, and sexual health services in the UK saw an 80% reduction of service provision. However, research is lacking about the experiences of PrEP users during this time and how professionals working in primary and secondary care can improve sexual health advice during future pandemics.Aim: We aimed to explore the experiences of PrEP users in Wales following the introduction of COVID-19 pandemic measures, with a focus on PrEP use, PrEP access, sexual behaviours, and well-being.

APPROACH Methods: We conducted a secondary analysis of interview data from two prior studies, which focussed on adherence to PrEP and the impact of PrEP on sexual behaviour. The studies collected data during the COVID-19 pandemic, between May 2020 and February 2021, using remote interviewing methods. Participants were: ≥ 18 years of age, residents in Wales, and men who have sex with men (MSM). Although the impact of COVID-19 was not the main focus of either study, many participants reflected on how the pandemic had affected their PrEP use, sexual behaviour and wellbeing. Secondary data analysis was conducted by lead author (a medical student) using reflexive thematic analysis, with support from co-authors. NVivo12 was used to support analysis.

FINDINGS: Thirty-two interview transcripts were available, three lacked data relating to COVID-19, leaving 29 for analysis. Major themes include: 1) PrEP use during COVID-19, 2) Sexual Behaviour following COVID-19 restrictions, 3) NHS service provision during the COVID-19 pandemic. Most participants experienced a change in PrEP use (the majority paused their PrEP use, others continued as usual, and some switched to event-based PrEP). PrEP use usually mirrored sexual behaviour, nearly all participants experienced a change in sexual behaviour, and felt it unnecessary to continue PrEP use when experiencing little or no sexual contact. Participants experienced reduced access to clinics and appointments during the pandemic, and advice on changing to event-based PrEP was varied with many participants needing more support. Loneliness was experienced by some resulting in varied response to lockdown rules, especially in the latter lockdowns.

CONSEQUENCES Implications: PrEP services in Wales have undergone major changes since the COVID-19 pandemic. This study provides patient perspectives on the challenges of reduced PrEP access during COVID. It offers insights into broader support needs around PrEP use when an individual's circumstances change. Flexible models of PrEP provision, which can be adapted to the patient's needs, will be essential as PrEP delivery extends into community settings such as GP clinics or community pharmacies.

Funding acknowledgement: This research is a secondary analysis of data from two previous studies which were funded by 1) Health and Care Research Wales for a post-doctoral fellowship, and 2) the KESS (Knowledge, Economy and Skills Scholarship) PhD scheme.

6D.2

The Measurement of Treatment Burden after Stroke (TRUSTED)

Presenter: Frances Mair

Co-Authors: Martin Taylor-Rowan, Terence J Quinn, David T Eton, Hamish McLeod, Lisa Kidd, Frances S Mair, Katie Gallacher

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 for people with long-term conditions and the impact of this work on wellbeing. Stroke survivors often experience arduous rehabilitation and long-term care needs, yet we lack a validated scale designed to measure treatment burden in stroke survivors. We have adapted a patient-reported measure (PRM) of treatment burden in multimorbidity, PETS (Patient Experience with Treatment and Self-Management), to create a stroke-specific measure, PETS-stroke. An examination of the content validity of PETS-stroke has already been completed with stroke survivors, resulting in a PRM that is relevant, important and comprehensible. In this study, we aim to examine construct validity, reliability and feasibility of PETS-stroke in a stroke survivor population, through a postal survey and telephone interviews.

APPROACH We will recruit 340 community-dwelling stroke survivors within one year of stroke to evaluate the psychometric properties of the PETS-stroke scale through a postal survey. Participants will complete PETS-stroke at least 4 weeks after discharge from hospital. We will evaluate construct validity against 3 other patient reported measures (PRM's): The Stroke Southampton Self-Management Questionnaire; The Satisfaction with Stroke Care Measure; and The Shortened Stroke Impact Scale. We will explore known-groups validity by exploring the association between treatment burden and

socioeconomic deprivation as well as multimorbidity. We will evaluate test-retest reliability by readministering PETS-stroke to all participants 2 weeks after completion of the first questionnaire. Cronbach's alpha will be used to examine internal consistency. Percentage of missing items and proportion of returned surveys will provide information on feasibility, and a subset of 30 participants will be interviewed by telephone after completion of the questionnaire to further explore this. FINDINGS To date, 237 participants have returned our survey and 27 have been interviewed, with data analysis underway. Recruitment is on track. We will gain information on construct validity (confirmatory factor analysis, convergent validity, known-groups validity), reliability (internal consistency, test-retest), and feasibility of PETS-stroke. Preliminary

FINDINGS from the interviews show that the measure is generally quick and easy to complete. A paper and pencil method suits most however some participants may benefit from telephone support. Clarification of whether to incorporate the workload of finding private healthcare or taking part in clinical trials when answering questions was requested. Participants with mild cognitive impairments benefitted from having someone help them to complete the survey by proxy such as an informal carer.

CONSEQUENCES Completion of this study will produce a validated measure of treatment burden in stroke. This scale will be used to identify stroke survivors at risk of high treatment burden and as an additional outcome measurement for use in clinical trials of stroke treatments.

Funding acknowledgement: CSO grant HIPS_21_13

6D.3

A SYSTEMATIC REVIEW OF THE USE OF BURDEN OF TREATMENT THEORY

Presenter: Frances Mair

Co-Authors: Rachel Smyth, Georgia Smith, Emily Alexander, Carl R May, Frances S Mair, Katie Gallacher

Author Institutions: School of Health and Wellbeing - University of Glasgow, Department of Health Services Research and Policy -London School of Hygiene and Tropical Medicine.

Abstract

PROBLEM Burden of Treatment Theory (BOTT) provides a framework to illustrate and explain how interactions between patients, their healthcare systems and their support networks can affect and exacerbate patient ability to manage their illness. BOTT outlines how patient capacity is influenced by structural and contextual factors that extend beyond the individual and highlights the importance of understanding these interactions to mitigate treatment burden. We aimed to characterise applications of BOTT in research in order to explore its contribution to the understanding of treatment burden and capacity issues for self-management.

APPROACH A qualitative systematic review of literature was carried out on five electronic databases for original research articles, protocols, or preprints published in the English language which cited the key paper presenting BOTT. Papers which used and engaged with BOTT, for example in their approach to data analysis, data collection, to aid in development of interventions, or to thematise or characterise data were included. The search was undertaken in December 2021 and updated in June 2022. DistillerSR software was used to carry out screening and data extraction processes, with 20% of papers double-coded. Quality appraisal using CASP checklists and the Mixed Methods Review

checklist was carried out on studies with empirical data.

FINDINGS Searches yielded 613 citations. After removal of 310 duplicates, 303 papers were screened as titles and abstracts, with 89 excluded due to not meeting inclusion criteria. 214 papers then underwent full-text screening and 185 were excluded. In total, 29 papers met inclusion criteria for this review. Whilst not scored, all included studies assessed via quality appraisal checklists were of high quality. BOTT has been applied across a diverse range of settings and research types, with the most common use being to aid in data analysis or data collection for qualitative studies seeking to characterise treatment burden. Another common use was to aid intervention development in research focused on workload alleviation in a diverse range of settings. The singular paper with a non-clinical setting focused on the feasibility of a web-based domestic violence intervention. The constructs of BOTT appear to be stable across different settings, and researcher commentary on theory utility was generally positive. Two papers adapted and extended BOTT to further suit the context of their research focus. Discussion of BOTT constructs revealed appropriate understanding and a high level of critical engagement.

CONSEQUENCES BOTT provides a useful conceptual, analytical and sensitising lens in studies focusing on both the characterisation and the alleviation of treatment burden through healthcare interventions, and the constructs discussed are stable and applicable to a wide range of healthcare settings. Future research studies could further examine the utility of BOTT by using it in contexts that would potentially require more adaptation and critical assessment of the theory.

Funding acknowledgement: The Stroke Association TSA LECT 2017_01

6D.4

The Acceptability of Quantum-Inspired Imaging for Remote Monitoring of Health & Disease in Community Healthcare (QUEST)

Presenter: Karen Wood

Co-Authors: Katie I Gallacher (1), Terrence J Quinn (2), Heather Fraser (3), Emma McIntosh (3), Jonathan Cooper (4), Muhammad Imran (4), Daniele Faccio (5), Frances S Mair (1)

Author Institutions: (1) General Practice and Primary Care, School of Health and Wellbeing, University of Glasgow, (2) School of Cardiovascular and Metabolic Health, University of Glasgow, (3) Health Economics and Health Technology Assessment, School of Health and Wellbeing, University of Glasgow, (4) James Watt School of Engineering, University of Glasgow, (5) School of Physics and Astronomy, University of Glasgow.

Abstract

PROBLEM Monitoring of health is important for the prevention of morbidity and mortality. Ideally, health monitoring would not depend on visiting a hospital or clinic, but instead be seamlessly integrated into everyday life at home. A problem with existing technology is that it can only monitor what is in the 'line of sight', can be expensive, and may feel intrusive, for example wearable technology.

APPROACH The Universities of Glasgow and Lancaster are developing new healthcare technologies that allow for continuous, remote monitoring of activity and movement. Instead of traditional cameras, we are utilising radio-waves in the environment. We have developed a system that uses intelligent reflective surfaces to allow for the monitoring of movement throughout a person's home. Another technology measures how well the heart is working. The system shines a laser on a person's neck to observe how the movements of blood vessels interfere with the laser beam to determine the strength and rhythm of the heartbeat. These technologies aim to identify issues before a crisis develops,

such as a fall or a myocardial infarction. A critical stage in the development process is to explore the acceptability, risks and benefits of these new technologies with key stakeholders. Members of the public and health professionals will be recruited to participate in focus groups and individual interviews. A sampling frame will ensure diversity in participant characteristics including age, gender, ethnicity, socio-economic status, morbidity and frailty status. Health professionals will be sought from a range of backgrounds (primary and secondary healthcare, social care). Data will be analysed thematically with coding clinics held to discuss key emerging themes.

FINDINGS Data collection is due to commence in the second half of 2023.

CONSEQUENCES This work will provide much-needed insight into the issues that must be considered when developing, testing and implementing these new technologies for health monitoring in the home. For example, the ethical issues of home monitoring, facilitators and barriers to its use and impact of data interpretation on health service workload must be considered. Such technologies could aid transformation of the way health monitoring is undertaken to improve the prevention, prediction, diagnosis and treatment of a range of conditions such as Parkinson's Disease, heartbeat irregularities and frailty. They could aid the assessment of physical health, measure proxies for mental and social health, and transform rehabilitation strategies and fitness monitoring.

Funding acknowledgement: UKRI – Engineering and Physical Sciences Research Council

6D.6

The BEauty and health community LOuNGes (BELONG) study: overview and preliminary FINDINGS

Presenter: Marjorie Lima do Vale

Co-Authors: Marjorie Lima do Vale, Maham Zaman, Louise Goff, Alexis Karamanos, Veline L'Esperance, Salma Ayis, Vasa Ćurčin, Stevo Durbaba, Clare Coultas, Ashlyn Mernagh-iles, Muriel Inyang, Mariam Molokhia and Seeromanie Harding

Author Institutions: King's College London and Kings College Hospital

Abstract

PROBLEM Avoidable mortalities caused by cardiovascular disease (CVD) have decreased in the last decade, yet in the most deprived areas of the United Kingdom, mortality rates remain four times higher than in the least deprived areas. CVD mortality is also higher among women from the Caribbean, Central and Western Africa and Southern Asia than for women born in European countries. In England, health checks services to improve CVD detection and management are freely available but their uptake has been below expected targets, with socioeconomic and ethnic inequalities. Previous research has suggested that community salons are ideal places for health promotion interventions.

APPROACH Informed by social capital theory and systems-thinking, we will use a mixed-methods approach to explore the feasibility of recruiting, training, and retaining hairdressers in community salons to support NHS health check uptake. In phase 1, we have identified relevant areas for intervention delivery and conducted interviews guided by WHO health systems building block, and concept mapping methodology to identify barriers, facilitators, and opportunities for intervention development, delivery, and evaluation. In phase 2, we will co-develop with hairdressers, educational resources on CVD prevention that will be embedded in an online application (App) and a training package to increase hairdresser's readiness to engage in conversations with their clients about health and signpost them to relevant resources. For

phase 3, a stepped-wedge approach will be used to explore the impact of the intervention on NHS health check uptake and to assess the feasibility of a larger trial. Qualitative data will also be collected to explore the experiences of community salons, GP surgeries and clients with the intervention.

FINDINGS To date, 7 salons in South London have confirmed interest and 2 in West London. Readiness assessments with salons (n=8) indicated interest and support for the intervention and limited activities conducted by community salons or in collaborations with health organisations around health promotion in the past. We have engaged multisectoral stakeholders (e.g., hair and beauty industry, the healthcare sector and advocacy groups working with minoritized populations) and discussions highlighted the potential of community salons in health promotion, the need to provide appropriate training and support, as well as to explore wider community links and partnerships to increase salons' engagement and more opportunistic offer of NHS health check services and to consider systemic barriers for low NHS health check uptake.

CONSEQUENCES Our findings highlight the potential of community salons in health promotion and the need to better prepare and support community salons for CVD prevention and to strengthen the link between salons, health care organisations and the wider community. Future work will include results from the co-development of culturally tailored materials and the feasibility of training and retaining community salons and GP practices.

Funding acknowledgement: National Institute of Health Research for Patient Benefit Programme (NIHR202769) and Royal Marsden Pan London Research Fellowship

6E.1

Do single-handed and single-partnered practices deliver high-quality personalised care?

Presenter: Ian Holdroyd

Co-Authors: William Chadwick, Adam Harvey-Sullivan , Theodore Bartholomew, Victoria Tzortziou-Brown, John Ford

Author Institutions: University of Cambridge School of Medical Education, Queen Mary University of London, Royal Surrey County Hospital NHS Foundation Trust, Institute of Population Health Sciences- Queen Mary University, Institute of Preventive Medicine-Queen Mary University

Abstract

PROBLEM Over the past years, there has been a drive to deliver primary care at scale with an increase in practice mergers. Some practices remain "single-handed", with a single GP, or "single-partnered", with a single partner. It is unclear whether these practices deliver high-quality, local and personalised care or have missed opportunities to innovate and benefit from working at scale. This study aims to investigate the quality of service offered by single-handed and single-partnered practices compared to practices with multiple GPs and multiple partners, respectively.

APPROACH All practices in England with more than 1000 patients were included. Practices were classified as single-handed or single-partnered if, for the preceding 2.5 years, at 6-month intervals, their workforce data reported one GP/ GP partner respectively. A quality control process was applied to practices whose workforce data listed only one GP to remove anomalies: practices were classified as having multiple GPs if their website listed more than one GP, they operated as a syndicate or they catered to more than 4000 patients. The outcomes were: 1. GP patient survey scores measuring access, continuity, confidence and overall satisfaction; 2. QOF data for diabetes and hypertension

outcomes; and 3. ED presentation rates and cancer detection (percentage of new cancers treated resulting from a 2-week wait). Direct comparisons were made between single-handed and multiple-handed GPs and single-partnered and multiple-partnered respectively by three sets of generalised linear models for each outcome: 1. unadjusted; 2. controlling for patient characteristics (age, sex and IMD); and 3. controlling for Carr-Hill weights. Sensitivity analyses were performed, including covariates for patient numbers, number of GPs and rurality.

FINDINGS Across adjusted and unadjusted models, patients reported improved access and continuity in single-handed and single-partnered practices compared to multiple-handed and multiple-partnered practices, respectively. Patient confidence was lower in unadjusted and Carr-Hill-adjusted models for single-handed practices and in all models for single-partnered practices. Single-handed practices had improved overall patient satisfaction in all models, while unadjusted and Carr-Hill-adjusted models found reduced satisfaction in single-partnered practices. There was no significant difference in hypertension outcomes. All models revealed significantly worse performance in cancer detection and ED presentation rates for single-handed and single-partnered practices and diabetes management in single-handed practices. Sensitivity analyses confirmed these findings.

CONSEQUENCES Single-handed practices offer better access, continuity and overall satisfaction but have worse performance in terms of cancer detection, ED presentations and diabetes management. Single-partnered practices also have better access and continuity and worse cancer detection and ED presentations but have better diabetes and hypertension management and worse overall satisfaction. Further work is needed to understand what happens to patient outcomes when practices merge.

Funding acknowledgement: No specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors was utilised.

6E.2

The uptake of roles through the Additional Roles Reimbursement Scheme and associations with patient experience: Analysis of General Practices and Primary Care Networks in England 2020-2022

Presenter: Chris Penfold

Co-Authors: Dr Theresa Redaniel, Dr Jialan Hong, Prof John Macleod, Prof Frank De Vocht, Prof Chris Salisbury

Author Institutions: NIHR ARC West, Centre for Academic Primary Care, Bristol Medical School, University of Bristol

Abstract

PROBLEM The Additional Roles Reimbursement Scheme (ARRS), commissioned by Primary Care Networks (PCNs), began in 2020 to expand the non-medical practitioner workforce in primary care. The ARRS is expected to improve primary care delivery across networks, by expediting patient access, mitigating rising demand, and providing an advanced career pathway for non-GP practitioners. At present there are 14 direct patient care ARRS roles eligible to be commissioned through the scheme. Integration of ARRS roles into PCNs has occurred at a rapid pace, with around 12,000 full time equivalent staff in ARRS roles (September 2022). However, the implementation of the scheme has undergone limited evaluation.The aims of our study were to:

1. Describe the commissioning of ARRS roles in England

2. Explore associations between ARRS roles and patients' experiences of primary care services.

APPROACH We used an ecological study design where outcomes and exposures were measured at the General Practice and PCN level.We used the PCN workforce data 2020-2022 to describe commissioning of these roles at PCN-level. We matched this with GP workforce and General Practice Patient Survey (GPPS) data to explore associations between Practice-level FTE in ARRS roles and GPPS outcomes (perceived access to care and satisfaction), adjusted for characteristics of the General Practices (workforce, number of patients) and registered patients (age, gender, deprivation, clinical need). Analyses included descriptive statistics and adjusted linear regression models.

FINDINGS By September 2022, 11,865 FTE in ARRS roles had been commissioned by 1,089 PCNs. These were predominantly pharmacists and pharmacy technicians (3,400 and 1,048 FTE), social prescribing link workers (2,047 FTE), care coordinators (1,895 FTE), and physiotherapists (972 FTE). The median PCN-level FTE ARRS roles was 1.9 per 10,000 registered patients (25%, 75%: 1.3, 2.5). PCNs from more deprived compared with less deprived areas commissioned slightly fewer ARRS FTE (median FTE/10k patients = 1.7 versus 2.0 most deprived versus least deprived PCNs respectively).An increase of one FTE in ARRS roles was associated with a roughly one percentage point increase in the proportion of patients satisfied with their care (beta=1.1, 95% CI: 0.81, 1.4) and able to make an appointment (beta=1.3, 95% CI: 0.91, 1.6).

CONSEQUENCES The commissioning of roles through the ARRS scheme has occurred rapidly since its inception and is associated with a small positive increase in perceptions of the accessibility of and satisfaction with primary medical care. Further research is needed to determine whether roles are being commissioned according to clinical need and whether these roles are extending or filling gaps in the primary care workforce.

Funding acknowledgement: This research was funded by the NHS Insights Prioritisation Programme and the National Institute for Health and Care Research Applied Research Collaboration West (NIHR ARC West). The views expressed in this article are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care

6E.4

Operational failures in general practice (OFIG): A consensus-building study of the operational failures on GPs' and patients' priorities for improvement

Presenter: Ahmed Alboksmaty

Co-Authors: Ahmed Alboksmaty, Jordan M Moxey, Jenni Burt, Mary Dixon-Woods, Carol Sinnott

Author Institutions: THIS Institute (The Healthcare Improvement Studies Institute) at University of Cambridge

Abstract

PROBLEM System issues (operational failures) can interrupt and frustrate the work of GPs, and may negatively influence patient experience. This study aims to build consensus amongst GPs and patients on operational failures to prioritise for improvement in NHS general practice.

APPROACH We conducted two consecutive modified Delphi surveys using Thiscovery, THIS Institute's online research and development platform, between Feb-Oct 2021. GPs were recruited via professional bodies and social media. Patients were recruited through seven local Healthwatch organisations. We compiled a list of operational failures (n=45) from three previous studies by our team. Over two survey rounds, GPs rated the importance of these

operational failures for improvement. The resulting shortlist was then presented to patients for rating, also over two survey rounds. Data were analysed using medians and interquartile ranges. Consensus was defined as 80% of responses falling within one value below and above the median.

FINDINGS Sixty-two GPs responded to the first GP Delphi survey, with 53.2% (n=33) retained through round two. GPs identified fourteen failures as priorities for improvement. Thirty-seven patients responded to the first patient Delphi survey, with 89.2% (n=33) retained through round two. Patients rated all fourteen failures as important for improvement, with consensus on thirteen. The top three failures related to inaccuracies in patients' medical notes, unavailable or missing test results and difficulties referring patients to other healthcare services because of problems in referral forms.

CONSEQUENCES This study has identified the highest priority operational failures in general practice and indicates where GPs and patients feel improvement efforts in general practice should be concentrated.

Funding acknowledgement: This work has been supported by an NIHR (UK) Clinical Lectureship (C.S.), an Academy for Medical Sciences (UK) Starter Grant (SGL018\1023) (C.S), and a Wellcome Trust Senior Investigator Award (WT09789) (M.D.-W.). M.D.-W. is supported by the Health Foundation's grant to the University of Cambridge for The Healthcare Improvement Studies Institute. The Health Foundation is an independent charity committed to bringing about better health and healthcare for people in the United Kingdom. M.D.-W. is a senior investigator in the National Institute for Health Research (NF-SI-0617-10026). The views expressed in this article are those of the authors and not necessarily those of the NHS, the National Institute for Health Research, the Department of Health and Social Care, the Health Foundation, the Academy for Medical Sciences or the Wellcome Trust.

6E.5

Should researchers standardise usual care arms in randomised controlled trials?

Presenter: Katrina Turner

Co-Authors: Alyson Huntley, Sarah Dawson, Shoba Dawson

Author Institutions: University of Bristol

Abstract

PROBLEM Many primary care trials evaluate new or modified treatments against usual care. To strengthen a trial's external validity, this comparator should resemble everyday clinical practice. However, usual care for the same condition can differ across trial sites, over time, and between patients and practitioners. This heterogeneity can make interpretation and translation of findings difficult and can raise scientific and ethical issues. It may be appropriate, therefore, to standardise what usual care entails when using it as a comparator arm, although doing so may compromise a trial's external validity if the care provided differs from what is normally delivered. Currently there is no guidance or overview detailing how researchers designing trials should decide the content of usual care comparators. We conducted a methodology review to summarise current thinking about what should inform this decision.

APPROACH MEDLINE, EMBASE, CINAHL and PsycINFO were searched from inception to January 2022. Reference lists and forward citation searches of included studies were screened to identify additional relevant studies. 1930 records were identified and after de-duplication, 1611 titles and abstracts were screened. 112 were included for full-text screening and 16 were included in the review.

Data were analysed using a narrative synthesis approach.

FINDINGS The aims of the trial, the heterogeneity of usual care, the vulnerability of the patient population, the effectiveness of existing care, the existence of clinical guidelines, the views of stakeholders, the requirements of robust ethical research, and the extent to which the intervention being evaluated needed to be modified for implementation in real-world settings, were identified as factors that should inform the content of a usual care arm. In terms of recommended actions that should be undertaken when making this decision, these included establishing what usual care is at the different study sites, discussing alternative comparators with policy makers and providers, and establishing criteria to review possible alternatives.

CONSEQUENCES Previous research has outlined what factors should inform the decision about whether to standardise usual care in a trial. It has also defined what actions should be undertaken during this process. However, this is a complex decision-making process and little attention has been given to how researchers can manage tensions that occur when trying to address competing priorities. Unless greater attention is given to the characterisation of usual care arms, primary care trials will remain hindered in the extent to which they can provide strong evidence to inform policy and practice.

Funding acknowledgement: This work was funded by the National Institute for Health Research School for Primary Care Research (study number 510).

6E.6

What is the relationship between research activity and quality of care in English general practice? A mixed methods study

Presenter: Peter Bower

Co-Authors: Jonathan Gibson, Cassandra Kenning, James Jamison, Jennifer Jones, Evangelos Kontopantelis, Matthew Sutton, Annette Boaz, Paul Little, Christian Mallen, Richard J McManus, Sophie Park, Juliet Usher-Smith, Bolanle Odebiyi, Peter Bower

Author Institutions: University of Manchester, University of Cambridge, University College London, London School of Hygiene & Tropical Medicine, University of Southampton, Keele University

Abstract

PROBLEM There is evidence that healthcare organisations that take part in research demonstrate better performance. However, most evidence derives from hospital settings. We aimed to assess whether levels of research activity in general practice are associated with a range of organisational and patient-reported outcomes, and to explore possible mechanisms of impact.

APPROACH We used a mixed methods approach, informed by a logic model. We accessed two datasets on research activity (NIHR Clinical Research Network data, and RCGP Research Ready Status) and a range of datasets on outcomes (including quality, patient experience, prescribing, staff retention, and hospital use). We explored the relationships with cross-sectional analyses (exploring relationships between cumulative recruitment over a number of years and outcomes) as well as panel and instrumental variable analyses (exploring relationships between annual research activity and outcomes in subsequent years). Panel and instrumental variable analyses were better able to test causal links. We also recruited general practices from across England and interviewed professionals and patients to understand their perspectives on research activity in general practice and its relationship with outcomes.

FINDINGS In cross-sectional analyses, research activity was associated with a number of

outcomes, in line with the evidence in hospitals. The cross-sectional results were not highly dependent on a particular measure of research activity, but the associations were generally modest in magnitude. However, using panel and instrumental variable techniques providing a more rigorous test of the link between research activity and outcomes did not provide strong support for a causal relationship. Although staff and patients identified different mechanisms by which research might improve outcomes, respondents did not support any mechanism strongly. The most salient impact among professional respondents was that research activity provided relief from clinical pressures and supported their well-being and work satisfaction.

CONSEQUENCES Patients raised concerns that research activity might distract practices from clinical work, reducing access to care. We found no evidence of such impacts. Levels of research activity in general practice are fairly modest in all but a small number of practices, and highly variable year-on-year. It remains possible that more significant increases in research activity will demonstrate larger impacts. There may be a tension between policy goals of increasing the number of practices engaged in research and increasing the scope of research activity in practices. Given workforce pressures, the benefits of research activity on well-being could usefully be the focus of further research and development.

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7A.1

Performance of doctors in the UK GP licensing Applied Knowledge Test for different question lengths

Presenter: Aloysius Siriwardena

Co-Authors: A. Niroshan Siriwardena, Vanessa Botan, Chris Elfes, Kate Neden, James Larcombe

Author Institutions: University of Lincoln, Royal College of General Practitioners

Abstract

PROBLEM The phrasing and length of questions in written examinations may affect candidate performance. It is not known whether this affects performance of candidates that have difficulties processing written language including to a greater extent those with a specific learning difficulty (SpLD) or who have English as a second language. The Applied Knowledge Test (AKT) consists of computer administered multiple-choice questions with stems of varying length. The aim of this study was to investigate how candidates with a declared SpLD and candidates of different ethnicity or those graduating outside the UK performed on longer questions.

APPROACH We used a retrospective study design examining data comprising candidates' results starting with AKT23 up to AKT44. Questions were divided into seven categories (no scenario, 1 line, 2 lines, 3 lines, 4 lines, 5 lines, and 6 or over 6 lines). The proportion of correct responses was calculated for each question length category and for each candidate. Multivariable predictive models were run using question length as the outcome and a declared SpLD, ethnicity and country of primary medical qualification (PMQ) as the main predictors.

FINDINGS We included 18,925 candidates who undertook the AKT23 to AKT44 of different ethnicity (White British 54.12%, minority ethnic 42.95% or mixed 2.93%), country of qualification (UK 73.99%, non-UK 26.01%),

and declared disability (disability declared 4.86%, no disability declared 95.14%). All candidates had a better performance on longer (6 or more lines) questions with an average of 82% of correct responses compared to an average score varying between 74% and 76% for other question length categories (p<0.001). Multivariable regression models revealed that candidates of non-UK PMQ, White ethnicity and with a SpLD performed significantly less well on all question length categories (p<0.001) except for candidates with a SpLD on questions of 6-lines or more which was comparable to that of candidates without a SpLD (B= -0.01, 95%CI -0.03, 0.01, p=0.247).

CONSEQUENCES These findings indicate that performance on different question lengths reflects the general performance of candidates with a declared SpLD, or of different ethnicity and country of qualification. The longest questions seem to favour performance for all candidates especially for candidates with SpLD, suggesting a greater ease of answering (higher facility) for these questions. Further research is needed to understand candidates' perceptions of differences in question facility related to question length.

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7A.2

Are we adequately preparing our GP trainees in Wessex to understand Health Inequalities and to work in areas of deprivation?

Presenter: Nicola McAlister

Co-Authors: NA

Author Institutions: Health Education England Wessex and Thames Valley

Abstract

PROBLEM Health inequalities in England are worsening. Health inequalities forms part of the Royal College of General Practitioners' curriculum but is often not taught. Exposure of GP specialty trainees (GPSTs) to deprivation is highly variable. Training practices are less likely to be situated in areas of deprivation. GPs tend to work in areas like those in which they trained so this may perpetuate the already unequal distribution of GPs. Too many lives are being cut short in the UK due to inequalities and I want to tackle this through improving knowledge and experience of our future GP workforce.

APPROACH I analysed what education and exposure to health inequalities GPSTs across Wessex are experiencing through surveys of GPSTs and GP trainers. I developed and delivered interactive education sessions for GPSTs and GP trainers and gathered feedback data through surveys. I also analysed the distribution of training practices across Wessex based on the level of deprivation and created an interactive map with this data.

FINDINGS I found a paucity of health inequalities education with <10% of respondents having had any during their GP training. 63.5% hadn't worked in an area of deprivation but 80.1% would like this opportunity. 75% rated their understanding of health inequalities as fair or poor. After my education session, 100% rated their understanding as good, very good or excellent and 100% said they would engage in further learning and placements. 47% of 136 GP Trainers didn't know that health inequalities forms part of the curriculum. Only 13.2% had facilitated a tutorial on this topic despite 89.7% believing it to be very or extremely important. Only 35.3% had had a trainee do a practice swap. Following my education session, 94% reported their educational practice would change, 100% reported they

would use the resources and 91.4% reported they would encourage a practice swap. Training practices in areas of deprivation are, in fact, represented in Wessex. Only two of the seven practices in the most deprived 20% based on the Index of Multiple Deprivation are not training practices. However, GPSTs' exposure to these varies hugely with some GPSTs only being exposed to one practice in their entire training.

CONSEQUENCES Health inequalities is an important topic for GPSTs to be exposed to through placements in practices in deprived areas and through targeted education.GPSTs are keen to engage in, and benefit from, learning about health inequalities. There is a need to embed this in GP training across Wessex.Raising awareness of health inequalities amongst GP trainers is likely to improve the exposure of GPSTs to the topic.Routine practice swaps and placements should be implemented to improve wider exposure of trainees to deprivation.

Funding acknowledgement: Health Education England Wessex and Thames Valley

7A.3

Bridging the Gap: The role of graduand students in developing medical education materials

Presenter: Milap Rajpara

Co-Authors: Manishaa Vairavan, Edward Tyrrell, Christine Johnson

Author Institutions: University of Nottingham

Abstract

PROBLEM Post-pandemic medical education delivery includes a greater role for online resources. Graduand students from the academic year 2021-2022 offer the unique perspective of experiencing medical education pre- and post- pandemic. This National Institute of Health Research School of Primary Care Research project has dual aims. The first is to examine whether there is a role for graduand students in developing educational materials. The second is to explore the impact on the graduand students' teaching and leadership skills within a primary care education team. The project consisted of re-developing an online teaching package used in undergraduate primary care education at the University of Nottingham.

APPROACH The graduand students joined the University of Nottingham Undergradate primary care education team as interns during their elective period. A two-month timeframe was offered to interns, during which they worked alongside experienced educators to re-develop an online teaching package. The package was aimed at introducing medical students to the fundamental principles of reflective practice, existing within a new undergraduate-level module. Tasks included brain-storming innovative teaching options, collecting and evaluating qualitative feedback from peers alongside developing teaching materials through an iterative approach. The project required the graduand students to apply their knowledge of medical education, as well as to develop their leadership and team-working skills.

FINDINGS The final online teaching package included multimedia components such as quizzes and worked examples to enhance the learning experience for medical students. The graduand students piloted the new online package with peers, which gained positive feedback and allowed further refinement. The teaching package was implemented into the undergraduate primary care teaching programme and is awaiting feedback from the first cohort of receiving undergraduate medical students. If the abstract is accepted, results will be presented at the conference.

CONSEQUENCES Overall, the graduand students felt empowered to take on the role of an educator to creatively innovate existing teaching material. The education team

benefited from the fresh perspectives of highly experienced students including discussion and challenging of how material was previously taught. The graduand students were able to invest time in material development which was not achievable for other team members with increased clinical and academic commitments. In conclusion, this project demonstrates the potential of student internship programs in medical education to develop the creativity and leadership skills of future educators. The online teaching package developed by the students highlights the importance of incorporating innovative teaching methods in medical education and the impact that student engagement can have on the quality of medical education. Finally, this project highlights the importance of providing students with opportunities to develop their teaching and leadership skills in a supportive and practical environment.

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7A.4

Using GP Fellowships to support Health Equity project implementation in Primary Care: the Newham Case Study.

Presenter: Kavita Gaur

Co-Authors: Dr Jenny Blythe, Ms Sule Kangulec

Author Institutions: Queen Mary University of London, Newham Training Hub

Abstract

PROBLEM Health Equity aims to address differences in health that are unnecessary, avoidable, unfair, and unjust. Climate can also been conceptualised as an health equity issue, with evidence of environmental racism and poor climate impacting on health.The London borough of Newham falls within the top five most deprived boroughs within the city according to the most recent rankings, with local population health data demonstrating poorer than average health outcomes across the life course in the Newham population.Primary care has been identified as particularly well placed to support health equity. It has population coverage, direct contact with patients, potential for continuity, and offers comprehensive coordination of generalist care to patients in their own environment.Educational Fellowships are an opportunity to “do something exceptional” and develop both knowledge and leadership skills. The local ICS made funding provision for Health Equity GP Fellows in its locality, with the aims of promoting workforce retention and developing local health equity projects and education resources.

APPROACH The Newham Training Hub used this funding to recruit four local mid-career GPs as Health Equity Fellows for one session per week for a year under a Fellowship Scheme. Each Fellow identified a local health equity issue to focus upon, developing their own knowledge, implementing a change in practice at local level and disseminating knowledge via educational resources.The Fellows met monthly online to share progress and provide mutual support. These meetings were also attended by Training Hub representatives. An anonymous survey with qualitative and quantitative measures was completed by Fellows near the end of their year.

FINDINGS All objectives for the scheme were either fully or partially met over the time period. At one year, three of the four GPs remained in a substantive role in the borough, all had implemented (or were in process of implementing) a local change in practice, and all had disseminated education on their chosen health equity topic to the local

workforce. A survey of the Fellows found that the scheme allowed protected time for local GPs already interested in health equity to develop their knowledge and produce learning material for their peers, and supported a degree of implementing local change while also acknowledging that "change takes time". Building connections with like-minded professionals was a particular strength of the scheme, and the monthly Fellows peer meet-up was well received. Formalising expectations of the Fellowship scheme, and planning for long-term implementation of projects started by the Fellows, were recommendations made in the survey, as well as developing a specific learning set in leadership.

CONSEQUENCES The GP Fellows scheme provided time and resources to develop projects and professional learning in Health Equity within Newham. A toolkit was developed by outgoing Fellows for future iterations of the scheme.

Funding acknowledgement: Dr Blythe was a mid-career GP Health Equity Fellow for Newham and received funding for that role from the Newham Training Hub.

7A.5

How do the diagnostic reasoning styles of UK medical and physician associate students compare? An exploratory study using an online patient simulation tool

Presenter: Ruth Plackett

Co-Authors: Alistair Thorpe, Angelos Kassianos, Maria Kambouri, Jessica Sheringham

Author Institutions: Department of primary Care and Population Health University College London, Department of Applied Health Research University College London, Institute of Education University College London

Abstract

PROBLEM Primary care teams encompass a wide range of disciplines, many of whom have a role in diagnosis. For example, in 2020, there were approximately 650 Physician Associates (PAs) in primary care networks, with numbers expected to rise substantially. Evidence indicates that successful integration of PAs in primary care relies on other professionals having confidence in their clinical reasoning skills, the thinking and decision-making processes of clinical practice, but there is little evidence of how PAs' clinical reasoning skills compare to other professions. This exploratory study aimed to compare clinical reasoning styles of final year medical and physician associate students in a simulation setting.

APPROACH Data from eCREST (electronic Clinical Reasoning Educational Simulation Tool), an online patient simulation educational tool designed to develop clinical reasoning skills were used. Between 2017 and 2021, four UK medical schools used eCREST with PA students and three schools with medical students. Students saw a simulated case of a 58-year-old female presenting with chest pain. They could ask up to 32 questions during the case, of which 20 were classified by a panel of GP registrars and GPs as essential for deriving informed diagnoses. We compared reasoning styles between PAs and medical students on: 1) the percentage considering lung cancer as a possible diagnosis (Odds Ratios[OR] with 95% confidence intervals[CIs] using Fisher's exact test) 2) the percentage of essential questions asked (mean difference estimates[MDE] with 95%CI) , and 3) which essential questions were asked.

FINDINGS A total of 159 medical students and 54 PA students completed the case. We did not find evidence of differences between medical and PA students on the percentage of students who considered lung cancer as a possible diagnosis (75% vs. 81% respectively, OR=0.68, 95%CI[0.28 to 1.53], or on the percentage of essential questions asked M=70.13% ± 23.17 (14 questions) vs.

M=73.24% ± 18.89 (15 questions), MDE=-3.11%, 95%CI[-9.38 to 3.15].. Physician associates (63%) appeared more likely than medical students (49%) to ask about how symptoms were affecting the patient (OR=1.76 95%CI[0.90 to 3.53]).

CONSEQUENCES Developing students clinical reasoning skills is critical for efforts to improve patient care and reduce diagnostic error in primary care. These results provide suggestive evidence that medical and PA students had similar clinical reasoning styles in terms of information seeking and diagnostic ideas when using eCREST. Comparing reasoning styles in qualified professionals in clinical settings could help understand its impact on patients.

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7A.6

Conceptualising undergraduate clinical general practice placements as clinical Communities of Practice: drawing on FINDINGS from a case study of an Undergraduate Longitudinal GP Placement

Presenter: Liza Kirtchuk

Co-Authors:

Author Institutions: King's College London

Abstract

PROBLEM There has been a global shift towards longitudinal placements in undergraduate medicine, with UK programmes being predominantly primary care based. Such placements are believed to play an important role in supporting medical student learning and professional identity formation (PIF)(1), with many of the educational benefits rooted in the continuity elements. A better understanding of how PIF and learning occur on such placements is needed. Communities of Practice (CoP)(2), a social learning theory, has been proposed to form the pedagogical foundation of longitudinal placements; however, empirical research exploring this phenomenon and factors influencing student participation within CoPs on such placements is limited, and requires further exploration. 1. Brown M, Ard C, Adams J, O'Regan A, Finn G. Medical Student Identity Construction Within Longitudinal Integrated Clerkships: An International, Longitudinal Qualitative Study. Academic Medicine. 2022;26;97(9):1385-92 2. Wenger E. Communities of practice: Learning, meaning, and identity. Cambridge university press; 1998.

APPROACH Case study methodology was used to explore how second year students undertaking an undergraduate longitudinal GP placement at a London medical school participate within CoPs and develop their professional identities. Data arising from routine student evaluation, written reflections, and in-depth interviews with tutors and students were triangulated.

FINDINGS Routine evaluation data was available for 57% of students (n239) and in-depth interviews were carried out with five students and three tutors. Inductive thematic analysis was undertaken, and findings illuminate how students participate and learn within CoPs on longitudinal GP placements. Making contributions to patient care; a welcoming clinical environment; access to the informal spaces and repertoires of the practice (such as clinical record systems); and effective brokerage of educational activities within the practice by the tutor greatly

enabled student legitimate peripheral participation within the GP CoP.

CONSEQUENCES CoP is a theory that allows us to make tangible the somewhat abstract when deepening our understanding of how students learn and form their identities on longitudinal GP placements. Continuity relationships offer students the opportunity to become more central members within the GP CoP, as well as potentiating the powerful socialising effects of GP tutor mentorship and role modelling; further strengthening the educational rationale for longitudinal placements. The extent to which students become legitimate peripheral participants on longitudinal GP placements varies, and this theoretical framework allows us to consider the factors in a GP surgery setting that can enable such participation, with significant implications for how educators design curricula and support clinical tutors in developing placement infrastructure. This is more critical than ever as we face increased demand for high quality undergraduate GP placements that can support workforce planning goals (3).3. Wass V. By choice- not by chance, supporting medical students towards future careers in general practice. Medical Schools Council/ NHS Health Education England (HEE).; 2016.

Funding acknowledgement: n/a

7B.1

WHAT DO PATIENTS WANT AND NEED IN AN EXPLANATION ABOUT OSTEOARTHRITIS?

Presenter: Clare Jinks

Co-Authors: Laura Campbell, Peter Croft, Krysia Dziedzic, Heiko Grossmann, Tina Hadley-Barrows, John Maddison, Chris Main, Cliona McRobert, Elaine Nicholls, Zoe Paskins, George Peat, Mark Porcheret, Jo Protheroe, Johnny Quicke, Noureen Shivji, Elizabeth Cottrell

Author Institutions: Keele University, Otto-von-Guericke-University, Royal Wolverhampton NHS Trust, University of Liverpool, Midlands Partnership NHS Foundation Trust, Sheffield Hallam University, Chartered Society of Physiotherapy, Wolstanton Medical Centre

Abstract

PROBLEM Osteoarthritis (OA) is a major cause of pain and disability worldwide. Patients and health care professionals (HCPs) often lack clarity about the nature of OA and effective treatment strategies. Osteoarthritis explanations are often inaccurate, simplistic, and mainly focused on biomedical terms, highlighting ‘damage’, ‘degeneration’ and ‘wear and tear’. Patients hold negative beliefs about osteoarthritis and may doubt whether they can improve their symptoms. Terminology used to describe OA and its typical, movement related symptoms, can cause people to worry about causing harm by exercising. Furthermore, health information in general is too complex. This study aimed to develop a new explanation for osteoarthritis to help people understand the condition and make sense of management approaches, taking account of health literacy.

APPROACH 1980 people registered at four general practices were mailed a conjoint survey (aged ≥45 years, recorded OA consultation in previous two years). The survey included eight pairs of potential OA explanation statements. Participants selected the explanation that would most help them to self-manage their OA. The OA explanations were designed using a partial-profile choice-based conjoint analysis (profile strength 4, comparison depth 3) from a set of 11 theoretically informed key attributes. Each decision task contained two statements: one representing current information sources, and one a newly designed statement (co-designed with patients and stakeholders). A Patient Advisory Group (PAG) met three times to translate findings into a story board for a new

animation, discuss leaflet content and a brief evaluation e-survey to obtain feedback from the public, people with OA, carers and HCPs (e-survey link embedded in animation and leaflet).

FINDINGS Survey response was 22% (428/1980) (typical for survey type) (average age = 65 years (SD= 10); 66% female). Newer statements were preferred to existing statements for 10 of 11 statements (8 differences statistically significant ($p < 0.05$)). Sensitivity analyses did not change the FINDINGS . The PAG preferred a "cartoon" to whiteboard animation, depicting a journey, patients progressing, taking control, living fulfilling lives, achieving goals (positive and hopeful). They advised to avoid red flames/circles denoting pain, text focusing on "no cure", and humorous images. Headings discussed included e.g.: What is Osteoarthritis? What Causes it? How should I start increasing activity and what should I expect? Tested statements were grouped under headings and further assessed using Flesch reading ease and literacy level. The YouTube link to the animation is https://youtu.be/6iz78WMm-Lo

CONSEQUENCES Updated 2022 UK NICE OA guidelines recommend HCPs advise people where they can find further information on osteoarthritis, how it develops, and that challenges common misconceptions about the condition. Using best health literacy practice, we have developed inclusive resources which aim to empower patients and carers to self-manage OA and sufficiently inform them to help shared decision making about their health.

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7B.2

Can a trial of a text message intervention to improve effective use of medication rapidly recruit people with type 2 diabetes during a global pandemic?

Presenter: Louise Jones

Co-Authors: Professor Andrew Farmer, Professor Peter Bower, Professor David French, Professor Ly-Mee Yu on behalf of the SuMMiT-D Team

Author Institutions: University of Oxford, University of Manchester

Abstract

PROBLEM Type 2 diabetes affects over 400 million people worldwide. Poorly managed diabetes can lead to major complications which can be reduced with effective treatments and self-management. Use of brief messages to provide education and support self-management, delivered through mobile phone-based text messages, can be an effective tool for some long-term conditions. We have previously developed messages aiming to support patients' self-management of type 2 diabetes underpinned by theory, evidence and user input. The aim of this analysis is to assess the extent to which we were able to efficiently recruit participants to an effectiveness trial during a global pandemic.

APPROACH A multicentre individually randomised, controlled trial in primary care recruiting adults (≥35 years) with type 2 diabetes. Routinely used recruitment procedures were adapted and optimised to enable remote recruitment and trial conduct. General practices from across England were ranked by deprivation score and thereby invited to participate to enable diversity of recruitment. Practices used a standard search based on the trial inclusion and exclusion criteria to invite potential participants to the trial. Invitees then registered their interest by texting the study. Following a telephone screening call, consent and questionnaires were completed online (n=894), or on paper if participants preferred (n=145). Participants were then randomised to receive short text messages three times a week or to continue to receive usual care for 12 months. Follow-up questionnaires were completed by participants at 13-, 26-, and 52-weeks using their preferred method of administration.

FINDINGS Recruitment began in March 2021 and concluded 16 weeks later in July 2021, with 1039 participants randomised from 42 general practices. Practices had a range of overall deprivation scores and ethnic mixes which were comparable to those of the UK as a whole.The recruitment rate was 71.8% from 1039/1447 expressions of interest and 5.1% of the cohort were from an ethnic minority group, which was lower than for practices. 95.6% (993/1039) remained in the trial for the full 12 months with a follow-up rate of 89.0% at 12 months on participant completed measures.

CONSEQUENCES Recruitment of patients with type 2 diabetes to a intervention using invitation by practices and registration via text message was well accepted with both practices and participants joining the study rapidly. Use of online systems was very effective for rapid recruitment during a global pandemic. Administration of a study using text messaging and questionnaires supplied online is also well accepted with high follow-up rates. The study successfully included practices with a range of overall deprivation scores and ethnic mixes, however, within the participant population the range of ethnicities and deprivation was less.

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7B.3

Are alternative home- and technology supported modes of rehabilitation delivery as effective as traditional centre-based programmes for people with heart disease? FINDINGS from a Cochrane review.

Presenter: Sinead McDonagh

Co-Authors: Sinéad TJ McDonagh, Hasnain Dalal, Sarah Moore, Christopher E Clark, Jannat Afzal, Sarah G Dean, Kate Jolly, Aynsley Cowie, Rod S Taylor

Author Institutions: University of Exeter, University of Birmingham, University of Glasgow

Abstract

PROBLEM Cardiovascular disease is the most common cause of death worldwide. Traditionally, centre-based cardiac rehabilitation (CBCR) programmes are offered to patients after cardiac events to support recovery and prevent further illness. Home-based programmes (HBCR) are sometimes offered as an alternative and may support increased access to, and participation in, rehabilitation. In 2017, our Cochrane review reported HBCR to be equally as effective as CBCR. With HBCR (± digital/telehealth platforms) becoming increasingly common, due to the SARS-CoV-2 pandemic, an update of the literature was required.The aim of this

study was to compare the effect of CBCR and HBCR (± digital/telehealth platforms) on health-related outcomes in patients with heart disease.

APPROACH We updated searches from the previous Cochrane review by searching CENTRAL, MEDLINE, Embase, PsycINFO, CINAHL, trial registries, as well as previous systematic reviews and reference lists of included studies to 16th September 2022. We included randomised controlled trials comparing CBCR with HBCR (± digital/telehealth platforms) in adults with myocardial infarction, angina, heart failure or who had undergone revascularisation.Two authors independently screened references, extracted outcome data and study characteristics, and assessed risk of bias (Cochrane ROB1). Quality of evidence was assessed using GRADE principles.

FINDINGS Three new trials were included in this update; 9 studies and 14 trial registrations await classification. Overall, 24 trials (3,046 participants) were included in analysis. No evidence of a difference was seen between CBCR and HBCR in primary outcomes up to 12-months of follow-up: total mortality (relative risk (RR)=1.15, 95% CI 0.65 to 2.16; participants=1647; studies=12/comparisons=14; low quality evidence), exercise capacity (standardised mean difference (SMD)=-0.10, 95% CI -0.24 to 0.04; participants=2343; studies=24/comparisons=28; low quality evidence), or health-related quality of life up to 24-months. Trials were of short duration, with only a few studies reporting outcomes after one year (exercise capacity: SMD 0.11, 95% CI -0.01 to 0.23; participants=1074; studies=3; moderate quality evidence). Trial completion was similar between HBCR and CBCR participants (RR 1.03, 95% CI 0.99 to 1.08; participants=2638; studies =22/comparisons=26; low quality evidence) and the cost per patient of HBCR and CBCR were similar. Insufficient detail was provided to enable a comprehensive risk of bias assessment.

CONSEQUENCES HBCR (± digital/telehealth) and CBCR, formally supported by healthcare staff, are similarly effective in improving clinical and health-related quality of life outcomes in patients with heart disease; this finding therefore supports the wider implementation of HBCR programmes to improve access to, and uptake of, rehabilitation. Further data are needed to confirm if these short-term effects of HBCR and CBCR can be sustained, and if such programmes can be beneficial to other cardiac populations.

Funding acknowledgement:

7B.4

Major haemorrhage in people with heart failure and atrial fibrillation: community-based cohort study

Presenter: Nicholas Jones

Co-Authors: Nicholas R Jones, Margaret Smith, Sarah Lay-Flurrie, Andrea K Roalfe, Yaling Yang, FD Richard Hobbs and Clare J Taylor

Author Institutions: University of Oxford, Nuffield Department of Primary Care Health Sciences

Abstract

PROBLEM Heart failure (HF) is a risk factor for major haemorrhage but is not included in key anticoagulation bleeding risk prediction scores for atrial fibrillation (AF), such as ORBIT or HAS-BLED. People with HF also typically have a poor prognosis and traditional analytical methods may over-estimate the prognostic significance of a variable if the competing risk of death is not accounted for. We aimed to report the relative risk of first major haemorrhage in people with HF and AF, compared to people with AF without HF,

accounting for the competing risk of all-cause mortality.

APPROACH Primary care cohort study of 2,178,162 patients aged ≥45 years in the English Clinical Practice Research Datalink (2000-2018), linked to secondary care data from Hospital Episode Statistics and mortality data from the Office for National Statistics. We excluded people with a history of major haemorrhage prior to the study index date. We conducted competing risks and landmark analyses alongside traditional survival analysis.

FINDINGS We included 60,270 people with HF and AF, 79,461 with HF only and 126,251 with AF only. Over 7.56 years median follow-up, 72,196 patients (3.3%) had a first major haemorrhage and 276,319 (12.7%) died. The cumulative incidence function of major haemorrhage in people with HF and AF was 2.25% (95%CI 1.96-2.58) at 1-year follow-up, 8.22% (95%CI 7.65-8.93) at 5-year follow-up and 12.0% (95%CI 11.3-12.9) at 10-year follow-up (Figure 1). By comparison among people with AF without HF the respective cumulative probability was 1.45% (95%CI 1.31-1.61) at 1-year, 6.47% (95%CI 6.15-6.82) at 5-year and 11.2% (95%CI 10.8-11.7) at 10-year follow-up (Figure 1). Incidence rates of intracranial and gastrointestinal bleeding per 1,000 person years at risk were also highest in people with HF and AF. In a fully-adjusted Cox model, the hazard ratio for major haemorrhage was higher among people with HF and AF (HR 2.52, 95%CI 2.44-2.61) than people with AF without HF (HR 1.87, 95%CI 1.82-1.92). HF remained associated with an increased relative risk of major haemorrhage in a sub-group analysis of people with AF who were prescribed an oral anticoagulant (fully adjusted Cox model HR 1.68, 95%CI 1.59-1.78). However, in a Fine and Gray model accounting for the competing risk of death, the hazard of major haemorrhage was similar for people with AF without HF (HR 1.82, 95%CI 1.77-1.87) or HF and AF (HR 1.71, 95%CI 1.66-1.78).

CONSEQUENCES People with HF and AF are at increased risk of major haemorrhage compared to those with AF without HF. Current bleeding prediction scores may under-estimate this risk and so miss the opportunity to treat modifiable bleeding risk factors. However, people with HF and AF often have a poor prognosis so may be exposed to this higher bleed risk for a relatively short window and prognosis is important to consider when assessing bleeding risk. Future research could seek to develop bleed risk prediction scores using competing risks methods.

Funding acknowledgement: This work was undertaken as part of NJ's Doctoral Research Fellowship, which is supported by a Wellcome Trust personal grant (203921/Z/16/Z). The project also received funding from the National Institute for Health and Care Research Collaborations for Leadership in Health Research and Care

7B.5

Hypertension in the time of Corona -- Whose hypertension did the pandemic most affect in North East London?

Presenter: Stuart Rison

Co-Authors: Oliver Redfern, Isabel Dostal, Chris Carvalho, Zahra Raisi-Estabragh, John Robson

Author Institutions: Clinical Effectiveness Group (CEG), Centre for Primary Care, Wolfson Institute of Population Health, QMUL, London; Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford; William Harvey Research Institute, NIHR Barts Biomedical Research Centre, QMUL, London; Barts Heart Centre, Barts Health NHS Trust, London

Abstract

PROBLEM The COVID-19 pandemic necessitated major changes in the primary care management of chronic conditions such

as hypertension. Some reports highlighted widening of health inequalities during this period. We set out to investigate health inequities in the management of hypertension in a large cohort of individuals with hypertension from North East London, one of the most diverse and deprived area of England.

APPROACH We analysed an open cohort of adults with hypertension in North East London over 43 months. We used NHS England Quality and Outcomes Framework metrics to define controlled hypertension. We also considered differences in blood pressure (BP) recording. We assessed variations in our management of hypertension indicators by ethnicity, sex, age, deprivation and treatment intensity using multiple variable logistic regression analyses performed in April 2019, April 2020, April 2021 and April 2022 (representing the pre-pandemic, pre-lockdown, lockdown and post-lockdown phases of the pandemic).

FINDINGS The cohort comprised of 219,180 unique patients over the entire study period. BP control assessed using QOF indicators fell from a pre-pandemic peak of 73% to a nadir of 50% by the end of the first UK lockdown, accompanied by similar fall in recently recorded BPs. However, during the same period, BP control in patients with a recent BP recording remained stable (81% to 80%). Across the entire study period, Black/Black British ethnicity group members were less likely to have controlled BP than White ethnicity group members, who themselves were less likely to have controlled BP than Asian/Asian British ethnicity group members. These differences could not be attributed to unequal recording of blood pressures in patient records nor to treatment intensity differences.

CONSEQUENCES In this large primary care cohort, BP control in patients with hypertension was broadly maintained during the pandemic despite initial concerns that management of hypertension had significantly deteriorated. The typical QOF indicator of management of hypertension (which suggested the deterioration) should be used with care.Ethnic disparities were observed in hypertension control and the same inequities were present before, during and after the pandemic lockdown. Within the parameters of this study, the pandemic did not disproportionately affect a specific ethnic group. Our study identified Black/Black British ethnicity individuals and younger individuals as potentially warranting targeted interventions.

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7B.6

Primary care intervention development research; developing a lifestyle intervention for people living with gout

Presenter: Lorraine Watson

Co-Authors: Watson L [1,2], Cornwall N [1], Jinks C [1], Bradbury K [3], Goff L [4], Little P [5], Mallen C [1,6], & Roddy E [1,6]

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Southampton, 4.Dept of Nutritional Sciences, King's College London, 5.Dept of Medicine, University of Southampton, 6.Haywood Academic Rheumatology Centre, Midlands Partnership NHS Foundation Trust

Abstract

PROBLEM Gout is a common inflammatory arthritis predominantly managed in primary care. Lifestyle, particularly diet and alcohol, has been associated with gout for centuries and the dietary factors which may trigger flares remain of great interest to people living with gout and their families. However, there is a lack of robust clinical trial evidence about the effectiveness of lifestyle change in people living with gout. A scoping review and semi-structured interviews aimed to identify barriers and facilitators to behaviours relating to lifestyle (diet, alcohol, physical activity) change in people living with gout and to explore stakeholder views on lifestyle interventions for gout respectively. This intervention development research is to develop a new lifestyle intervention for people living with gout.

APPROACH In a scoping review, following Arksey & O'Malley's scoping studies methodological framework, databases Embase, MEDLINE, CINAHL, PsycINFO and AMED were searched from January 2000 to October 2021 to identify qualitative studies in gout. Thematic synthesis identified themes and barriers and facilitators to behaviours relating to lifestyle within the results of included qualitative studies.Semi-structured interviews with people with gout and healthcare professionals are being undertaken. Analysis of the semi-structured interview data will involve inductive reflexive thematic analysis using NVivo v12 software. Involvement of a stakeholder community of practice (COP) and a Patient & Public Involvement and Engagement (PPIE) group has informed the research process and aided the interpretation of results.

FINDINGS 1871 title/abstracts and 158 full papers were screened and 38 qualitative studies in gout were identified. The themes identified in the thematic synthesis and corroborated by COP and PPIE group members were: Impact of gout, Current information, Knowledge, Current treatment plans or strategies, Patient/healthcare professional relationship, Motivation to treat/manage gout, Social influence. Examples of potential facilitators for lifestyle change in people with gout include the desire to prevent flares and pain, the provision of information, and that people with gout already search for information and avoid or consume certain foods. Potential barriers include poor knowledge, confusing or inadequate information, uncertainty about effectiveness of diet in gout management, stigma, and a reluctance to see healthcare professionals. Themes and subthemes from the semi-structured interviews, which have been discussed with PPIE and stakeholder COP members, will be presented. Semi-structured interviews will identify what makes a lifestyle intervention acceptable to stakeholders and identify barriers and facilitators to engagement with lifestyle interventions in gout.

CONSEQUENCES This intervention development research will inform the development of the new lifestyle intervention for people living with gout in primary care, to be tested in a future pilot and feasibility study. Such research is required due to the current paucity robust clinical trial evidence about the effectiveness of lifestyle change in people living with gout.

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7C.1

Assessing the Acceptability and Effectiveness of Mobile-Based Physical Activity Interventions for Midlife Women During Menopause: Systematic Review of the Literature

Presenter: Ghada AlSwayied

Co-Authors:

Author Institutions: UCL

Abstract

PROBLEM Midlife women with menopausal symptoms are less likely to meet the recommended level of physical activity (PA). Promoting PA among women in midlife could reduce their risk of cardiovascular diseases and perhaps improve menopausal symptoms. Mobile PA interventions in the form of smartphone apps and wearable activity trackers can potentially encourage users to increase PA levels and address time and resource barriers to PA. However, evidence on the acceptability and effectiveness of these interventions among midlife women is unclear. This systematic review evaluated the effectiveness, acceptability, and active behavior change techniques (BCTs) of mobile PA technologies among midlife menopausal women.

APPROACH A mixed methods systematic review of qualitative and quantitative studies was conducted. MEDLINE (Ovid), Embase, Scopus, CINAHL, Web of Science, SPORTDiscus, CENTRAL, PsycINFO, and the ProQuest Sports Medicine and Education Index were systematically searched. Studies were selected and screened according to predetermined eligibility criteria. In total, 2 reviewers independently assessed the risk of bias using the Mixed Methods Appraisal Tool and completed BCT mapping of the included interventions using the BCT Taxonomy v1.

FINDINGS A total of 12 studies were included in this review. Overall risk of bias was "Moderate to high" in 58% (7/12) of the included studies and "low" in 42% (5/12) of the studies. Of the 12 studies, 7 (58%) assessed changes in PA levels. The pooled effect size of 2 randomized controlled trials resulted in a small to moderate increase in moderate to vigorous PA of approximately 61.36 weekly minutes among midlife women, at least in the short term (95% CI 17.70-105.01; P=.006). Although a meta-analysis was not feasible because of heterogeneity, positive improvements were also found in a range of menopause-related outcomes such as weight reduction, anxiety management, sleep quality, and menopause-related quality of life. Midlife women perceived mobile PA interventions to be acceptable and potentially helpful in increasing PA and daily steps. The average number of BCTs per mobile PA intervention was 8.8 (range 4-13) according to the BCT Taxonomy v1. "Self-monitoring of behaviour," "Biofeedback," and "Goal setting (behaviour)" were the most frequently described BCTs across the included interventions.

CONSEQUENCES This review demonstrated that mobile PA interventions in the form of smartphone apps and wearable trackers are potentially effective for small to moderate increases in moderate to vigorous PA among midlife women with menopausal symptoms. Although menopause is a natural condition affecting half the population worldwide, there

is a substantial lack of evidence to support the acceptability and effectiveness of mobile PA interventions on menopause-related outcomes, which needs further investigation.

Funding acknowledgement:

7C.2

Oral Spironolactone for Adult Female Acne (SAFA): multicentre double-blind randomised trial

Presenter: Megan Lawrence

Co-Authors: Megan Lawrence1, Miriam Santer2, Matthew J Ridd3, Nick Francis2, Ingrid Muller2, Susi Renz1, Zina Eminton1, Beth Stuart4, Sarah Pyne5, Tracey Sach5, Irene Soulsby6, Karen Thomas6, Jacqui Nuttall1, Gareth Griffiths1, Kim S Thomas7, Paul Little2, Alison M L

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Abstract

PROBLEM Background. Acne is a common problem that causes significant burden. Patients are frequently prescribed prolonged courses of oral antibiotics leading to increased antimicrobial resistance. Oral spironolactone is prescribed for acne however there is lack of evidence for its effectiveness. Aim. To determine the effectiveness of oral spironolactone for acne in adult women.

APPROACH Methods. This is a double-blind randomised superiority trial with women 18 years or older with facial acne for at least 6 months, judged to warrant oral antibiotics. Participants were identified through primary and secondary healthcare and through community and social media advertising. Participants were randomised 1:1 to either 50mg/day spironolactone or matched placebo until week-6, increasing to 100mg/day spironolactone or placebo until week-24. Topical treatment use could be continued. The primary outcome was the Acne-Specific Quality of Life (Acne-QoL) symptom subscale score at week-12 (range 0 to 30, where higher scores reflect improved QoL). Secondary outcomes included Acne-QoL at week-24, participant self-assessed improvement, Investigator's Global Assessment (IGA) and adverse effects.

FINDINGS Results. Of the 1267 women that were assessed for eligibility, 410 were randomised (201 intervention, 209 control) and 342 were included in the primary analysis. The mean age at baseline was 29.2 years (sd 7.2) and 7.9% (28/356) were from a non-white background. 46% of participants had mild acne, 40% moderate and 13% severe. Topical treatments were used by 83% (340/410). Over 95% in both groups tolerated treatment and increased dosage. The mean Acne-QoL symptom scores at baseline and week-12 for spironolactone were 13.2 (sd 4.9) and 19.2 (sd 6.1) and for placebo were 12.9 (sd 4.5) and 17.8 (sd 5.6) respectively (difference favouring spironolactone 1.27 (95%CI 0.07 to 2.46), adjusted for baseline variables). At week-24 the scores for spironolactone were 21.2 (sd 5.9) and for placebo were 17.4 (sd 5.8) (difference 3.45 (95%CI 2.16 to 4.75) adjusted). Secondary outcomes also favoured spironolactone at week-12 with greater differences at week-24. More participants reported acne improvement on spironolactone compared to those on placebo. This difference was not statistically significant at week-12 (72.2% vs 67.9% (OR 1.16 (95%CI 0.70 to 1.91), adjusted)) but it was significant at week-24 (81.9% vs 63.3% (OR 2.72 (95%CI 1.50 to 4.93), adjusted)). Treatment success (IGA-classified) at week-12

was 31/168 (18.5%) on spironolactone and 9/160 (5.6%) on placebo (OR 5.18 (95%CI 2.18 to 12.28)). Adverse reactions were not serious and were similar between groups, but more headaches were reported on spironolactone (20.4% vs 12.0%)..

CONSEQUENCES Conclusions. Spironolactone improved acne outcomes compared to placebo, with greater differences at week-24 than week-12. This study supports spironolactone as a useful alternative to oral antibiotics for adult women with persistent acne.

Funding acknowledgement: This trial is primarily funded by the NIHR Health Technology Assessment Programme 16/13/02

7C.3

Vulval lichen sclerosus in primary care: how common is it and how can we support patients?

Presenter: Sophie Rees

Co-Authors: Susanne Arnold, Helen Parsons, Sarah Hillman

Author Institutions: Bristol Medical School, Warwick Medical School

Abstract

PROBLEM Vulval lichen sclerosus (VLS) is a chronic dermatological disease causing symptoms such as intense pruritus, pain, and dyspareunia. If untreated, VLS can lead to malignancy, scarring, and anatomical changes irreversible without surgery. People with vulval disease are an under-researched population, and prevalence in primary care is unknown. This study aimed to understand the experience of living with VLS, including of help-seeking in primary care, and to examine the prevalence of VLS in primary care.

APPROACH We are undertaking a mixed methods study. We utilised in-depth interviews with women (n=20) recruited through support groups and social media, and a survey of primary care patients (n=106 at time of abstract). Qualitative analysis was informed by grounded theory. The survey is a work-in-progress, with a descriptive analysis to be undertaken in Spring 2023. This mixed methods approach enabled us to gain rich data about the experiences of living with VLS, and to then explore this in a broader population recruited through primary care. The survey also generated data about rates of VLS in primary care sites.

FINDINGS Interviewees reported long delays to diagnosis, despite presenting to primary care on multiple occasions. Supportive primary care clinicians provided referral and took symptoms seriously. VLS was often misdiagnosed as candidiasis or genitourinary symptoms of menopause. Patients may struggle to accurately describe their symptoms given poor public understanding of vulvovaginal anatomy. Analysis of survey data is ongoing, but preliminary analyses suggest that survey respondents may be more positive about their experience of diagnosis and treatment, indicating that those using support groups have experienced greater challenges in accessing diagnosis and treatment, resulting in the need for more support. Preliminary data indicates that between 0.28-1.08% of practice populations (n=19 practices) were coded as having a VLS diagnosis.

CONSEQUENCES Primary care clinicians, including GPs and practice nurses, have a critical role in the lives of those with vulval symptoms. Patients feel supported by primary care clinicians when they take symptoms seriously, examine patients, and refer to secondary care when unsure of diagnosis or treatment. We recommend that practice staff, especially GPs and nurses, are made aware of the impact of VLS on quality of life, and that repeated presentations for vulval symptoms should trigger the need for examination and consideration of a diagnosis of VLS or other vulval disease. Vulval symptoms can be highly distressing, and it is important that presenting

patients feel they have been listened to. Persistent vulval symptoms should not be accepted as part of ageing, rather they should be fully investigated to alleviate suffering and prevent long-term irreversible changes to the vulval anatomy. Further research is needed to understand the impact of this neglected condition and the experiences of primary care clinicians in managing this population.

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7C.4

What are the risks of bone fractures for women when using menopausal hormonal therapy and after cessation of treatment?

Presenter: Yana Vinogradova

Co-Authors: Barbara Iyen, Tahir Masud, Lauren Taylor, Jo Kai

Author Institutions: University of Nottingham

Abstract

PROBLEM Older women are particularly at risk of developing osteoporosis and suffering fragility fractures as a consequence of reduced levels of oestrogen found in all women during and after menopause. Menopausal hormone therapy (MHT) treatments are known to have a protective effect on bone, and previous studies have confirmed that current use of MHT decreases the rate of fractures. It is also known that the protective effect of MHT diminishes or disappears after treatment is discontinued, but how long the effect lasts, whether duration of the treatment before discontinuation is a factor, and whether the patterns of decrease differ between specific hormonal treatments are all still unclear. Currently evidence for different treatments is not comprehensive and sometimes even contradictory.

APPROACH From UK primary care data in the Clinical Practice Research Datalink, 204,135 women over 40 had a fracture record between 1998 and 2022. In a nested case-control study, each case was matched by general practice and year of birth to 5 female controls alive at the date of case diagnosis (index date). Exposure to MHT was based on prescriptions excluding one year prior to the index date. Compared to no MHT use, associations with treatment duration and recency were examined using conditional logistic regression, adjusted for indicators for MHT prescribing and osteoporosis risk factors (smoking, ethnicity, alcohol consumption, body-mass index, and relevant co-morbidities and other medicines), and treatment for osteoporosis.

FINDINGS 49,713 (24%) cases and 217,707 (24%) controls had used MHT drugs in the exposure period. 31% of exposed cases and controls were prescribed oestrogen-only treatments, 69% prescribed oestrogen-progestogen. Current (within 5 years) use was associated with decreased fracture risk both for oestrogen-only (<5 to ≤ 10 years of use, odds ratio 0.84, 95% confidence interval 0.79-0.89; >10 years, OR 0.69, 0.64-0.74) and for oestrogen-progestogen (<5 to ≤10 years, OR 0.87, 0.83-0.91; >10 years, OR 0.76, 0.70-0.81) treatments. Past (>5 years prior) users of oestrogen-only therapy had reduced risk (<5 to ≤ 10 years of use, OR 0.90, 0.86-0.94; >10 years OR 0.86, 0.79 to 0.94). Past users of oestrogen-progestogen therapy, however, showed no residual protective association. Risk levels across all MHT treatments studied proved broadly similar.

CONSEQUENCES This very large, population-based study of fracture risks and MHT therapy has shown that, in general, increased duration of treatment decreased fracture risk for current users. After discontinuation, however,

only oestrogen-only treatments showed longer-term risk reduction, most marked for longer prior exposures. Particularly for women suffering from, or at increased risk of developing, osteoporosis, our comprehensive findings will usefully inform decision-making of doctors, patients, healthcare professionals and policy makers regarding optimal MHT treatment regimens, and possibly stimulate further research.

Funding acknowledgement: The study was funded by School for Primary Care Research NIHR.

7D.1

Early-career general practitioners' antibiotic prescribing for acute infections: a systematic review

Presenter: Emma Baillie

Co-Authors: Emma J Baillie, Greg Merlo, Mieke van Driel, Parker Magin, Lisa Hall

Author Institutions: The University of Queensland, Queensland Health, The University of Newcastle, GP Synergy

Abstract

PROBLEM Antimicrobial resistance is growing worldwide, exacerbated by inappropriate antibiotic prescribing. There have been cases of death due to pan-resistant infections, highlighting the. consequences of failure to contain antimicrobial resistance. The majority of human antibiotic use occurs in primary care. The early years of a general practitioner's (GP) career can be pivotal in determining their future prescribing practice, with some evidence for antibiotic prescribing habits remaining stable over time. Despite the importance of a GP's experiences early in their career for determining their ongoing antibiotic prescribing behaviour, there are currently no systematic reviews of studies on this topic. We aimed to explore the antibiotic prescribing patterns of early-career general practitioners for acute infections, and establish if 'years of experience' is associated with antibiotic prescribing.

APPROACH The systematic review was registered with PROSPERO (CRD42021273935) and follows Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. We searched PubMed, Embase, and Scopus. Two authors independently screened abstracts and full texts for inclusion. Primary outcomes were antibiotic prescribing rates for common acute infections by GPs with experience 10 years or less. 'Common acute infections' were defined as self-limiting or where antibiotics are generally not indicated. Secondary outcomes were any associations between working experience and antibiotic prescribing.

FINDINGS Of 1,483 records retrieved, we identified 41 relevant studies, of which 14 investigated primary outcomes, 6 examined both primary and secondary outcomes, and 21 investigated secondary outcomes.Primary outcomes: antibiotic prescribing rates for any acute self-limiting respiratory conditions ranged from 14.6% to 52%. Antibiotic prescribing rates for upper respiratory tract infections ranged from 13.5% in Australia, to 29% in Canada. Antibiotic prescribing for acute bronchitis ranged from 4.6% in Sweden to 63-73% in Australia. Two studies including multiple acute self-limiting infections found prescribing ranged from 11% to 26%. Condition specific data for all other included acute infections, such as sinusitis and acute otitis media, was limited to the Australian context.Secondary outcomes: Although highly heterogenous in variables used to describe the outcome, most studies found more years in practice resulted in higher likelihood of antibiotics prescribed. When direct comparisons between early-career and late-career GPs were made, early-career GPs were less likely to prescribe an antibiotic (OR 0.23-0.68).

CONSEQUENCES In the majority of studies identified, early-career GPs prescribed less antibiotics than later-career GPs, across a variety of conditions and countries. This is encouraging for the fight against antimicrobial resistance. However, for most conditions, although their prescribing is lower compared to more established peers, antibiotics continue to be overprescribed. Addressing antimicrobial resistance requires an ongoing worldwide effort and early-career GPs could be the target for long-term change.

Funding acknowledgement: The author EB is funded by a scholarship supported by the National Health and Medical Research Council (NHMRC) and Centre for Research Excellence in Minimising Antibiotic Resistance in the Community (CRE- MARC).

7D.2

Polypharmacy prescribing amongst ethnic groups: A scoping review

Presenter: Rima Chauhan

Co-Authors: Rima Chauhan1,2, Sobia Janjua1, Mitum Chauhan3, Matthew J Boyd1

Author Institutions: 1. School of Pharmacy, University of Nottingham 2. Medicines Optimisation Team, Leicester, Leicestershire and Rutland Integrated Care Board 3. School of Medicine, University of Nottingham

Abstract

PROBLEM Polypharmacy is considered the use of 5 or more medication by an individual. Although not all polypharmacy is inappropriate, the use of multiple medications is associated with adverse consequences. Approximately 15% of England's population take 5 or more medication daily. The key contributory factors include age and multimorbidity. Furthermore, the National Overprescribing Review highlighted that ethnic minority groups are more likely to take 8 or more medication. Therefore, indicating a possible link between ethnicity and polypharmacy. There is limited in research investigating the relationship between ethnicity and polypharmacy. This is despite evidence suggesting individuals from ethnic minority groups report poorer health and more long-term conditions and are less likely to take medication as prescribed or engage in regular medication reviews. This scoping review aims to summarise the current literature on polypharmacy amongst ethnic groups.

APPROACH A scoping review was carried out using the Joanna Briggs Institute guidelines and Arksey and O'Malley's scoping review framework. MEDLINE, Embase, Scopus, Wed of Science, CINAHL, PsycINFO and Cochrane library searches were conducted to identify all English language studies published before March 2022 that reported ethnicity of participants in the context of polypharmacy. A full review was independently completed by two investigators using the pre-determined criteria. A thematic analysis identified key themes.

FINDINGS Thirty-two of 2658 studies were selected for full review. These included 28 quantitative, 2 qualitative and 2 mixed-method studies spanning 26 countries and 31 different ethnic groups. The four main themes relating to polypharmacy prescribing amongst ethnic groups identified were, sociodemographic factors, clinical factors, patient factors and health system factors. Sociodemographic and clinical factors were the largest theme identified. The key findings were that increasing age, low household income and multiple health conditions were associated with higher levels of polypharmacy amongst all ethnic groups. There were inconsistent findings relating to the prevalence of polypharmacy amongst different ethnic groups. Six studies reported no significant difference in polypharmacy prevalence, 7 studies reported higher prevalence of polypharmacy amongst White

ethnic groups and 5 studies reported that higher prevalence of polypharmacy amongst ethnic minority groups.

CONSEQUENCES Our findings suggest that there is a lack of consensus into the factors influencing polypharmacy amongst different ethnic groups. Furthermore, the included studies were predominantly quantitative and explored polypharmacy prevalence. Consequently, wider factors, including, cultural beliefs, that may influence polypharmacy amongst ethnic groups have not been explored.This scoping review also highlighted that having multiple health conditions increases the risk of polypharmacy amongst all ethnic groups. Within the UK, Asian and Black ethnic groups, have the highest average number of co-morbidities and the highest prevalence of polypharmacy. Therefore, suggesting complex unexplored factors may influence polypharmacy within these groups. Further studies are required to explore the clinical, behavioural, socioeconomic and cultural differences.

Funding acknowledgement: This study was conducted as part of a National Institute for Health Research and Health Education England Pre-Doctoral Bridging Fellowship Award.

7D.3

How feasible is a proactive review of patients taking opioid medicines for persistent pain led by pharmacists in primary care?

Presenter: Clare Jinks

Co-Authors: Julie Ashworth, Nicola Cornwall, Sarah Harrisson, Charlotte Woodcock, Elaine Nicholls, Libby Laing, Toby Helliwell, Gillian Lancaster, Christian Mallen, Anthony Avery, Roger Knaggs, Tamar Pincus, Clare Jinks on behalf of the PROMPPT team

Author Institutions: Keele University, Midlands Partnership NHS Foundation Trust, Keele Clinical Trials Unit, Nottingham Clinical Trials Unit, University of Nottingham, Pain Centre Versus Arthritis, Primary Integrated Community Services, University of Southampton

Abstract

PROBLEM Opioids are commonly prescribed for persistent non-cancer pain ('persistent pain') despite limited evidence of long-term effectiveness and important safety concerns. Clinical pharmacists working in general practices ('practice pharmacists') play an increasing role in managing patients on long-term medicines in UK primary care and seem ideally placed to review patients on opioids. This feasibility study is part of a National Institute for Health and Care Research funded research programme to develop and test a practice pharmacist-led intervention (PROMPPT) to support patients with persistent pain to safely reduce opioids, where appropriate, without increasing pain/pain-related interference, and aimed to investigate the acceptability, credibility, and feasibility of delivering PROMPPT in practice.

APPROACH A single arm, non-randomised design, with nested mixed methods process evaluation. Eligible patients, prescribed opioids for ≥6months, identified from electronic records in four general (GP) practices were invited to participate in the Management of Opioids and Persistent Pain (MOPP) study by completing self-reported questionnaires at baseline and 3-month follow-up. A sample of MOPP participants were invited for a PROMPPT review with the pharmacist. Participants scheduling a PROMPPT review were invited to consent to audio-recording of the consultation and following the review, were sent an Acceptability Questionnaire and invited to an interview. Pharmacists delivering the reviews and one GP per practice were also interviewed. Qualitative analysis used a framework approach, drawing on the Theoretical Framework of Acceptability.

FINDINGS Between November 2020 and May 2021, n=1020 potentially eligible patients were mailed a consent-to-contact form and n=178 were returned. Of 178 potential participants invited, 148 (15%) consented to participate in the MOPP study. N=123 participants (83%) completed 3-month follow-up questionnaires. N=88 participants were invited for a PROMPPT pain review, n=80 (90.9%) attended, and n=8 reviews were audio-recorded. N=50 acceptability questionnaires were returned and 90% (n=45) rated the review completely acceptable or acceptable. Interviews were conducted with n=15 patients, n=4 pharmacists and n=4 GPs. Overall, patients interviewed perceived the pain review as a good idea and recommended it to others. Practice pharmacists were perceived as appropriate to conduct these reviews because they were knowledgeable about medicines and doing so redistributed workload away from overstretched GPs. Prior to the pain review, participants reported mixed feelings. These included feeling 'pleased' to be invited and 'grateful' someone was taking an interest alongside concerns about what would happen at the review, including opioids being stopped and changes being detrimental. Following the review, most participants who had agreed changes to opioids were happy with suggestions made.

CONSEQUENCES Practice pharmacist-led pain reviews were acceptable to patients, pharmacists and GPs. Uptake of PROMPPT reviews was high. FINDINGS were used to refine the intervention (pain review and training) in readiness for a cluster randomised controlled trial evaluating the clinical and cost-effectiveness of PROMPPT, which is underway.

Funding acknowledgement: This research is funded by the National Institute for Health and Care Research (NIHR) under its Programme Grants for Applied Research Programme (Reference Number RP-PG-0617-20005). CW, CJ and CDM are part funded by the NIHR Applied Research Centre (ARC) West Midlands. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

7D.4

What value do pharmacist-general practitioner (GP) inter-professional collaborative discussions have in patient medication reviews? A qualitative process evaluation (IMPPP Trial).

Presenter: Dr Debbie McCahon

Co-Authors: Dr Roxanne M. Parslow, Dr Lorna Duncan, Professor Carolyn A. Chew-Graham, Professor Bruce Guthrie, Professor Rupert A. Payne, Professor Katrina Turner

Author Institutions: University of Bristol, Keele University, University of Edinburgh, University of Exeter

Abstract

PROBLEM Polypharmacy is increasingly common with risks to patient safety. The Improving Medicines use in People with Polypharmacy in Primary Care (IMPPP) trial aimed to evaluate the effectiveness of a complex intervention to optimise medication use for patients with polypharmacy in general practice. The intervention comprised a structured medication review, which included structured case-finding, pharmacist-general practitioner (GP) inter-professional collaborative discussions and a person-centred approach. Additional training, financial incentives and feedback was used to enhance professional engagement.

APPROACH The trial received NHS Research Ethics Committee approval (ref 19/WA/0090).A nested mixed-methods process evaluation explored: adoption, delivery/fidelity, clinician and patient's views and perceptions, maintenance, and context to give insight into how the intervention was implemented in primary care. A subset of intervention practices were purposively

sampled. GP and pharmacist inter-professional collaborative discussions, and patient-facing reviews were recorded. Semi-structured interviews were undertaken with GPs, pharmacists and patients to understand their experiences of the medication review, usual clinical care and practice systems. Interviews followed a checklist of topics. All interviews were audio-recorded and both recordings and interviews were transcribed verbatim, uploaded to NVivo V.11 and analysed using thematic analysis to facilitate both deductive and inductive coding, allowing the identification of overarching themes.

FINDINGS Data collection and analysis are ongoing. To date we have: 14 recordings of GP-Pharmacist inter-professional collaborative discussions; 21 recordings of patient medication reviews, 15 interviews with GPs/pharmacists and 22 interviews with patients. The inter-professional collaborative discussion (IPCD) between GPs and pharmacists emerged as one of the most valued aspects of the intervention. Prior to the trial, pharmacists described uncertainty about which GP to approach about queries and described ad hoc communication about medication queries. The IPCD as part of the trial provided a dedicated GP with protected time, offering an opportunity to focus on the whole patient and pharmacy perspectives jointly. Both pharmacists and GPs felt that this strengthened their working relationship and they learnt from each other. Pharmacists often brought suggestions to the meeting that were confirmed by the GP, giving them confidence in making decisions about medication. Pharmacists described how they often reinforced their discussions with GPs to patients as part of the medication review which seemed to increase patient confidence in their interactions. Patients reported that they valued the knowledge that pharmacists were working with GPs to over-see their care.

CONSEQUENCES Primary care is becoming more multidisciplinary. Clearly defined roles for healthcare professionals, inter-professional liaison and collaboration, and structured interventions can support improved patient care.

Funding acknowledgement: This project is 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.

7D.5

A cost-utility analysis of a fixed-dose combination "polypill" for primary prevention of cardiovascular events

Presenter: Ben Jacob

Co-Authors: Ben Jacob, Frank Moriarty, Patrick Redmond, Tom Fahey

Author Institutions: Royal College of Surgeons in Ireland, Dublin, Ireland (all authors)

Abstract

PROBLEM Cardiovascular diseases are the leading cause of morbidity and mortality worldwide, and a significant economic burden due to treatment costs and reduced productivity. Combination drug therapy in the form of a polypill has been proposed in terms of increased adherence and efficacy in the primary prevention of cardiovascular events. In addition to considering the efficacy of a polypill, it is necessary to establish its cost-effectiveness. We sought to establish the cost effectiveness of a polypill for the primary prevention of cardiovascular disease using UK utility and cost data based on a recent meta-analysis (n=18,162) of three randomised controlled trials (RCTs).

APPROACH A Markov model was developed using the "heemod" package in R, to model the quality of life and healthcare costs of a polypill cohort and comparison group (the

placebo arm in the trials) over a period of 5 and 10 years. Cost data was taken from event and long-term costs for cardiovascular events based on CPRD (Clinical Practice Research Datalink) data from 2006-2012. Utility values were taken from a systematic review of estimates for cardiovascular health states. The annual cost of a polypill, £382.64, was taken from a similar study by Ferket et al in 2016, which aids comparability. All costs were inflated to September 2021 prices. A discount rate of 3.5% on both costs and effects was applied in accordance with NICE guidance.

FINDINGS The polypill was cost-effective (incremental cost-effectiveness ratio between £10,000 and £15,000 per QALY) when the model was allowed to run for both 5 years and 10 years. A deterministic sensitivity analysis showed that the most influential factor in the model is the price of the polypill.

CONSEQUENCES This study shows that a polypill strategy for primary prevention for cardiovascular disease is cost effective for a British population aged between 50-70 years olds at intermediate cardiac risk. Further examination and sensitivity analyses will be presented around the model assumptions.

Funding acknowledgement: None declared.

7D.6

How can referrals from primary care to a golf on prescription scheme be implemented?

Presenter: Frank Sullivan

Co-Authors: Drs. L. Brown and A. Williams

Author Institutions: Universities of St Andrews

Abstract

PROBLEM Physical inactivity is associated with 1 in 6 deaths in the UK and costs the economy £7.4billion per year. Golf can help alleviate this burden due to the mental, physical and social benefits associated with the sport. Social prescribing from primary care services to a free programme called Golf for Health could help those who might not usually be active take up a new sport and reap the associated benefits. Golf for Health is an 8-week programme, for individuals who are new to golf and not currently meeting physical activity guidelines of 150 minutes per week. The aim of this work was to develop and evaluate this social prescribing scheme, connecting patients from primary care services to golf for health.

APPROACH Using co-design seven potential connection pathways or means to implement the social prescribing scheme from primary care to Golf for Health were identified in Phase 1. In Phase 2 GP practices and other primary care or community services implemented the pathways identified. Four of the seven pathways were most commonly selected. The Golf for Health programme ran at a total of four golf clubs across Fife. Evaluation of the feasibility and acceptability of these pathways and process was conducted. Brief evaluation of the Golf for Health programme was also conducted. Methods included online surveys, interviews and focus groups with Golf club providers, GP practice staff, community link workers and programme participants. Data was analysed thematically.

FINDINGS Initial results from the evaluation of Phase 2 are positive with those completing Golf for Health thoroughly enjoying the programme and emphasising the positive impact on mental and physical health, indicating that Golf for Health gave them time away from the other pressures of life. “I thought it would be good to do something that was a total switch off because I suffer from high anxiety and severe depression, and I’m very busy at work, and I’d have never thought of golf before… but it gave me an hour to myself”.GP staff found “using clinical staff time to promote the programme” a key barrier but agreed the programme could be beneficial and was worthwhile, especially after the COVID 19 pandemic. “It seemed a

good scheme and useful to have available for patients. Too many patients have got sedentary and isolated during lockdown.

CONSEQUENCES To overcome this barrier around time constraints, self-referral and relying more on other practice staff or community services to make the connections was recommended. In addition other services were suggested as potential means for referral including a weight management service and diabetes service. Further research is required to continue the development and evaluation of the social prescribing scheme, ensuring those who can benefit most feel confident and are encouraged to participate.

Funding acknowledgement: R & A and ISPS HANDA

7E.1

Domestic abuse in General Practice; What are the lived experiences of medical students consulting using Forum Theatre training?

Presenter: Claire McPeake

Co-Authors:

Author Institutions: Queen's University Belfast

Abstract

PROBLEM Domestic abuse (DA) is a pervasive and widespread problem that leads to significant morbidity and mortality across the globe, which has increased in prevalence since the Covid-19 pandemic and the ongoing cost of living crisis. It leads to a multitude of health and social problems that persist long after abuse has stopped, resulting in high personal and economic costs. Patients affected by DA present more frequently to healthcare services due to their complex health needs, and thus staff in primary care are ideally placed to identify abuse and intervene. However, there is a lack of awareness, education, and training about how to identify and respond to DA. Recent research demonstrates that medical students do not universally receive training on DA, and of those that do, 75% of medical schools rate the training as inadequate. Our future doctors therefore need better training to improve patient care. Studies currently suggest that experiential forms of DA training provide most benefit. Forum theatre (FT) is a novel method of experiential training that allows for the safe exploration of difficult issues, raising critical consciousness and preparing participants for action in a real-world scenario. Given the significance of DA and its health impacts, the gaps in undergraduate medical training and the potential benefits of FT, this study aims to explore the lived experiences of medical students utilising Forum Theatre as a training method in consulting with DA survivors in the primary care setting.

APPROACH The research will involve a group of GP trainees in Northern Ireland undertaking a Forum Theatre exercise that has been developed by a multi-disciplinary team, with subsequent participant interviews. A qualitative approach will be taken to explore the participants' lived experiences using interpretive descriptive methodology. This aims to gain deep insight into the lived experiences of the GP trainees undertaking this training.

FINDINGS The background, rationale and methodological considerations will be presented for discussion. The ensuring dialogue will help to give the research proposal firm grounding.

CONSEQUENCES This research will review FT as a putatively novel method to teach GP trainees about DA, an oft neglected area of the curriculum and under-recognised occurrence in clinical practice. It will produce insight into the lived experiences of the GP trainees, exploring how to raise critical consciousness and motivation, and could introduce a novel training method to improve patient care in the area of DA.

Funding acknowledgement: This research has been funded by the General Practice Academic Research Training Scheme, the Northern Ireland Medical and Dental Training Association and Queen's University Belfast.

7E.2

Health care professional's role in the randomized controlled trial of the selfBACK app – a mixed-methods process evaluation

Presenter: Frances S Mair

Co-Authors: Charlotte DN Rasmussen, Karen Wood, Paul Jarle Mork, Karen Søgaard, Mette J Stochkendahl, Barbara Nicholl

Author Institutions: University of Glasgow, University of Southern Denmark, Norwegian University of Science and Technology, The National Research Centre for the Working Environment Denmark

Abstract

PROBLEM The selfBACK artificial intelligence-based app was developed and designed to support people to self-manage their low back pain (LBP), as an adjunct to usual care. Its effectiveness to reduce pain-related disability was tested in a randomised controlled trial (RCT; n=461) in Norway and Denmark. The selfBACK intervention group (n=229) had lower LBP-related disability at 3 months compared to usual care alone (n=232), and app benefits were sustained throughout the 9-month follow-up period. Participants to the trial were recruited via primary care (Norway and Denmark) and an outpatient spine clinic (Denmark); a total of 57 Norwegian health care professionals ((HCPs) physiotherapists and GPs) and 39 Danish chiropractor and spinal clinics actively recruited to the RCT. Here we explore the role that HCPs played in the RCT recruitment process and their perceptions of selfBACK.

APPROACH A mixed-methods APPROACH involving quantitative and qualitative data collection was used. Quantitative data consisted of trial recruitment logs and a vignette-based survey showing examples of patient scenarios to gather opinions on the appropriateness of the self-management plans, this was completed by 73 recruiting HCPs (27 (37.0%) physiotherapists, 32 (43.8%) chiropractors, 14 (19.2%) GPs). Qualitative data included trial procedure documents, interviews with 19 clinicians, and free-text responses in the survey. A purposive sampling strategy was used to recruit HCPs with different levels of patient recruitment rates. Interviews were conducted in native language and transcribed verbatim. Analysis is underpinned by the Normalization Process Theory. Analysis is ongoing and here we present preliminary findings, which will be completed before the conference.

FINDINGS Of the survey, approximately 60% of the HCPs agreed that the five presented self-management plans would be a good supplement to usual care, but two thirds of physiotherapists disagreed with planned exercises. findings from interviews suggest that HCPs found the recruitment procedures straightforward, however, HCPs with high recruitment rates reported that they undertook additional measures to aid recruitment, e.g. placing of study materials in the reception area. HCPs considered selfBACK to be a useful clinical tool: with GPs suggesting that it is a much-needed alternative to medication and referral to physiotherapy; whereas chiropractors and physiotherapists perceived the app as supplementary to usual care.

CONSEQUENCES Preliminary analysis suggests that selfBACK recruitment procedures were appropriate and that overall, the content and need for selfBACK was supported by HCPs. However, we need to explore further about physiotherapists views of the recommended exercises within the selfBACK app.

Funding acknowledgement: European Union Horizon 2020 research and innovation

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7E.3

Can the history of primary care be used to inform its future? Developing an innovative APPROACH to understand patient engagement with primary care services

Presenter: Barbara Caddick

Co-Authors: Shoba Dawson, Alastair Hay, Rupert Payne

Author Institutions: University of Bristol

Abstract

PROBLEM The history of primary care in England is a neglected area of research and yet taking a historical approach can make an important contribution to our understanding of people's behaviours and attitudes. There is currently very little data about people's experiences and attitudes toward healthcare, illness, and treatment during the period 1940-1970. During this period healthcare changed radically with the arrival of the NHS making healthcare accessible and affordable. As this period is still within living memory, we have an opportunity to engage people with lived experience, to ensure their stories are preserved and used to inform research. To address this we have worked with patient and public collaborators and community groups to develop a novel methodology for collecting memories of everyday healthcare.

APPROACH Archival research was undertaken at the Black Country Living Museum and the Walgreen Boots Alliance archive to identify historical materials relating to primary care. These include photographs of chemist shops (exterior and interior), advertisements, medical/pharmaceutical objects, and packaging (such as medicine bottles, commercial cough medicines). These images were presented to public contributors to test whether they help to stimulate memories. Discussions were held with contributors about how best to engage future participants with these materials.

FINDINGS The work has demonstrated that people with lived experience from the period are keen to engage and share their memories and experiences of healthcare. The archival images play an important role in prompting memory recall and work as a novel stimulus to prompt interesting discussions between people. Contributors in community groups frequently moved conversation from healthcare in the past into comparison with their recent experiences of healthcare in the present. Through this they raised issues related to (1) aging (2) difficulties navigating a healthcare system that has changed dramatically in their lifetime. (3) their views about healthcare professionals' behaviour toward older people.

CONSEQUENCES The work has led to the development of a 'memory pack' which will be used in a future research project to elicit and collect memories of everyday healthcare from 1940-1969.The FINDINGS from this development work suggest that history can play a role in contemporary primary care research by contributing to our understanding of patient attitudes and behaviour. Particularly in relation to engagement with primary care services, self-management of minor illness and healthcare seeking behaviours.Such learnings which have potential to be fed back into service delivery to change communication practice.

Funding acknowledgement: This work is supported by the Elizabeth Blackwell Institute, University of Bristol and the Wellcome Trust Institutional Strategic Support Fund.

7E.4

Antinuclear antibody (ANA) testing. Why did I request it and what do I do now? An observational study of UK primary care.

Presenter: Dr Will Evans

Co-Authors: Will Evans, Yana Vinogradova, Fiona Pearce, Peter Lanyon

Author Institutions: NIHR School of Primary Care Research School of Medicine University of Nottingham; Division of Epidemiology and Public Health, University of Nottingham

Abstract

PROBLEM The ANA-associated diseases are a group of rare autoimmune diseases (including: SLE, Sjögren's, Scleroderma, autoimmune hepatitis & myositis). These diseases are hard to diagnose, and patients often experience a long diagnostic delay.The ANA test, frequently performed in primary care can be difficult to interpret, it is often positive in patients who do not appear to have an associated disease at the time of testing, although a proportion will later develop disease. This presents a challenge: How should these patients be followed-up? We suspect there may be features in these ANA positive patients that can help distinguish those who will later develop disease.To address these challenges, we aim to:

- firstly, understand the characteristics of those who are tested;
- secondly, compare the incidence of ANA-associated disease and mortality between the tested and untested populations;
- and finally, in those who are positive identify features that are associated with later ANA disease development.

APPROACH We have collected from the literature, disease experts and patients, features that prompt ANA testing and features associated with disease development. We have generated code lists for these features. We have used the primary care database CPRD Aurum to perform the following observational studies. We have linked hospital and mortality data to enhance the capture of outcomes. The study involves 3 phases:

1) A parallel cohort study comparing the ANA-tested population subdivided by test result (positive, negative or unknown result) to the untested population. This will the enable Incidence rates for the outcomes: a composite of ANA-associated diseases and mortality, to be compared between exposure groups.

2) A case control study to understand what led to ANA testing. Each patient who has had an ANA test is matched 1 to 1 to a control patient. Logistic regression will be used to calculate odds ratios for exposures associated with performing an ANA test.

3) A cohort study of ANA positive patients. We will use time to event analysis with Cox- regression models to calculate hazard ratios for candidate predictor variable for later ANA disease development.

FINDINGS At the time of completing this abstract submission the code-lists have been generated, the data has been cleaned and almost completely prepared for analysis. The analyses have not yet been performed but will be over the next 3 months.

CONSEQUENCES We envisage that the findings of this study will help to stratify patients who test ANA-positive and help reduce unnecessary referrals and target resources more effectively. It may also give insights into when to request and when not to request an ANA test, reducing the number of clinically inappropriate requests. Insights from this study may also help to improve the diagnosis of patients affected by ANA-associated diseases, a priority of the UK Rare disease Framework.

Funding acknowledgement: Dr Will Evans, (GP Career progression fellowship: NIHR SPCR:C019) is funded by Health Education England (HEE) / NIHR for this research project. The views expressed in this publication are those of the authors and not necessarily those of the NIHR, NHS or the UK Department of Health and Social Care.

7E.5

Perspectives on access in primary care from patients, clinicians and practice staff: The PEOPLE-HULL study

Presenter: Alex Young (1)

Co-Authors: Julie Walabyeki (1), Sara Macdonald (2), Elizabeth Mitchell (1), Una Macleod (1)

Author Institutions: (1) Hull York Medical School, University of Hull, (2) University of Glasgow;

Abstract

PROBLEM Hull has one of the highest rates of lung cancer in England, but one of the lowest rates of two week wait referrals, indicating potential delays in diagnosis. The PEOPLE-Hull study combines public, community engagement and primary care interventions to improve early diagnosis of cancer. The current stage of the study focuses on a primary care intervention which is comprised of practice-specific media campaign, educational activities and quality improvement, fast-track appointments, focused ethnography, interviews, consensus development exercise and data extraction. We report on the interviews and ethnographic observations to explore potential barriers to help seeking in primary care.

APPROACH We interviewed clinical staff and administrative staff (n=7) in the recruited GP practices and patients about potential barriers to appointments, patients were also asked about potential barriers to seeking treatment for respiratory symptoms. Eligible patients were adults over 50 years old (n=10), preferably without COVID, consulting for respiratory symptoms or who have developed new respiratory symptoms during the study period (when the practice-specific media campaign materials are being displayed). Administrative staff were invited to take part in focus groups. Interviews and focus groups were semi-structured and were conducted over the phone, face-to-face, or online after written and verbal consent was given. They were audio recorded and transcribed verbatim. Transcripts were analysed thematically and managed in NVivo. Additionally, four observations were carried out in each of the recruited practices, within the waiting area with patients and the main office area with practice staff.

FINDINGS Patients and staff at GP practices have contrasting opinions on the availability and type of appointments offered in practices. Staff at study sites reported that face-to-face appointments never stopped, and that they are offering as many appointments as possible, including extended access options. Patients however, believe that face-to-face appointments have become limited, and expressed some frustrations with the changes in booking systems and the increased emphasis on triaging. During the observations, patient frustration and anger was often directed at the practice staff on the phones, which was also raised by practice staff in the focus group discussions. Our data suggests that patients view staff as gatekeepers to care, and that this process of booking appointments can impact willingness to make appointments more than interactions with clinical staff..

CONSEQUENCES Data collection is still ongoing. Understanding how the change in appointment availability and booking systems act as a barrier to patients seeking help for respiratory symptoms will contribute to the development of targeted interventions to fast-track appointments. This in turn will potentially improve lung cancer outcomes.

Funding acknowledgement: This study is funded by Yorkshire Cancer Research

7E.6

What are patients, caregivers, and healthcare professional's experiences of, and perspectives on, online health records access in primary care? A qualitative synthesis.

Presenter: Brian McMillan

Co-Authors: Gail Davidge, Gemma Louch

Author Institutions: University of Manchester, University of Leeds

Abstract

PROBLEM NHS England (NHSE) have announced that all adult patients in England will have full prospective access, by default, to their primary care record online. Whilst there have been several systematic reviews examining the evidence for the benefits or drawbacks or records access, no studies to date have attempted a qualitative synthesis of studies on this topic. Our qualitative synthesis examined patients, caregivers, and healthcare professional's experiences of, and perspectives on, online health records access in primary care. We compared if various stakeholders' priorities and concerns align or differ in respect of important factors to consider with regard to making improvements to future online health records access services.

APPROACH We searched MEDLINE, Embase, PsycINFO, CINAHL, and grey literature for relevant papers published between Jan 2000 and Jan 2023. We included qualitative studies that focussed on patient online GP records access and excluded studies focussing solely on transactional functions. The target population was patients, caregivers, and/or health care professionals who interact with electronic primary care health care records. Titles and abstracts of were assessed for relevance by two researchers independently. Full texts were examined by two independent reviewers and disputes were resolved by a third reviewer. Data extraction and synthesis were undertaken using guidance set out in the Cochrane Handbook for Systematic Reviews of Interventions. Eligible studies were critically appraised by two researchers for risk of bias and methodological quality. The Critical Appraisal Skills Programme Qualitative checklist was used to inform the assignment of studies into final categories based on the qualitative research assessment framework adopted by Dixon and Woods. Data synthesis drew upon strategies employed by Thomas and Harden's work on thematic synthesis. Searching for themes continued until no new themes were identified. Synthesis was undertaken and a sample of selected codes and themes created at each stage were checked by a second reviewer for consistency. Discrepancies were resolved through discussion with a third member of the research team. Using this three-step process we synthesised and aggregated results of included studies.

FINDINGS Our findings enabled us to develop an in-depth understanding of patients, caregivers and health care professionals' perspectives and experiences of patients having access to their own electronic health record within primary care contexts. We identified barriers and facilitators of effective online records access for patients that can inform improvements to future provision of this service in England.

CONSEQUENCES Our findings will be used to develop materials to support patients and carers to benefit maximally from online access to their primary care record. We are also working with NHSE, Health Education England, and Primary Care Medical Defence Organisations to develop materials to support primary care staff navigate common challenging scenarios resulting from patients having full prospective access to their primary care record.

Funding acknowledgement: This work was funded by an NIHR Advanced Fellowship to Dr Brian McMillan (NIHR300887). The views expressed are those of the authors and not

necessarily those of the NIHR or the Department of Health and Social Care.

2F.2

Creative Enquiry - The Interview

Presenter: Debra Westlake

The Interview

Treading lightly, we begin.

How are you?

Do you understand why you are here?

I wonder

Will you allow me into your space?

Will you honour me

With your trust,

Or just tell me what you think I want to hear?

Tentative,

Apologetic,

Your words unfurl as petals.

Half-formed,

They

Suddenly mature,

Tumbling in a torrent.

Delicately

I cup them in my shaking hands

Before they fall.

And the story comes,

Faltering.

How he captured you alone in his gaze,

A prisoner

To his needs and hatred.

Friendless.

You sought help,

You tell me about the appointment

How she held you

In the void of his leaving.

She was the only one

To hear, to value and allow

Tears,

That come even now

And touch me and bring me into your world,

Move me beyond my role.

She held you

On your journey,

You found the way,

To safety,

Rewrote the story.

That sits here between us.

This poem addresses compassion from my stance as an ethnographic researcher working on a study about the implementation of social prescribing link workers in primary care (1). Compassion is not often discussed in relation to research activities, but is pertinent to the work of listening to people's life stories (2). As part of the study we are interviewing people who have met with a link worker. The interviews ask people about the reasons they were referred, what work they did with the link worker and what the outcomes were for them. During the interview which inspired this poem, I was moved to tears as the participant, a migrant to the UK, described the coercive control she was subjected to by her partner. Her repetition of racist language he used to terrify her into not seeking support in this

country, shocked me to the core. It emerged that the link worker had been able to give this isolated and fearful woman confidence and companionship on her journey of separation from a toxic relationship. Social prescribing can often be painted as an intervention about signposting people to a yoga class or arts group. However, our study shows that it is much more. This was a story of deep compassion shown by the link worker, which allowed for the telling and witnessing of suffering. She enabled the woman to leave a home that had become both her refuge and her prison, and apply for a visa that permitted her to stay in this country. These were huge steps that did not appear on a metric about outcomes. This felt like true person-centred care. Ethnographic interviewing and observation skills are not something that you are taught, but which you learn through doing. They are part of who you are as a person and how you position yourself relative to others (3). The skills also develop with life experience – in this way they may be similar to compassionate healthcare consultation skills (4, 5). Hearing someone's story is like handling a baby: to be treated with care and sensitivity. In health services research, many people are interviewed because something is troubling them. Sometimes they are in pain – physical or psychological. As an interviewer we have no service to offer, no help to give. We simply want to listen and to understand life from someone else's perspective. It can feel like an intrusion, yet it is a privilege to be allowed to hear these stories, which are often very moving. The weight of responsibility to honour such personal stories can feel heavy as we seek to analyse and dissect. My hope and intention is that we do this with integrity, respect and compassion. Acknowledgement: Thanks to Stephanie Tierney for advice and comments on earlier drafts. References 1. Gilbert P. Compassion: From Its Evolution to a Psychotherapy. Frontiers in Psychology. 2020;11. 2. Tierney S. What place does compassion hold in the conduct and production of health services research? Journal of Compassionate Health Care. 2018;5(1):1. 3. Atkinson P. Ethnography: Principles in practice: Routledge; 2007. 4. Bivins R, Tierney S, Seers K. Compassionate care: not easy, not free, not only nurses. BMJ Quality & Safety. 2017;26(12):1023. 5. Krishnasamy C, Ong SY, Loo ME, Thistlethwaite J. How does medical education affect empathy and compassion in medical students? A meta-ethnography: BEME Guide No. 57. Medical Teacher. 2019;41(11):1220-31.