

Health Literacy UK Conference

HEALTH FOR LIFE: Developing and promoting healthy environments across the life course

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Abstracts in alphabetical order by first author surname:

1. Health literacy and mental health in Wales: a national online population survey

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The Problem: Although common mental health disorders (CMDs) are associated with poor physical health and increased emotional and social burden, they are widely underdiagnosed. Poor health literacy (HL) is associated with adverse health outcomes and may contribute to the hidden risks associated with poor mental health. We used data from the HealthWise Wales (HWW) online, population-based cohort to examine the health literacy of participants and explore the association of HL and CMDs.

The Approach: HealthWise Wales collects behavioural and opinion data which are linked to routine healthcare records from adults (≥ 16 years) who receive their healthcare in Wales, UK. Self-reported mental health and health literacy are assessed using the short-form mental health inventory (MHI5) and European Health Literacy (HLS EU 16) tools, respectively. Data from both tools were processed according to published protocols to provide binary outcome variables indicating CMD yes/no and HL problematic vs adequate. Data were analysed using logistic regression adjusting for age, gender and area-level deprivation. A positive ethical review was received from Wales Research Ethics Committee (REC) 3 reference 15/WA/0076. All participants gave informed consent digitally at registration. No questionnaires are mandatory.

The Findings: Data on both CMDs and HL were available from 2518 participants. Demographic characteristics were as follows: 68% were female, 23.2% were ≤ 44 years old, 41.4% ≤ 64 years and 35.4% > 65 years, while 26.1% of those who provided deprivation data ($n=2457$) were in the two most deprived quintiles. Of 2075 with complete MHI5 data 23.9% were identified as likely to have a CMD and 38% of 2258 respondents had poor or problematic HL levels. Poor or problematic HL was associated with male gender (OR 1.67, 95%CI 1.35-2.10, $P<0.01$) younger age group (1.47, 95% CI 1.11-2.0, $P<0.001$) and area-level deprivation (most deprived 1.39 95% CI 1.05-1.85, $P<0.05$ vs least deprived). Compared to participants without a CMD, those identified as having a CMD were more likely to have problematic health literacy after controlling for the demographic variables (OR 1.86 95%CI 1.47-2.31, $P<0.001$).

The Consequences: This study suggests that even within the context of health-conscious internet users, a significant proportion of the Welsh population have a level of health literacy that may limit their ability to find, critically assess and act on health information. The prevalence of poor health literacy is greater in participants with evidence of common mental health disorders. Poor health literacy may contribute to the underdiagnosis of CMD suggesting that targeted interventions are required.

2. Health Literacy: The Household as an Unexplored Dimension

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The problem: Low health literacy (HL) is associated with poorer health outcomes, increased morbidity and higher mortality rates. It is defined by the World Health Organisation as the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health. The concept of HL is extensive and much more than being able to read information and attend appointments, and incorporates functional, communicative/interactive, and critical domains. It also takes into account environmental, political and social factors that structure inequalities. Consequently, whilst most studies of HL focus on the individual, there are growing calls to broaden its conceptualisation beyond the micro (individual) to the meso (family) and macro (community and society) levels. In Singapore, the family is the primary unit of support for most individuals and therefore appropriate to look at HL within a household context rather than simply at the level of the individual.

A variety of measures of HL have been validated to capture prevalence and explore associations with patient outcomes. An adapted version of the short version Test of Functional Health Literacy in Adults (S-TOFHLA) has been validated previously for use in Singapore: the Health Literacy Test for Singapore (HLTS). This study tests its utility in a community-based research context.

A second innovative aspect to this work is Patient and Public Involvement (PPI) in Singapore, with lay community members recruiting households, assisting with data collection, informing interpretation of findings and contributing to the identification of the implications for future research.

The approach: The aims of the research study are to:

1. Explore the utility of using the HTLS to identify health literacy within English literate households with members with chronic diseases in Singapore

2. Explore the feasibility of training lay people to work as collaborators within the three main ethnic communities in Singapore (Chinese, Malay and Indian)
3. Develop an intervention to improve household HL in a subsequent large-scale clinical trial

We are using a mixed-methods design to fulfil these aims. Socio-demographic and health data, together with HLTS scores for each individual within the households are being collected. Feasibility is being assessed by recruitment data, ethnographic field notes from PPI collaborators and researchers, together with PPI focus group debriefing data.

Comparisons will be made across the different communities to identify possible cultural dimensions in terms of findings and implications for research methods.

Findings: The study commenced in August 2019. This presentation outlines the methods used, particularly in relation to recruiting and retaining the PPI collaborators.

Consequences: The importance of mixed-methods feasibility research ahead of full clinical trials is increasingly recognised. However there remain concerns about the extent to which the methods used in such research are disseminated and shared. This presentation is intended to share the methods from this innovative feasibility study to help maximise learning and ultimately improve evidence based research and practice, particularly in relation to health literacy and PPI.

3. Working collaboratively with young people to develop the Coming to Spinal Clinic resource

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The Problem:

Adolescent Idiopathic Scoliosis (AIS) affects 3 to 4 young people in every 1000 and typically develops between the ages of 10 and 18 years. Evidence shows that young people and their parents can have low knowledge levels and understanding of scoliosis treatment options which influences their ability to make meaningful and informed decisions. Young people rely on health professionals for credible information about their scoliosis condition, and yet can struggle to engage in consultations about scoliosis diagnosis and treatment. The active involvement of young people in consultations can enhance their health literacy by facilitating their ability to acquire knowledge, improving understanding of their condition and increasing their opportunity and ability to communicate choices and decisions. These

health literacy skills are particularly important to nurture in young people, who will be life-long health care users. This project was focussed on creating a resource with young people to support them in being prepared and meaningfully engaged in spinal clinic consultations.

The Approach:

We used a qualitative participatory based approach. Two workshops using multiple methods and activities were held with ten young people (aged 14-16 years of age) with AIS and their parents. The activities included the use of emojis, speech bubbles and thought clouds to gain understanding of their key concerns and feelings when attending spinal clinic and the resources and information they thought would assist young people's involvement in these consultations.

The Findings:

The young people identified the uncertainty and worry associated with attending spinal clinic. The young people expressed difficulty in asking questions in clinic and expressed feeling 'separate' to the conversation. Often a lot of complicated information was discussed, with minimal opportunity for young people to clarify meaning and gain understanding of how the information related to them. The young people were keen to feel more involved in consultations as it was 'their back' and they wanted information and a prompt sheet to facilitate their involvement by helping them to plan questions in advance and note down key information during the clinic visit.

The Consequences:

We collaboratively developed the 'Coming to Spinal Clinic' resource through iterative engagement with young people, parents and through working with an animator, scriptwriter and designer. The resource consists of three components: (1) a short animation for young people to help them know what to expect when they come to spinal clinic and how to get the most out of their clinic visit; (2) A prep (preparation) sheet to help young people and parents think about what they want to ask or find out about when they are in clinic; and (3) an information leaflet for parents to help them know what to expect when they bring their child to spinal clinic. The resource is free to download on <https://www.edgehill.ac.uk/comingtospinalclinic/> and aims to help improve young people's health literacy through increasing their access to credible information and help them gain a meaningful understanding of their diagnosis and treatment options in order to be involved with choices and decisions about their condition.

4. Child dental screening and oral health promotion programme in schools in Udine

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The Problem:

Most childhood tooth decay could be avoided through simple preventive measures such as screening, monitoring, improvement of healthy eating habits and regular professional care. In 2016, a dental screening program was implemented in all public primary schools in Udine and the nearby municipalities, involving 68 schools and more than 1000 children. The project was developed thanks to the a close co-operation and multilevel governance between various institutions, that are the Primary Health Care Department of the Local Health Agency, the Healthy Cities Project Office of the Municipality of Udine, the University and the Region Friuli Venezia Giulia, which included the school program “A Smiling School” into its “Social Dentistry Plan”. The aim was to collect data on the oral health status of children and their compliance to the WHO goal set for 2020. The results showed an increase in dental problems among children aged 5-6 years. In 2018 we registered a caries-free percentage of 53.2%, an average dmftf (decayed-missing-filled teeth index) score of 1.95, a SIC index (Significant Caries Index) of 5.4, with malocclusion problems in 62.3% of cases (WHO goals for children of that age: dmft <0.4, CF% = 90%, SIC index >4). The most vulnerable children were among non-native population and families with low-educated or unemployed parents.

The Approach:

Schools having the worst oral health status were thus involved in an oral health promotion project, which introduced teeth brushing at school, by teaching and monitoring the correct brushing techniques, by checking the mid-morning snacks eaten, by registering tooth brushing frequency at home, by distributing educational materials to be used at school and at home. After one month, the project was evaluated through pre- and post-tests filled in by parents, a checklist produced by health professionals and a structured interview with teachers. A protocol containing practical hygienic recommendations was also prepared to facilitate safe teeth cleaning at school and at home.

The Findings:

The educational project involved 99 children. 94% of families authorised their children to participate and 80% completed the questionnaires. At the end of the project, the results were impressive: 76.6% of children brushed their teeth more than once per day (before the project 58.1%) and 15.6% did it after every meal (before they were 2.7%). 87% of parents confirmed that the project influenced their children’s habits and 42% of children used the correct brushing techniques (36% did it every time). Since the beginning health

professionals noticed an increase in the number of children using the right techniques (from 7.5 to 13.6) and teachers during the interviews confirmed this and highlighted the importance of having educational materials for children and families.

The Consequences:

The 4 schools involved welcomed the oral health promotion project in a positive manner, despite its organisational complexity, concerning especially the children's surveillance in the toilets. Children's habits have positively changed. 3 over 4 schools are still implementing the project and we are working to spread it in all primary schools in Udine also through the use of multimedia materials.

5. What patients want and need from an osteoarthritis explanation: results from a stakeholder consultation exercise

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The Problem:

Osteoarthritis is common, but healthcare professionals often do not have the right words to help patients understand the condition. This can result in patients feeling that their condition is being trivialised or holding negative beliefs about osteoarthritis. Self-management strategies, such as exercise and weight loss (if needed), are core approaches to managing osteoarthritis: however, they are commonly underused. Patients may doubt whether they can improve their symptoms. Because osteoarthritis can cause pain on moving the affected joint, patients often worry about, or may avoid, doing exercise. This concern can be reinforced by everyday terms for osteoarthritis such as 'wear and tear'. Within a mixed-methods project, we are aiming to develop and test a patient explanation package for osteoarthritis (PEP-OA) to help patients' understanding of their condition and make sense of the management approaches suggested to them. This abstract describes the findings of the first stage of the project which aimed to establish what patients want and need to know about osteoarthritis, and to identify appropriate language, to support self-management.

The Approach:

A consultation exercise, carried out with health professionals, researchers and patients with expertise in osteoarthritis, was undertaken to inform initial development of candidate explanation statements. Informed by theory, existing statements used in real consultations

and commonly used patient information leaflets were divided into topics within 11 sets. These sets of statement topics were presented to the consultation group (n=10) for feedback on completeness, accuracy and preferred wording. Post-discussion, consultation group members (n=6) red-amber-green (RAG) rated each topic (red: no clear link to supporting self-management, green: clearly linked to self-management). Topics unanimously RAG-rated red were removed. Remaining topics were discussed by a patient advisory group (PAG, n=6) for further feedback, exclusion and refinement.

The Findings:

The consultation group advised that the word 'degeneration' should not be used. PAG members rejected concepts of osteoarthritis such as 'wear and tear', 'loss', 'not inflammatory arthritis/osteoporosis', 'normal' and technical descriptions involving changes in joint anatomy. The words 'condition' or 'disorder' and 'movement' or 'activity' were preferred over 'disease' and 'exercise' respectively. Both groups conceptualised osteoarthritis as: not inevitably progressive; modifiable, and being variable between people, joints and over time. They liked positive topics which portrayed hope, that something can be done, different sources of support, and the benefits of simple self-management strategies.

The Consequences:

The findings offer insight into what patients want and need to know to understand osteoarthritis and its core management. Stakeholders preferred simple explanations which conceptualise osteoarthritis as a manageable and/or modifiable long-term condition. The next step is to test the impact of the statements on self-management in a conjoint survey, before finalising a core patient explanation of osteoarthritis for use in consultations.

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6. Self-care Pharmacy Schools Resource

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The Idea:

Children's health and wellbeing is high on the research and policy agenda of many nations. The WHO publication *The Solid Facts: Health Literacy* suggests 'educational interventions play a central role in promoting and strengthening health literacy.' Fundamentally health

literacy is a way to help and support people maintain health, better understand health conditions and options available for self-care and during minor illness.

Belfast Healthy Cities and the Department of Health are working to develop a health literacy schools programme that aims to enhance children's knowledge and understanding of minor self-limiting conditions and the resources available to manage these conditions using a health literacy approach. We hope to influence behavioural change within the school setting to encourage children and their parents or carers to use community pharmacy as the first point of contact for advice and treatment of minor conditions.

Why it matters:

An Innovation Lab 'Medicines for self-limiting conditions' research report produced by Northern Ireland's Department of Finance and Department of Health, suggests school education on physical health focusses on proactive approaches to healthcare such as exercise and diet but there appears to be a gap for education on understanding illness and self-care.

While there is some regional variation in prescribing patterns within Northern Ireland, high levels of expenditure on medicines for self-care conditions is observed in both deprived and more affluent areas. The report also suggests people may lack the ability or confidence to identify a minor ailment, which can lead to people using GP services to clarify that a minor condition is in fact a minor, self-treatable condition. It is thought individuals may not understand the normal progression of symptoms for illnesses and think something more serious is wrong. An increase in levels of health literacy could lead to improvements in knowledge and confidence to identify minor ailments as "common or self-limiting or uncomplicated conditions which can be diagnosed and managed without medical intervention leading to a decision to self-care.

The development of a health literacy school programme would support the NHS Confederation call for a return to healthcare education in schools, an interactive resource involving children, parents and teachers would guide and inform choices on self-care for self-limiting conditions and minor ailments.

The Innovation Lab also reports on user research conducted which indicates respondents typically use their GP for 'professional advice' and their pharmacy to 'pick up a prescription'. Opportunities to promote the skills and services provided by community pharmacies will be central within the development of the school programme.

The Next Steps:

The overall proposal will develop and deliver a health literacy school programme proposal through the following actions:

1. Elements of Northern Ireland Curriculum for Pre-School, Foundation Stage, Key stage 1 and Key stage 2 education which could be supported using a health literacy programme on improving knowledge of minor ailments and self-limiting conditions,

improving capacity for self-care have been identified. A literature review of examples of best practice collated to inform development of resource.

2. Engage with key stakeholders to identify elements of a school programme that will increase awareness and knowledge of minor ailments, self-limiting conditions, and self-treatment.
3. A workshop held with teachers, children and artist to comment on and review draft resources.
4. Develop and deliver and pilot a school programme with schools' and/or community organisations that will influence population behavioural change, and make community pharmacy first choice for advice and treatment.

The Risks:

Developing robust evaluation methods that can measure baseline and any change in knowledge and awareness of minor conditions, community pharmacy and health literacy skills will be required. Additional resources may also be required to further develop digital versions of the draft resources to help facilitate wider use across Northern Ireland in the future. In order to positively affect population level behaviour change, the development of key links to community and parents to ensure awareness of and effective use of pharmacy services.

7. The Co-Design of an Adolescent Health Literacy Intervention

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The Problem:

The transition from childhood to adolescence presents a window of opportunity for obesity prevention. However, health literacy, particularly in disadvantaged areas, presents a barrier to positive health outcomes. Health literacy is the ability of an individual to find, appraise, understand and apply information to promote and maintain good health and wellbeing. Yet there is a lack of evidence regarding effective strategies to increase health literacy, particularly in children. This study is part of a wider World Health Organisation Health Literacy Demonstration project, following the OPHELIA (Optimising Health Literacy) process, where students, educators and researchers work together to optimise the intervention to

meet the needs of those within the community. The aim of this stage of the project was to co-design a targeted health literacy intervention for post-primary Irish DEIS schools (Delivering Equality of Opportunity in Schools).

The Approach:

Five post-primary DEIS schools in the North Dublin area were recruited to participate in this study. The first stage of the project, (Phase 1 of the OPHELIA process) informed the development of a series of nine vignettes representing the health issues faced by students within this context. In the second stage of the project, these vignettes were explored in a series of 10 co-design workshops conducted separately with staff (n=26) and students (n=33) in the five participating schools. The question guide explored: (i) familiarity of the vignette, (ii) health issues faced and (iii) potential strategies to overcome these issues. Each vignette was discussed until saturation was reached. During the workshop, ideas were recorded in real time in view of participants and summarised routinely to ensure trustworthiness. All workshops were audio-recorded, transcribed, and analysed using inductive thematic analysis.

The Findings:

Preliminary analysis indicates a number of common themes across schools and/or student and teacher workshops. Students and teachers across schools indicated that information regarding health needs to be delivered in a relevant, applied and engaging way. It was identified that there are many opportunities for cross-curricular links, potentially aligning to the introduction of wellbeing within the Junior Cycle in Ireland.

The Consequences:

These findings will directly inform the design, planning and refinement of the health literacy intervention which will be implemented from September 2020.

8. The Link between Health literacy, Consultation Behaviour and Musculoskeletal Health in People with Knee Pain

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The Problem:

Health literacy refers to the capacity individuals have to obtain, process, and understand basic health information and services needed to make appropriate health decisions. Understanding the role of health literacy is important for directing and targeting

interventions to improve musculoskeletal health. The objectives of this study were to examine the link between health literacy and primary care consultation for knee pain and describe musculoskeletal health in people with knee pain stratified by health literacy level.

The Approach:

Case-cohort study of adults aged 35 years and over registered with one of eleven general practices in North Staffordshire or Stoke-on-Trent CCGs. Analysis included responders to a baseline survey who (i) consulted primary care in the previous 12 months for knee pain or (ii) belonged to a general population sample and had complete health literacy data. Consultation status was categorised as consulters for knee pain (n=1033), non-consulters (responders in the general population sample who did not consult primary care but had chronic moderate to severe knee pain on the questionnaire) (n=364) and no knee pain (n=3178). Health literacy was measured using the Health Literacy Screen (HLS-EU-Q6) and categorised to sufficient (mean score ≥ 3) or insufficient (mean score < 3). Musculoskeletal health was measured using the Arthritis Research UK Musculoskeletal Health Questionnaire (MSK_HQ); range 0-56 (higher scores indicating higher musculoskeletal health). Logistic regression measured the association between health literacy and consultation status, adjusting for age, gender, educational attainment and consultation for other musculoskeletal conditions and was expressed as odds ratios with 95% confidence intervals. Difference in median MSK_HQ scores for consultation status stratified by health literacy was examined using Kruskal Wallis test.

The Findings:

42.4% and 28.9% of people with knee pain and with no pain respectively had insufficient health literacy. Insufficient health literacy was significantly associated with consultation for knee pain (Adjusted Odds Ratio 1.49; 95% CI 1.26, 1.75, $p < 0.0001$) and non-consultation with knee pain (1.88; 95% CI 1.50, 2.36, $p < 0.0001$). Musculoskeletal health was significantly lower for each consultation status when health literacy was insufficient ($p = 0.0001$). MSK_HQ mean score for knee pain consulters with sufficient health literacy was 38.1 and 29.7 when insufficient. MSK-HQ mean score for those with knee pain but had not consulted with sufficient health literacy was 33.3 and 25.9 when insufficient.

The Consequences:

Health literacy is lower in people with knee pain compared to those without pain. Musculoskeletal health is lower for those with insufficient health literacy for each consultation status. The results suggest health literacy may act as a moderator of the link between knee pain and musculoskeletal health; pathways between knee pain and musculoskeletal health differ dependant on health literacy level. Furthermore as health literacy is lower in non-consulters, interventions may be more effective at a population level.

9. Health literacy in COPD and the implications for creating a health-promoting secondary care environment.

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The Problem:

The health literacy needs of people with chronic obstructive pulmonary disease (COPD) have been little explored. Literature to date indicates a low level of health literacy in this population which is correlated with poor adherence to medication, greater healthcare utilisation, less effective interactions with clinicians and poor health outcomes. The need to reduce any health inequalities by developing and promoting clear, accessible health information and services is recognised at government and NHS level. Health literacy therefore needs to be embedded in NHS culture in order to promote an environment in which tailored patient communication and greater active engagement between patients and healthcare providers can be developed.

The Approach:

An exploratory mixed methods approach was used to identify the levels of health literacy, self-efficacy, anxiety, depression and breathlessness in patients with COPD through a questionnaire survey (n=23), and to derive qualitative data from a purposive sample of survey respondents through semi-structured interviews (n=8). Health literacy was differentiated into the following domains: functional, communicative and critical.

The Findings:

Findings suggest a significant relationship between self-efficacy and greater confidence in having enough information to make health decisions (functional health literacy) and between self-efficacy and a greater ability to obtain health information (communicative health literacy). Increased knowledge of COPD resulted in greater self-management for female participants, who were also more able than male participants to engage collaboratively with healthcare providers despite higher levels of anxiety and depression. Patient-provider partnerships supported self-management and helped patients navigate complexities of the healthcare system.

Findings of low to moderate appraisal skills (critical health literacy) showed an overall weakness for the sample. However, the strong positive association between appraisal and actively managing health in the current study suggests encouraging abilities in evaluating information across the COPD spectrum to facilitate good health outcomes. There were unmet health literacy needs for the newly diagnosed.

The Consequences:

In order to develop and promote good understanding and management of COPD in patients attending secondary care services, findings suggest that partnership working, communication and service design are important considerations:

Partnership working:

- Identifying patient's educational preferences and helping patients to identify barriers to knowledge of what to ask about COPD, self-management and the healthcare system.

Communication:

- Tailoring communication to patients' health literacy needs, offering/planning education in patients' preferred formats and encouraging patients to develop their self-advocacy skills in seeking information and collaboratively engaging in health-related discussions.

Service level:

- Screening for health literacy, anxiety and depression in COPD patients, ensuring access to comprehensive resources on COPD and planning and monitoring service improvements through collaboration with service users.

Socio-contextual factors also require consideration such as gender-based communication. Further research with a larger cohort is required to build on these exploratory findings.

10. Out-of-school settings for facilitating critical health literacy in children: a scoping review

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The Problem:

Children's health literacy is increasingly recognised as a foundation for health-literate adult populations. Critical health literacy (CHL) is the action-oriented domain of health literacy. When realised to its full extent, it enables individuals and communities to act on determinants of health relevant to their experiences.

When CHL interventions for children are implemented, these tend to be school-based. But the structures and practices of school settings, even in Health Promoting Schools (HPS), do not necessarily prioritise the participatory approaches or advocacy that CHL entails.

The possibilities of out-of-school settings for CHL capacity-building in children merit further exploration.

The Approach:

A scoping review was undertaken to map previous and ongoing research across disciplines into the development of CHL in upper primary school age children with a focus on intervention setting.

The Findings:

Of the 39 studies identified, 33 were school-based or featured a school-based component. Alternative settings included camps, the community (e.g. drama performances in public spaces), the home and housing estates, public health departments, pharmacies, universities, and different types of libraries (public library; health sciences library; art museum library). Interventions piloted in schools commonly described challenges in attempting to integrate CHL into a teacher-led curriculum which emphasised cognitive skills over social action. The potential of child-accessible libraries as settings for CHL emerged.

The Consequences:

Analysing CHL for children through a settings-based approach affords insights into three understudied aspects: a) the critical dimension of health literacy; b) the coproduction of health literacy early in the life course; and c) the application of socio-ecological modelling to health literacy. Studying the facilitators and barriers of libraries as settings for the development of CHL in children offers an alternative view on children's agency as exercised within the structures and social relations of everyday, out-of-school learning environments. This could inform an evidence base for embedding effective, feasible and equitable CHL programmes by and for children in settings beyond the traditional classroom walls.

This scoping review is the first step in a larger doctoral research project

11. A health literacy intervention to increase parental confidence to manage childhood illness and navigate services

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The Problem:

In the UK there are upward trends in GP consultation rates and Emergency Department (ED) total attendances, for adults and children, particularly 0-4-year olds. Young children often present with self-limiting minor illness. 'Unnecessary attendance' has resource implications for services and can be stressful for children and families. Socio-economic deprivation is

associated with high GP consultation and ED attendance rates. Parents report anxiety around decisions on how to manage childhood illness and when to seek medical attention.

The Approach:

We report an evaluation of health literacy resources implemented in Wessex to support parents to manage minor childhood illness and navigate services. These 'Healthier Together' resources consist of a website and paper handouts available in children's centres or from GPs/health professionals. We conducted 18 semi-structured interviews including a section in which respondents were asked to 'think aloud' as they read and navigated the resources. Data were transcribed and subject to thematic analysis.

The Findings: Parents appreciated advice on 'what to do when' in cases of minor illness. Some gave examples of things done differently and several anticipated future behaviour change. Suggestions for improvement included a need to simplify information and website navigation due to heightened parental anxiety when children are ill. Parents felt it was important for health professionals who introduce health resources to communicate in an unrushed and reassuring way. A small number of parents stated they struggled to understand the resources and some refused to participate in the evaluation because they were not confident to discuss 'medical matters' or felt their English was not good enough. These participants exhibited characteristics of lower health literacy linked to socio-economic disadvantage.

The Consequences:

Health literacy resources offer potential to increase parental confidence to manage minor childhood illness. To address health inequalities, any additional support needs of parents with lower health literacy (for whom standard resources may be insufficient) must be investigated and responded to.

These findings have led to a planned second phase of work to develop a health literacy intervention specifically for socially disadvantaged parents and carers designed to develop their health literacy as an asset that can empower them to care for their children's and family's health. The planned work will also be outlined in this presentation.

12. Locating information literacy within the current health literacy landscape

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The Idea:

The Information Literacy Community of Practice Health Literacy Group (ILCoP HLG) is a working group that brings together representatives from libraries, SQA, NHS Education

Scotland and the Scottish Government to examine how information literacy (IL) can be integrated within health literacy (HL) policy and initiatives. Initial actions of the group focused on gathering information on policy, research, education and practice in the field of HL within Scotland.

The group have identified projects that position libraries firmly within the public health landscape in line with Scotland's health literacy action plan *Making it easier* and its strategy for public libraries *Ambition & Opportunity*. They have also identified resources available or under development to support individuals, educators, library and healthcare workers to improve their understanding, confidence and skills around HL. The group aims to provide an overview of how various groups, research and initiatives fit together and to identify opportunities for further research and action that further embeds IL.

Why it matters:

Making it easier identifies an appetite for librarians to play a more active role in the creation and dissemination of health and care information and in building the skills required for a more health literate society. The plan cites research undertaken by Strathclyde University, funded by the Economic and Social Research Council, which emphasises the importance of information skills for improving HL. From this it is reasonable to assert that input from librarians will be fundamental in achieving deeper integration of information skills into HL efforts. It is therefore imperative that librarians participate on HL action groups and that their contribution is heard by decision makers.

Future multi-sectoral engagements on HL could be enhanced by a compelling evidence-based story that frames policy, data and impact of HL initiatives. It is the intention of the group to help construct this story making HL more visible, recognisable and communicable.

The Next Steps:

The programme for Scotland's next Digital and Information Literacy Forum event will be shaped by the ILCOP HLG and will bring together speakers from education, health and social care to facilitate inter-professional and cross-sectoral exchange of ideas and experiences as well as providing opportunities for further collaboration.

The group will make recommendations on how we can advocate for the role of libraries and librarians in promoting deeper integration of information literacy into HL policy and initiatives. They will also produce a report of findings, recommendations and areas of concern to the Scottish Library & Information Council who have a formal partnership with the Health and Social Care Alliance Scotland.

The Risks:

Risks to fulfilling aims of the group include the complexity of terminology that surrounds HL and how this is communicated across professions and sectors. There are also challenges of consistency, resulting for example from the momentum a voluntary group can maintain in the context of wider professional commitments. Gathering robust data to build the evidence-base may also be challenging in a field where there are few validated tests and

measures and where pilot projects are succeeded by lack of resources to continue more sustained interventions.

13. Digital health literacy across the life course

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The Idea: digital and health literacy levels vary across the life course. Age is one aspect of consideration when developing approaches to minimise the potential to widen health inequalities. There is often the presumption that younger people will have the skills and appetite to adopt consumer technologies at a faster rate, deriving greater benefit, but is this always the case? And when considering digital solutions in healthcare, how do you take pre-emptive action to guard against widening inequalities when developing and deploying those solutions?

Why it matters: it is well understood – with an increasing research evidence base – that there is a complex interplay between digital skills/capabilities and people’s ability to interpret often complex healthcare information. There is often a presumption of ‘digital first’ approaches. It is vital that digital healthcare solutions factor in digital health literacy levels of the populations they serve and that organisations become more responsive to health literacy needs. This is a key strand of strategic work across the UK, including as part of Scotland health literacy action plan *Making it Easier*

The Next Steps: NHS Scotland’s approach to addressing the fragmented landscape of health technology is via the development of a national digital platform. This work is being undertaken by the NES Digital Service (NDS). Each product and service delivered via this work is factoring in health literacy, equalities and diversity considerations. There’s a need to explore how the challenges of digital health literacy can be explored for many dimensions of equality. Age is a highly relevant element, so a detailed exploration of these issues via a conference workshop could share initial thinking from NDS’ work, link to research undertaken to date and planned, and capture practice issues and potential solutions from the conference audience. We would run the session as an interactive workshop, highlighting some of the traditional approaches taken to different age groups and their involvement with digital solutions, then questioning whether there are aspects that perhaps apply to new/different contexts or can be genericised.

The Risks: the implementation of major digital programmes has been severely compromised by not approaching design from an inclusive and health literacy responsive starting point. Through the work to deliver the national digital platform we can ensure that we build upon

practice and research to better meet the needs of people and their practitioners, to digitally support the interactions and conversations at the heart of healthcare.

14. Health Literacy-an integral component of Health Professional Education

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The Idea:

Undergraduate health professional students do not routinely access health literacy training despite the growing recognition of its relevance and importance in the delivery of patient centred care.

This project is focused on the development of a flexible undergraduate curriculum on health literacy for health professional education. NUIG is a partner in IMPACCT (IMproving PATient Centered Communication Competences), a pan-European, Erasmus+ funded project which aims to develop professional capacity regarding HL through medical and nursing undergraduate education. The learning units developed for the programme comprise sub-units with teaching materials and activities that can be used individually as part of a module or combined to form complete modules that can be integrated into existing curricula.

Why it matters:

The increasing complexity of patients' medical and social needs require a more patient-centred approach, with greater involvement of the patient/their family in medical decisions, disease prevention, health promotion and management. Health literacy (HL) is at the core of these skills. This is the degree to which people are able to access, understand, appraise and communicate information to engage with the demands of different health contexts in order to promote and maintain good health across the life-course. It is a relational concept so that HL emerges from the interaction between individual skills and environmental demands and complexity. Health professionals can play a central role addressing the HL needs of patients. However, there is a need to integrate training in HL into undergraduate health professional education.

The Next Steps:

Components of learning units developed were pilot tested with five first year undergraduate medical students in an elective module. A mixed methods evaluation with a pre- and post-test questionnaire based on learning outcomes and qualitative rapid appraisal was undertaken. The components for the delivered module were drawn from 3 learning units: the Health Literacy Canon, Diversity and Organisational Health Literacy and were delivered

between January and March of 2019. Overall the learning experience was reported as positive. Areas identified by students for change included: provision of international best practice examples, more activities, and involvement in real world solutions for HL related problems. A larger scale evaluation with undergraduate nursing students is currently underway. In addition, learning units are being delivered and evaluated in Italy, the Netherlands, Slovakia and Germany. A detailed manual for educators is also being developed for use with the open access materials. There is also potential to deliver units as part of ongoing CPD training.

The Risks:

The time pressured environment of undergraduate medical/other health professional training means that it can be difficult to implement a new curriculum item. For the same reason the sustainability of the project may be threatened. However, medical students were very engaged with HL and learnt tools to address the HL needs of patients. The adaptability and flexibility of the learning materials demonstrates that HL can be included in the very time pressured environment of undergraduate health professional education.

15. Developing a Health Access Card for Asylum Seekers and Refugees in Newcastle

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The Idea

In response to reports that new entrants to the North East (including asylum seekers and refugees) were struggling to navigate the local health care system, Newcastle City Council's Public Health team in collaboration with Haref (Connected Voice) and the Regional Refugee Forum set about developing a 'Health Access Card' aimed at asylum seekers and refugees. This resource would detail the range of health services available in Newcastle including GP's, interpreting, A&E, pharmacy, dentists, opticians, screening, mental health, substance misuse, physical activity and holistic lifestyle advice, as well as information on NHS costs and charging.

Why it matters:

Worldwide, more than 214 million people have left their country of origin. This unprecedented mass migration significantly impacts on health care provision in host countries. Research suggests migrants face many barriers when accessing healthcare in their host country leading to unmet need and poor-quality care.

In the UK, the NHS is a comprehensive health service providing free health care at the point of entry to all UK residents. However, a significant number of asylum seekers and refugees

are inappropriately denied free NHS care despite their entitlement. Others may not seek it owing to a lack of awareness.

Research has shown that this population group finds the NHS difficult to navigate and negotiate. Some of the main barriers are language (including health literacy), lack of awareness of how the NHS works, charges, location/accessibility and fears linked to perceived stigma, discrimination and racism.

The Next Steps:

The resource was launched in February 2019 with 5000 copies of the card distributed to a range of relevant key agencies and partners with an agreement that they would provide feedback on its use and impact as part of the evaluation. After the launch, PHE's North East Health Protection team in collaboration with colleagues from Newcastle University and Newcastle City Council Public Health worked together to develop the evaluation methodology which is currently underway.

The aim of the evaluation is to examine the impact and efficacy of the resource with the overarching objective being to consider how the health needs of this population group might be best met moving forward. This will be done by exploring and understanding the views of both asylum seekers, refugees and professionals in relation to the card; determining how the card could be improved/adapted for future use and exploring the barriers to care currently experienced by Newcastle's asylum seeker and refugee community.

The Risks:

The main risks identified with this intervention were that the cards wouldn't be used appropriately, if at all, also that they wouldn't be made accessible to the specific population they were intended for by the relevant services. As they were produced in English only (to minimise costs and to encourage service users to seek interpreting support) there was also a risk the information in the cards wouldn't be understood or followed. This could then result in little to no impact on improving access to health services in terms of improving navigation and increasing awareness of rights.

16. How the Age-Friendly University Initiative supports positive and healthy ageing over the life course.

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The Idea: Age Friendly University Initiative

In this presentation I will demonstrate how the Age-Friendly Initiative has been implemented in DCU and share examples from the Age-Friendly Global Network on their approach to the AFU Initiative which promotes positive and healthy ageing over the life course. Dublin City University (DCU) developed Ten Principles of an Age-Friendly University and is leading an Age-Friendly University Global Network representing Europe, North America, South America, Canada and South East Asia. The Age-Friendly University Global Network has its genesis in the WHO Age Friendly Cities Programme launched in 2006.

Why it matters: As an emerging global network of cities are learning from each other how to apply the principles for the development of age-friendly cities and communities in their own contexts, universities have a unique role and opportunity to promote active and healthy ageing over the life course. DCU posed the question, how does an institute of higher education meet the needs of an aging population in the context of being age-friendly? Health promotion, such as encouraging healthy diets, regular physical activity, good social relationships, life-long learning opportunities and other meaningful activities, is a crucial component of a strategy to achieve a healthier, more active ageing population and this is the fundamental objective of the Age-Friendly University Initiative with the framework of the Ten Principles of an Age-Friendly University. Members of the Age Friendly University Global Network deliver a range of activities which support ageing across the life course.

Health literacy is fundamental to age-friendly cities, starting with the voices of older persons. Opportunities to help improve older peoples’ health literacy are important in order to empower and assist them to understand health information, enable them to better self-manage their own health and diseases and support them to navigate through the healthcare system. Adapting our physical and social environments to the needs of older people and promoting age-friendly environments further support sustainable solutions that must be implemented to achieve healthy and active ageing. The integration of older people into the higher education environment not only impacts them but it also has an effect on students to inform their ageing process, challenges stereotypes and promotes lifelong learning.

Next Steps: We are working towards validation of the Age Friendly University Global Network with the WHO and encouraging higher education institutions to review how to review and consolidate their work through their membership of the AFU Global Network.

The Risks: Higher education is a competitive industry, all universities are exploring new ways to increase funding and research outputs, attract students and retain good quality staff. The need to be the first, the best, the most innovative can lead to initiatives such as the Age-

Friendly University Initiative being adopted in a peripheral way leading to a false sense of expectation (from the stakeholder community), and rhetoric which contributes to reputational damage of the university.

17. Can the NHS consent forms provide valid informed consent?

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The Problem:

Currently within the NHS there are generic consent forms that are used to help gain informed consent from the patient prior to a medical investigation, treatment or surgical procedure. 43% of the English adult working population have a reading age of or below 13-14yrs. Guidance for developing information is that it should be aimed at reading age 10-11yrs. If the patient cannot fully understand the consent form could they be giving 'informed consent'? Although it is not a legal requirement for informed consent to be in the written format, for many procedures written consent is routinely used and added to the patient's record as evidence. To date health literacy research appears to be focused on the readability of patient information leaflets rather than on consent forms.

The Approach:

To assess the readability of the NHS consent form 1-4 by using the Flesch-Kincaid Grade Level and Flesch Reading Ease available through Microsoft Word 2016. The Flesch-Kincaid Grade Level determines the US grade level at which these forms could be understood at. We converted the US grade level to the equivalent UK reading age. The Flesch Reading Ease calculates a score out of 100. A score of ≥ 60 suggests it is easy to read. The scores for each form will be compared to the average reading age of the English adult working population and this will determine whether the consent form has been developed in line with recommendations for readability.

The Findings:

Three of the consent forms had a Flesch Kincaid Grade level of 12, equivalent to a reading age of 17-18yrs and one had a Flesch Kincaid Grade Level of 9, equivalent to a reading age of 14-15yrs. The Flesch Reading Ease for the 4 consent forms ranged from 46 – 59. For written information to be considered easy to read, it must achieve a score of ≥ 60 , suggesting none of the consent forms are easy to follow.

The Consequences:

According to the English 2011 Skills for Life Survey (Dept for Business and Skills), 43% of the English adult working population had a reading age of 13-14yrs or below. This means that all

of the consent forms we examined may not be fully understood by a large proportion of the adult working population. A key principle of informed consent relies on the patient understanding the information given to them to be able to make an informed decision. If the reading age and ease of the forms is too difficult for the patient to understand then informed consent may not be obtained. This poses legal implications and implications on patient care.

18. Crystal Clear: Ireland's first health literacy quality standard mark for pharmacies and general practices

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The Idea:

In 2015 we launched the Crystal Clear Pharmacy and General Practice Programme - Ireland's first health literacy quality mark for pharmacies and general practices. It was developed by the National Adult Literacy Agency (NALA), the Irish Pharmacy Union (IPU) and Merck Sharp & Dohme (MSD) and is supported by Healthy Ireland (Government Framework). It aims to recognise the critical role pharmacies and general practices play in helping patients understand their health issues. It is free to apply for the mark and it is given for three years. To date (December 2019) we have 100 pharmacies and 5 general practices with the mark.

We developed a booklet to support [pharmacies](#) and [general practices](#) to become more literacy-friendly and get the mark. You apply for the mark by filling in the [online audit](#) that asks ten questions under 4 areas:

1. Communications (4 standards – plain speaking; plain English; check for understanding and layout)
2. Staff awareness (2 standards – staff aware and responding sensitively)
3. Policies and procedures (3 standards)
4. Evaluating and improving (1 standard)

NALA gives feedback and supports pharmacies and general practices to achieve the standards.

Why it matters:

Recent OECD research shows that one in six adults in Ireland (521,550 people) find reading and understanding everyday texts difficult: for example, reading a leaflet, bus timetable or medicine instructions. One in four (754,000 people) has difficulties with real world maths, from basic addition and subtraction to calculating averages. It is essential therefore that

pharmacies and general practices are delivering a literacy-friendly service to their patients. This means their service takes account of the literacy and numeracy needs of its patients, responds as necessary to these needs and regularly evaluates and consistently improves. For the patient this means having a more accessible and responsive service and better health understanding and practices.

The Next Steps:

In 2017 a US researcher, Doris Ravotas, PhD Western Michigan University, worked with NALA for 11 weeks to study the process and experience of Crystal Clear from the pharmacy provider perspective. This was done by analysing existing data from approved pharmacies and doing some case studies. The study looks at:

- How Crystal Clear pharmacies address the standards for literacy-friendly services
- Challenges to becoming a literacy-friendly pharmacy
- Impact of the programme

The Risks:

The biggest risk is sustaining this initiative in the longer term without the support of a corporate sponsor

19. Health system: How people with asthma and limited health literacy navigate the health system

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The Problem: Navigating the health system may be challenging for people with asthma and limited health literacy. There are many factors which may affect how people with asthma interact with the health system.

The Approach: Using arts-based methodology, we aimed to explore the views and experiences of people with asthma and limited health literacy on navigating through the health system for their asthma management. We purposively sampled adults ≥ 18 years, with asthma and limited health literacy (using health literacy scale, HLS-Q47 (Malay version)) from five primary healthcare clinics in Malaysia. The interviews used a semi-structured topic guide in participants preferred language. Participants were additionally invited to participate in 'Photovoice': (1) One-week photo-taking (2) Post-photo interview. Interviews were audio-recorded, transcribed verbatim, and analysed thematically. We

undertook in-depth interviews with twenty-six participants. Eight of these participants completed photovoice activities which provided additional insights.

The Findings: The initial contact with the health system is an important window of opportunity to lay down fundamental understanding about asthma and its care. Experiences during this initial phase shaped how people viewed health and their illness and influenced their subsequent health-seeking behaviour. The two-tier health system (public and private) in Malaysia was a barrier to fostering a long-term trusting relationship with healthcare professionals and limit continuity of care in people with limited health literacy.

The Consequences: Healthcare system and policies affect access to health outcomes in many settings especially in low-middle-income countries. Universal healthcare can help to ensure the rights of vulnerable people, such as those with limited health literacy, to access quality care for asthma. Deeply entrenched privatisation of healthcare may hinder this establishment. Future research must take into account issues in health governance.

20. Health Literacy and Health Outcomes in Patients with Back Pain – A Scoping Review

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The Problem:

The World Health Organisation reports that back pain is a leading cause of disability worldwide. Traditionally thought of in terms of injury and pain, there is a growing understanding of the broader psychological and social factors that need to be taken into account in the management of back pain. In research into chronic pain, higher health literacy (HL) is linked to lower pain intensity and better pain control. While it would seem that improving HL will lead to better back pain outcomes, research evidence is needed. In a 2018 systematic review of published research reports into the relationship between HL and back pain management found only three studies meeting its inclusion criteria, which suggested a wide-ranging lack of evidence.

The Approach:

We carried out a scoping review to provide an overview of the international research evidence available on the relationship between back pain outcomes and HL. This review built on the 2018 review by exploring a wider range of back pain outcomes and conducting a

broader search than was used previously. We searched thirteen journal databases, using medical subject heading (MeSH) terms for back pain and health literacy, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines. A thematic framework approach was used for analysis.

The Findings:

The search resulted in ten relevant studies. Lower HL was not associated with a positive outcome in any of these. We identified five themes of patient characteristics in relation to HL and back pain outcomes:

Knowledge and Beliefs: Patients with low HL had more difficulty identifying types and sources of treatment for back pain and were more dissatisfied with their care.

Behaviour: Low HL was linked to a less active lifestyle, but had no significant association with fear avoidance, pain catastrophizing or psychological empowerment.

Disability: One study reported greater disability patients with low HL, but most found no significant association.

Pain: Two studies reported worse pain outcomes in low HL patients, while another two found no association.

Resource Utilisation: Patients with lower HL had higher utilisation of curative or symptomatic treatment (e.g. emergency room visits), and lower utilisation of preventive medicine (e.g. flu vaccinations).

We also identified limitations in the research, including the wide range of HL and back pain outcome measures used which limited how some findings could be compared with others. There was also a lack of diversity in terms of the patients included in the research, most of which has been carried out in Western developed countries.

The Consequences:

Strong research evidence is needed in order to identify possible strategies to improve outcomes for people with back pain with different levels of health literacy. However, this review shows there is still very little work in this area. More research is needed that uses the same measures so that results can be compared. More research is also needed with diverse groups of patients and in other regions such as Asia where back pain rates are high.

21. Involving patients in developing ways to support people with musculoskeletal conditions and lower health literacy

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The Problem:

Musculoskeletal (MSK) conditions affect joints, bones, muscles and tendons. They are the leading cause of disability worldwide and are linked to depression and increased likelihood of developing other chronic health conditions. Research shows that people with MSK conditions who have lower levels of health literacy are at risk of poorer outcomes, with more persistent and disabling pain, compared to those with adequate health literacy. The NHS recommends supported self-management but it seems that current approaches are not meeting the needs of this group of patients, leading to inequalities in care and variability in outcomes.

The Approach:

This two-year research study aims to develop a new approach to support self-management for patients with MSK conditions and lower health literacy. The research has 3 main stages: 1) a review of what is already known about existing approaches; 2) community group discussions with people who are living with MSK conditions about the sorts of things they find helpful or would find helpful if they were available; 3) combining the results of these two stages to design a new approach. It is using patient and public involvement (PPI), which is the active engagement of the public in NHS, health and social care research. Such involvement has been shown to increase the relevance of research to patients, improve its quality and design, and improve services, policies and patient outcomes. However, there is concern that researchers do not explain in enough detail how they have used PPI and to what effect.

In this study, PPI is being used in stages 2 and 3. It is drawing on members of the existing PPI group at Keele University to advise on a) how best to recruit community residents living with MSK conditions who may have lower health literacy and b) reflect on the analysis of the group discussions and what the findings might mean for designing a new approach.

The Findings:

Twenty PPI members have taken part in the research in two meetings. In the first meeting, they suggested ways of reaching out to community members that included working with local community groups such as Workers Education Association. They also suggested targeting disadvantaged areas as it was more likely that residents might have lower health

literacy, and also MSK conditions. In this meeting, PPI members reviewed the information that would be given to potential participants telling them about the study, and they reflected on the wording of some of the questions that would be put to the discussion groups. In the second meeting, they reflected on the findings from the discussion groups and what these mean for the development of the new approach.

The Consequences:

The contribution of PPI in this study has resulted in: successful recruitment of community residents with MSK conditions and lower health literacy; the collection of rich information on what people find helpful or would find helpful if it were available; ensuring that the new approach being developed is likely to be acceptable and accessible to patients with lower health literacy.

22. Health literacy levels in the British population in 2018

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The Problem:

Health literacy determines whether a person is able to follow treatment instructions and make appropriate health decisions. Low health literacy is associated with lower levels of medication adherence, extra health care costs and mortality. Because of this, finding what population characteristics are associated with lower levels of health literacy is important. Knowing the associated characteristics can help direct where to target health literacy interventions. The aim of our study was to describe the health literacy levels of British adults using a nationally representative population survey, and show how health literacy levels vary by population characteristics.

The Approach:

Data were collected through a population based cross-sectional survey conducted by NatCen called the British Social Attitudes survey in 2018. Two health literacy domains from the Health Literacy Questionnaire™ were asked as part of the wider survey: 1) Understanding health information well enough to know what to do, and 2) Ability to actively engage with health care providers.

The Findings:

A total of 2309 responded to the questionnaire and weighted analyses were conducted to explore the relationship between population characteristics and health literacy scores. The characteristics that were explored were: age, gender, ethnicity, having children under 5, deprivation, having visited a GP in the last 12 months, having a limiting health condition or disability, living alone, household income, and education level. The findings of these analyses will be presented at the meeting.

The Consequences:

This study will have described the distribution of health literacy levels for British adults in 2018 for both the 'understanding information' and 'ability to engage' with health professionals domains of the Health Literacy Questionnaire™. The results could be used to suggest where interventions to improve health literacy would be best targeted.

23. The Co-Design of an Interactive and Engaging Health Literacy Lab Experience

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The Problem:

Health Literacy (HL) is the ability to find, understand and apply information to make positive health decisions. HL can play a significant role in individuals managing their own health; giving rise to healthier lifestyles and reduced non-communicable disease (NCD) risk. Despite this, there is a lack of effective strategies to increase HL. Adolescence has been identified as a crucial time to embed lifestyle behaviours, presenting a window of opportunity for obesity and lifestyle-related disease prevention. This study is part of a wider Irish Heart Foundation HL Demonstration Project, registered with the World Health Organisation. As part of the overall project, disadvantaged schools and the research team are currently co-designing a purpose-built lab to foster interest and motivation to learn about health in an out-of-school setting and ultimately improve HL levels. The lab aims to provide a foundation on which to scaffold a corresponding school-based intervention to sit within the Wellbeing Curriculum in Ireland. This will enable the translation of theory-based learning into engaging and interactive learning activities.

The Approach:

Five post-primary DEIS (Delivering Equality of Opportunity in Schools) schools were recruited (4 urban; 1 rural). Approximately 300 Junior Cycle students (aged 11-16) and 10 Wellbeing teachers have been invited to participate. Individual classes and their teachers will pilot-test the lab-experience in spring 2020. The lab will incorporate interactive, technology-based activities, centred on the importance and implications of health-related behaviours. Lab learning objectives will be mapped across the Wellbeing Curriculum. Focus group interviews with students and interview administered questionnaires with teachers will be used to evaluate the feasibility and efficacy of the lab. This data will inform the iterative refinement of the lab experience as part of the overall intervention rollout, starting in September 2020.

The Findings:

The lab includes interactive, technology-based stations, incorporating health measures such as muscular strength, body composition, blood pressure, spirometry and cardiovascular fitness. Curricular mapping shows that the lab links with a number of the Wellbeing Indicators, along with learning intentions associated with subjects under the Wellbeing framework. Findings will be presented on the suitability and efficacy of this from the students' and teachers' perspective.

The Consequences:

An interactive lab experience with cutting-edge technology has the potential to positively disrupt adolescents' knowledge and awareness around their health, improve HL levels and provide a scaffold on which to build towards positive health behavior change at the school-setting as part of Irish Heart Foundation schools programmes.

Funding:

This research is funded by the Irish Heart Foundation and the Irish Research Council.

24. Conceptualising eHealth literacy in the context of infertility

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The Problem:

The importance of health literacy as a concept that exists within, and is influenced by, environment is increasingly recognised. Understandings of the digital realm as one such environment in which health literacy competencies are exercised and developed is crucial and represents an EU and WHO priority. However, how vulnerable groups and those seeking information about sensitive issues such as infertility access and interact with both information based and socially interactive digital platforms is not fully understood or

conceptualised. Without such understanding inequalities already experienced may be compounded.

The Approach:

This research aimed to examine eHealth literacy of individuals experiencing infertility and to assess the relevance of existing conceptual frameworks. An interpretive qualitative methodology was employed to explore how functional and interactive health literacy skills were utilised by diverse population groups experiencing involuntary childlessness and the barriers they faced. Purposive sampling recruited 27 participants and semi-structured interviews were conducted using an interview schedule informed by existing eHealth literacy frameworks. Data were analysed using thematic analysis.

The Findings:

The sensitive and reportedly 'taboo' nature of infertility meant a premium was placed on the internet as a source of information and support. People within this sample had diverse needs and were potentially vulnerable to misinformation and exploitation. Functional health literacy skills were utilised by all in the accessing of health information. However, most of those interviewed also displayed complex, continual movement between information-based websites and interactive social media platforms in the development of interactive health literacy. Through this movement, people drew on the knowledge and experience of virtual community members to collectively make sense of and appraise information and to prepare for consultations with health professionals. This became key in decision making for action. People engaged in this process differently with some passively observing conversations while others actively engaged in conversations or led them. A movement from being consumers of information to purveyors of knowledge was described, with some motivated by inequitable provision of treatment and a sense that information and services were targeted at heterosexual females who were in relationships, to become politically active online providing a sense of empowerment and critical health literacy.

The Consequences:

Established frameworks of eHealth Literacy have been helpful in understanding how people interact with digital platforms and the skills required to access, understand, appraise and apply health information. However, they do not fully incorporate the multi-dimensional characteristics of health literacy such as engagement with health professionals or the social processes found within distributed health literacy. They focus primarily on the interaction of users with technology and digital services rather than the two-way dialogical opportunities offered through social media. This study demonstrates the complex three way interaction and movement by participants between: information-based platforms, conversational platforms and information provided by health professionals with online communities playing a central part in this relationship. The findings demonstrate that this movement contributes to all stages of accessing, understanding, appraising and applying information and is represented in a new conceptualisation of eHealth Literacy in the context of infertility that will be presented here.

25. Manual of Good Practices in Health Literacy – Training Healthcare Professionals

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In Portugal, 5 in 10 people present low levels of health literacy, 11% of them have inadequate levels and 28% problematic. This low level of health literacy of the Portuguese population entails individual and social costs that, ultimately, lead to a decrease of the autonomy of the individual.

Nowadays, the increase of the population's health literacy levels is seen as both strategic and crucial, as well as a way to improve the population's quality of life and well-being, arising as both a challenge and a priority. Promoting health literacy presents itself as an effective strategy that addresses both health and education, endowing the individual with reflection and action regarding the opportunities to promote their health.

The healthcare professional, apart from his clinical skills, may, through a good verbal and non-verbal communicational process, guide and influence the individual's decisions, especially in cases of low health literacy levels. The communication between the individual and the healthcare professional plays an important role in the whole interaction. Sometimes, the difficulty in understanding the communication with the healthcare professional may affect the acceptance of proposals, recommendations and associated behavioural change.

With this in mind, the "Manual of Good Practices in Health Literacy – Training Healthcare Professionals" was developed to deepen the concept of health literacy, emphasising the importance of disease prevention and health promotion *versus* disease treatment, and has as one of its goals to encourage the development of effective interaction and communication strategies by healthcare professionals, facilitating the information transmission process. With the information, healthcare professionals can familiarise themselves with good practices in promoting health literacy in different contexts such as in primary healthcare, hospitals, pharmacies and in the Portuguese SNS24 (NHS25), as well as at different stages of the life-cycle. The Manual will hopefully be used by healthcare professionals as an aid to stimulate their reflection and action regarding the opportunities in promoting health literacy among the population.

In this Manual, conceptual aspects related to health literacy are initially addressed, followed by an analysis of the main obstacles inherent to its promotion, given their importance in obtaining positive results, as well as behavioural change strategies. It also addresses the

implementation of good practices in health literacy, on an analysis comprehending all life-cycle stages and healthcare settings. Finally, it presents a summary of the main methods and means to be considered while promoting health literacy.

The implementation and dissemination of this Manual are therefore of great relevance for capacitating healthcare professionals and providing them with the tools, knowledge, interaction and communication strategies necessary for the promotion of health literacy, encouraging their sense of autonomy and critical thinking in decision making, therefore increasing their levels of health literacy and the levels of health literacy of the Portuguese population.

26. Ativa Saúde - A good practice platform

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The Idea: It is considered that technological expansion may provide an excellent opportunity to enhance and improve the promotion of health literacy, covering various sectors of society that may, in some way, influence the health and well-being of the population.

The “Ativa Saúde” (Active Health) Platform stems from a need identified by different activators/promoters of good practices, who want to have quick and easy access to health promotion projects. It was in this context that the Directorate-General of Health (DGS) proposed to develop this Platform, integrated with the Health Literacy Action Plan.

This instrument will, therefore, be a public space for sharing projects and promoting health initiatives. The “Ativa Saúde” Platform will have as its main objective disseminating knowledge, seeking to improve and enhance the implementation of good health practices.

The multidisciplinary and interdisciplinary work of the entire community is vital for joining efforts in the area of health and well-being, expanding the possibilities of information and sharing of the various projects, in multiple and diverse contexts.

This space for public and community use can and should inspire diverse teams in order to implement good health practices, promoting the development of new interventions and improving the quality or replication of existing experiences.

In addition to the dissemination of a set of good practices, the Platform will serve as a space for sharing events and relevant topics in the area of health literacy, allowing the population to acquire knowledge of the various ongoing projects and, consequently, actively participate.

With a view to continuously improving access to information and sharing good practices, the DGS provides, through the “Ativa Saúde”, a comprehensive space, where all agents promoting events can submit and publicize their initiatives and projects.

Why it matters: The “Ativa Saúde” Platform will take on specific characteristics, among which we can highlight the high potential for disseminating ideas and experiences of good practices, minimising efforts in the search for projects already carried out and evaluated and whose implementation already has recognised feedback. Potential project activators will be able to get in touch with each other, also drawing on the experience of agents with programmes already implemented, in diverse contexts, taking effective advantage of the networking.

The research to be carried out by project promoters may correspond to a more structured and facilitated process, through the application of specific filters to be defined, namely target groups, chronic diseases, dietary requirements, physical activity, etc. Access to projects that respond to interests of the activator himself and the discovery of complementary projects will be catalytic aspects of experiments to be carried out.

Finally, we highlight a potentiality that we will register as a determining factor: the population will be able to become aware and be informed about projects in progress in their area of residence or action, adhering and participating actively.

The Next Steps: We are currently in the process of implementing a pilot experiment, investigating the existence of ongoing projects in the area of health literacy, looking for the diversity of sub-themes. At the same time, we seek to determine the framework of the projects, defining the criteria for discriminating good practices and proceeding with the preparation of a presentation form.

It is important to highlight the constructive aspect of all the experiences, which will be verified through the gradual and systematic presentation of the various moments of the processes.

The Risks: The most problematic aspect to consider when implementing the “Ativa Saúde” Platform will be related to the expected high costs, both in terms of implementation and in terms of eventual expansion, using artificial intelligence instruments.

27. Framework for Health Literacy Promoting Institutions: Healthcare Institutions

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Health Literacy contributes not only to promoting health and preventing diseases, but also to the effectiveness and efficiency of health services, and is, therefore, an essential tool for the sustainability of the National Health Service (SNS). As such, health literacy is one of the top priorities of the Directorate-General of Health (DGS).

With regards to the Portuguese context, the SNS has been modernising itself, seeking to improve health literacy levels among the Portuguese population and has been implementing various measures and initiatives with this aim.

Inspired on the discussion paper released in 2012 by Brach et al., the DGS has decided to develop a sequence of Frameworks dedicated to promoting health literacy in different institutions and organisations. Starting with healthcare institutions, the aim is then to follow onto other sectors and institutions, for example, once the Framework for Health Literacy Promoting Institutions: healthcare institutions is finalised, the DGS will, in collaboration with the Ministry of Education, produce a Framework for health literacy promotion in educational institutions.

The Framework for Health Literacy Promoting Institutions: Healthcare Institutions describes 10 attributes of health literate healthcare institutions that make it easier for people to navigate, understand, and use information and services to take care of their health. By creating health literate healthcare institutions, we are empowering not only the 49% of the Portuguese population who have problematic and inadequate health literacy levels but also the majority of Portuguese who have difficulty understanding and using currently available health information and health services.

Each attribute is described is exemplified with actions that can be taken up to achieve the attribute. This Framework is relevant for healthcare institutions and healthcare professionals to know what actions need to be taken to close the gap that currently exists between citizens' health literacy skills and the healthcare system's complexity, to improve the institution's linguistic and cultural competence, to create an environment that promotes health literacy, to improve the quality of health care provision and, consequently, to promote the citizens' health.

28. Framework for the Promotion of Health Literacy Programmes

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At the core of the Shanghai Declaration on promoting health in the 2030 Agenda for Sustainable Development is the statement advocating the importance of health literacy in empowering individual citizens and enabling their engagement in collective health promotion actions. Health literacy is one of the three pillars of health promotion and is, therefore, a fundamental strategy in improving population health, reducing hospitalisations, the use of emergency services and healthcare costs. High levels of health literacy provide individuals with the capacity to make informed health decisions in their day-to-day life, at home, in the community, at the workplace, when navigating the healthcare system, and in the political context, allowing them better control over their health.

In 2014, the Portuguese Health Literacy Survey (ILS-PT) demonstrated that when compared with the participating countries of the Health Literacy Survey EU (HLS-EU) and the European average, Portugal has the lowest percentage of people with “excellent” levels of health literacy. Based on the priorities identified and actions recommended, the Directorate-General of Health decided to develop a Framework for the Promotion of Health Literacy Programmes as a means to guide professionals in the planning, implementation and evaluation phases of health literacy promotion programmes. Bearing in mind that health professionals are a key factor in promoting health literacy among the population, the aim is to empower these professionals and guide them throughout the process, as well as provide a better insight into behavioural change patterns, opportunities for promoting health literacy in different settings and stages of the life-course, barriers to health literacy, methods and means for promoting health literacy, person-oriented tools and suggestions for content and graphic templates. Overall, we are hopeful that this will lead to an increase in the development of local and regional health literacy promotion programmes that increase the population’s health literacy levels. The Framework includes relevant indicators and criteria to take into consideration at each distinct stage of the programme’s life-cycle. These stages include problem diagnosis; needs assessment; population involvement; planning; stakeholders; dissemination, implementation, evaluation and sustainability of health literacy promotion programmes.

Enormous potential lies in the exchange of experiences, best practices and knowledge. We commit to collaboration, building capacity and sharing best practices, and welcome comments from all interested parties who wish to contribute to making this Framework an important and relevant tool for health literacy promotion. The Framework builds an evidence base for publications and sharing information with the local and international

community, and may serve as a template for other such Frameworks to help increase levels of health literacy, especially in at risk and vulnerable populations.

29. Health Literacy e-learning: NHS Education for Scotland and Health Education England collaboration to spread awareness

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The Idea: Staff across health and social care need to have greater awareness of health literacy and its impacts. NHS Education for Scotland (NES) and Health Education England (HEE) agreed to share expertise to develop an eLearning module to complement existing resources; in Scotland the Health Literacy Place website and in England the health literacy toolkit. This module provides an opportunity to spread knowledge of health literacy to all health and social care staff.

Why it matters: Health literacy is low in the UK, as 61% adults aged 16-65 struggle with health information that combines words and numbers (Rowlands et al, 2015). Greater awareness can support health and social care staff, citizens, carers and patients to have better conversations about their health. Some people have roles in which they need specialist insight. For others, an electronic resource that provides an introduction and tools to which they can return can make a significant difference.

The resource encourages learners to think about how they can make a difference through:

- Teach back;
- Chunk and check;
- Using simple language;
- Using pictures; and
- Routinely offering help.

Each learner creates an action plan of how they plan to use the tools in their practice.

The Next Steps: The module is available on both the NES Learning Management System and the Health Education England's e-Learning for Healthcare. The files can be shared for hosting on other platforms.

In England, NHS library and knowledge services are being supported with tools for 1-day, 1-hour and 15-minute face-to-face training resources to use alongside the e-learning tool. Following on from The People Plan, staff in public libraries, school libraries and academic

libraries will also be supported to work on projects that increase health literacy or raise awareness of health literacy.

In Scotland NES is offering webinar or face to face sessions with learners to enable further discussions how the tools can be used in practice and how learners can encourage teams and organisations to be health literacy friendly. There are also opportunities to work with librarians in all sectors who have an interest in health literacy.

The resources are open to use in other nations to support a blended approach to health literacy.

The Risks: With such a wide-spread change programme, the risk is that we may not be able to capture all of the activity in order to assess the impact. Where there is face-to-face training, we will collect impact case studies. We would welcome partnerships to support the spread of the tool and measures of its impact.

30. Rhythm and Poetry: a narrative approach to engaging young carers with population health research

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The Idea: Maintaining engagement with large numbers of participants in long-term research studies is challenging, particularly when the study is conducted online. HealthWise Wales (HWW) is a longitudinal, national population study collecting health and lifestyle information for a growing cohort of over 33,000 online participants (aged ≥ 16 years and receiving their healthcare in Wales). Sharing research findings is an important aspect of HWW outreach to current and prospective participants. This engagement project will test the use of a music-based methodology to engage a group of HWW participants t, who tend to be under-represented, with research that is relevant to them. The interactive workshops will be developed in collaboration with the Ministry of Life, a community interest company, who work with marginalised young people, to create audio and visual outputs that can be shared with stakeholders.

Why it matters: Providing care for a family member or friend can have a negative effect on health and social activities, especially for young people. A recent analysis of HWW data demonstrated that carers have poorer health behaviours and mental health than non-carers. Young carers, aged 16-25 years, may have difficulty voicing their needs and tend to remain hidden from health services, resulting in poor health and wellbeing. Music has been shown to act as a creative outlet for young people to communicate important messages. We aim to deliver interactive workshops using a novel narrative process, Rhythm and Poetry

(RAP) music, to give young carers the chance to interact with research findings and be able to explain them in their own words, in accordance with the principles of co-production.

The Next Steps: The creative outputs will be shared with carers, HWW participants and other stakeholders through social media to raise awareness and improve knowledge on what it means to take part in research and improve the way research studies are presented to the public. It will also help increase the engagement of under-represented young people with the research process and empower them to meet other young carers, think about their own health and wellbeing, and share their experiences.

The Risks: Although this methodology has been used successfully in a social science research context, some young carers might not be interested in engaging with health research in this manner. For this reason, we will employ an adaptive approach incorporating participant feedback to evolve alternative innovative, art-based outputs such as visual displays, lyrics, poetry and performance. Young carers might be unable to attend or drop-out of the workshops due to their caregiving responsibilities, therefore, the workshops will be run in different areas around the Cardiff capital area and will be tailored to their availability and commitments. Interactive methods will be employed to include young individuals with different levels of literacy attainment and the inclusion of less confident participants will be facilitated by incorporating a range of tasks and methods for eliciting interaction and feedback e.g. graffiti walls.

31. Creating Structure in Professional Education: The Assessment-Based Health Literacy Certificate

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The Idea:

A structured professional development pathway in health literacy exists in the United States, to demonstrate one's proficiency in health literacy within an accredited framework. The Assessment-Based Health Literacy Specialist Certificate captures the knowledge one needs to possess and tasks one must be able to do in order to be considered a health literacy specialist, as defined by a broadly representative group of health literacy professionals, vetted by the broader health literacy community, and developed under strict accreditation guidelines.

This Certificate can be used by practitioners in the UK to inform and develop its own structured professional development model and process.

Why it matters:

Defining practice in health literacy is a critical first step to guide educational and professional development initiatives in a structured fashion. Having a functional, rigorously designed model can help move this process forward, contributing to Health Literacy UK's stated mission to "building the evidence base for health literacy."

The Next Steps:

The Assessment-Based Health Literacy Specialist Certificate is being developed by a US-based healthcare non-profit (Institute for Healthcare Advancement [IHA]), with a strong mission initiative in health literacy and a mission to "empower people to better health." IHA has strong interest in advancing education and professionalism in health literacy, in the areas of research, practice, and policy. It is open to discussing the feasibility of a collaborative effort to create such a model in the UK, as well as ways the Certificate and its content could be utilized in the UK.

The Risks:

None seen at the moment. This process will begin with professional interest and inquiry, which will determine next steps. This session is about awareness-raising and stimulating conversation and questions.

32. Health literacy and health behaviours in cardiovascular patients in the Scottish Highlands

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The Problem: Cardiovascular disease is one of the leading causes of mortality and morbidity worldwide. Health literacy has been shown to be an important factor in effective self-management of chronic health conditions and the prevention (and secondary prevention) of non-communicable diseases such as cardiovascular disease. Health literacy has been shown to predict both initial cardiac knowledge, and gains in knowledge following cardiac rehabilitation, and it has been found that patients with cardiovascular disease find it significantly harder to understand health information or engage with providers. NHS Highland is seeking to improve its provision of cardiac rehabilitation and increase uptake. The purpose of this study is to collect baseline data on the levels of health literacy in cardiovascular patients in the Highlands and examine relationships between health literacy, physical activity, healthcare use and psychological factors known to influence health behaviours.

The Approach: A retrospective cross-sectional study of all patients referred to cardiac rehab between 1st April 2018 and 31st March 2019. The study has two research questions: a) what are the levels of health literacy, physical activity and cardiac rehab attendance in cardiovascular patients in the Highlands? B) What are the cross-sectional relationships between health literacy, cardiac rehab attendance, physical activity, self-assessed health, healthcare use, self-efficacy, motivation, illness beliefs, and cardiac rehabilitation barriers?

The Findings: Data has been collected from 282 patients (45% response rate) and is currently being analysed. Preliminary analyses show that compared to non-responders' responders are slightly older (69 v 66) and from less deprived SIMD areas. No differences were seen with regards to gender, diagnosis and time since diagnosis. The HLS-EU-Q6 indicates that 72.5% of respondents had likely problematic health literacy (mean 2.75 ± 0.63). Planned analysis includes descriptive statistics, correlations and regression analysis.

The Consequences: With problematic health literacy and a challenging geographical region, NHS Highlands are working to improve access and support patients to increase uptake of cardiac rehabilitation. The results of this study) will be used within a wider Ophelia process to develop interventions and improve health literacy and support more effective self-management and secondary prevention.

33. Health Literacy in Stoke-on-Trent and the role that Health Visitors play to reduce it.

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The Problem:

Health Literacy is a person's ability to access, understand and act on health information. Research shows that the divide between health literacy and health inequality is growing. In Stoke-on-Trent 49% of adults have low Health Literacy Levels compared to the national average of 43%. This has a significant impact on their ability to access services and understand the information and advice they are given.

The Approach:

Our aim is to ensure that information provided and how we interact with our families is at the right level and in a suitable format allowing everyone to make informed decisions on where and how to access to Health Care. This helps to improve health outcomes supporting the reduction of Health Inequalities in the area. By improving the knowledge and skills of our workforce, their contacts with families are more meaningful to all.

We aimed to train all staff in Health Literacy awareness, review our information and create Health Literacy Champions in each team

Training: The Service Manager and 1 HV Team Leader undertook Health Literacy Train the Trainer and delivered cascade training within the organisation.

Documentation: The HV Team Leaders and staff reviewed the information the service is responsible for creating.

Changes to service literature was undertaken following focus groups with parents in a number of areas.

The Findings:

We have seen a reduction in missed appointments, reduced confusion in how to access information and where to attend appointments

The Consequences:

This is an ongoing piece of work. The changing demographics of our City and families requires continual revisiting. We are fortunate to have a local authority committed to improving health literacy and the overall outcomes for our families.

Our work will continue and remain high profile within our service.