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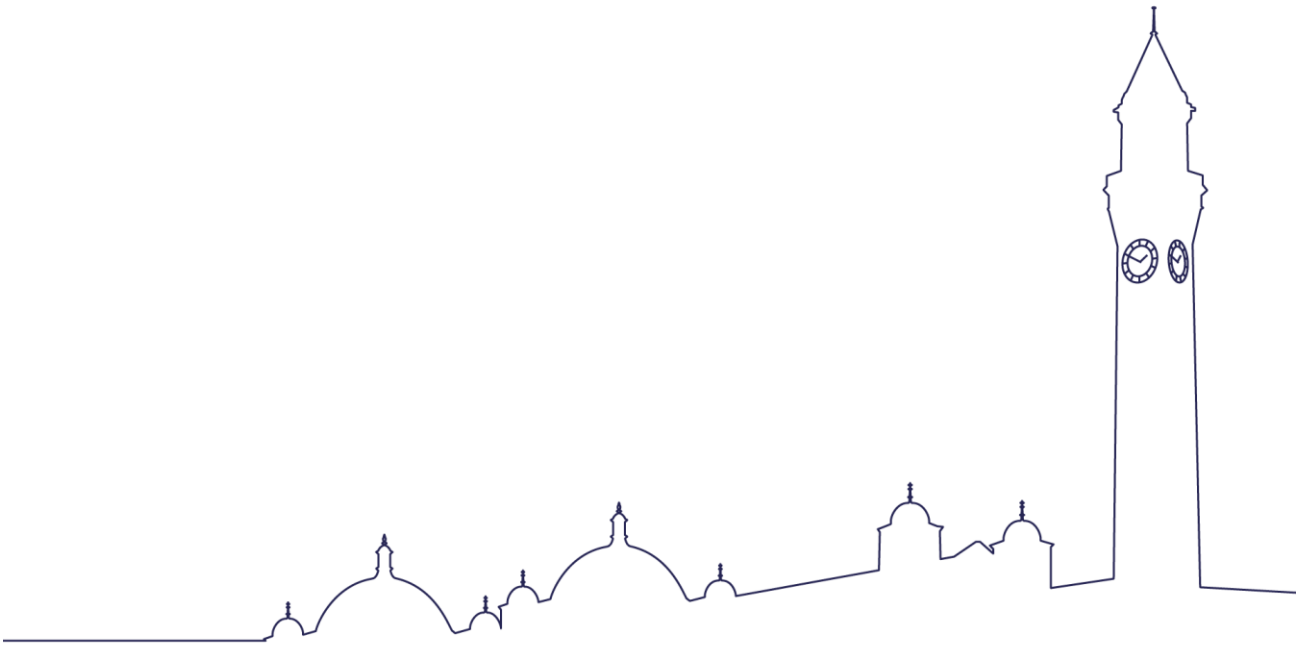
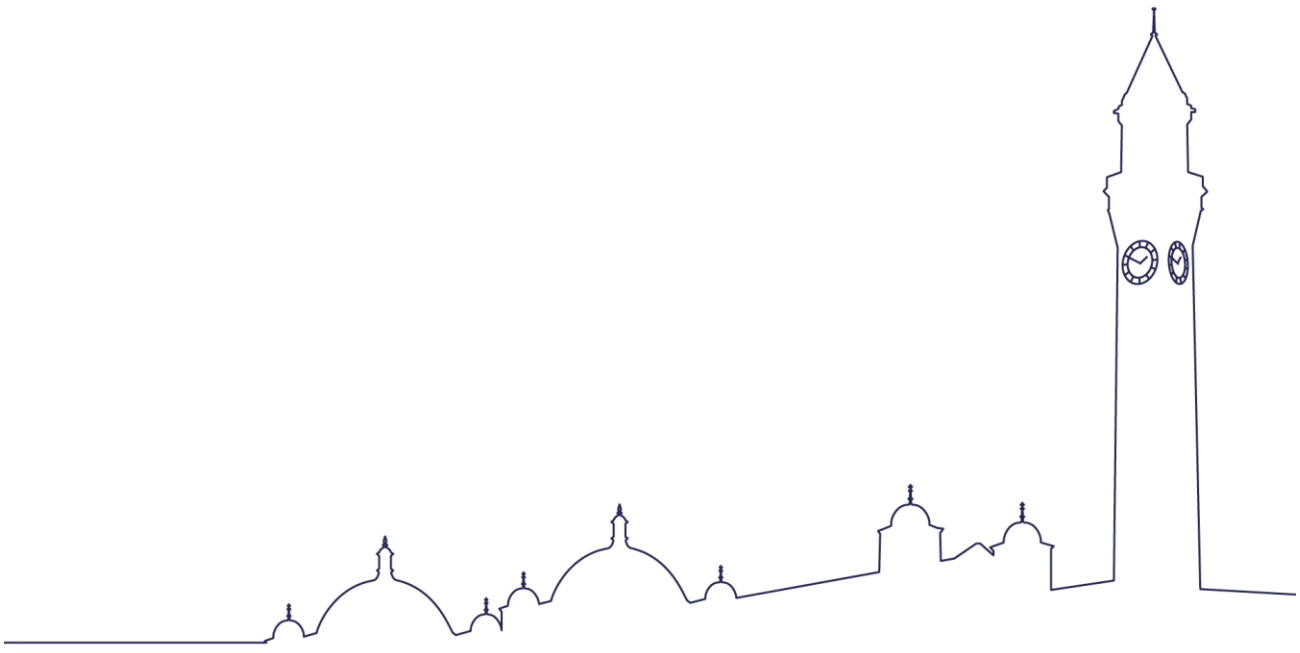
THE FUTURE OF PRIMARY CARE

BOOK OF ABSTRACTS



KEYNOTE BIOGRAPHIES



Professor Dame Helen Jayne Stokes-Lampard

Prof Dame Helen Stokes-Lampard is a GP Principal, Chair of the Academy of Medical Royal Colleges (AoMRC, the umbrella body for all medical Royal Colleges and Faculties), founding Chair of the National Academy for Social Prescribing (NASP), a Trustee of Macmillan Cancer and a Professor of GP Education here at the University of Birmingham. She was awarded a DBE in the New Years Honours list Jan 2022 'for services to General Practice'.

She began working at the University of Birmingham's Department of Primary Care in 2000, while she was a GP registrar then had various academic roles including interim Head of Primary Care, Clinical Director of the NIHR Primary Care Trials unit and Head of GP Education prior to becoming RCGP Chair. She has participated in many SW-SAPC and SAPC conferences over the years.

As Chair of AoMRC she is fully seconded away from the University of Birmingham (2020-23). This role requires her to work closely with Westminster government, colleagues in DHSC and NHSEngland as well as collaborating with all the relevant arm's length bodies. Much of her time is tied up behind the scenes, seeking consensus across colleges and ensuring that duplication of effort is minimised.

She was Chair of the Royal College of General Practitioners (RCGP) 2016-2019, where she had a very high media profile, launched a new vision for General Practice and secured the greatest financial investment in general practice since the formation of the NHS.

As founding Chair of the Board of NASP, she is helping to shape their direction, building strong partnerships, establishing an academic basis for the social prescribing movement and raising its profile. Helen remains a part-time GP partner at The Westgate Practice in Lichfield and her clinical practice constantly informs her national roles. She is a great believer in the Harry Truman saying, 'It is amazing what you can accomplish when you do not care who gets the credit.'

Professor Aneez Esmail, University of Manchester

Aneez Esmail is Emeritus Professor of General Practice at the University of Manchester. His research interests focus on patient safety in primary care, racism in the medical profession and the organisation and delivery of health care in primary care. He was the Medical Advisor to the Shipman Inquiry between 2000-2006. He continues to practice clinically as a GP in inner city Manchester.

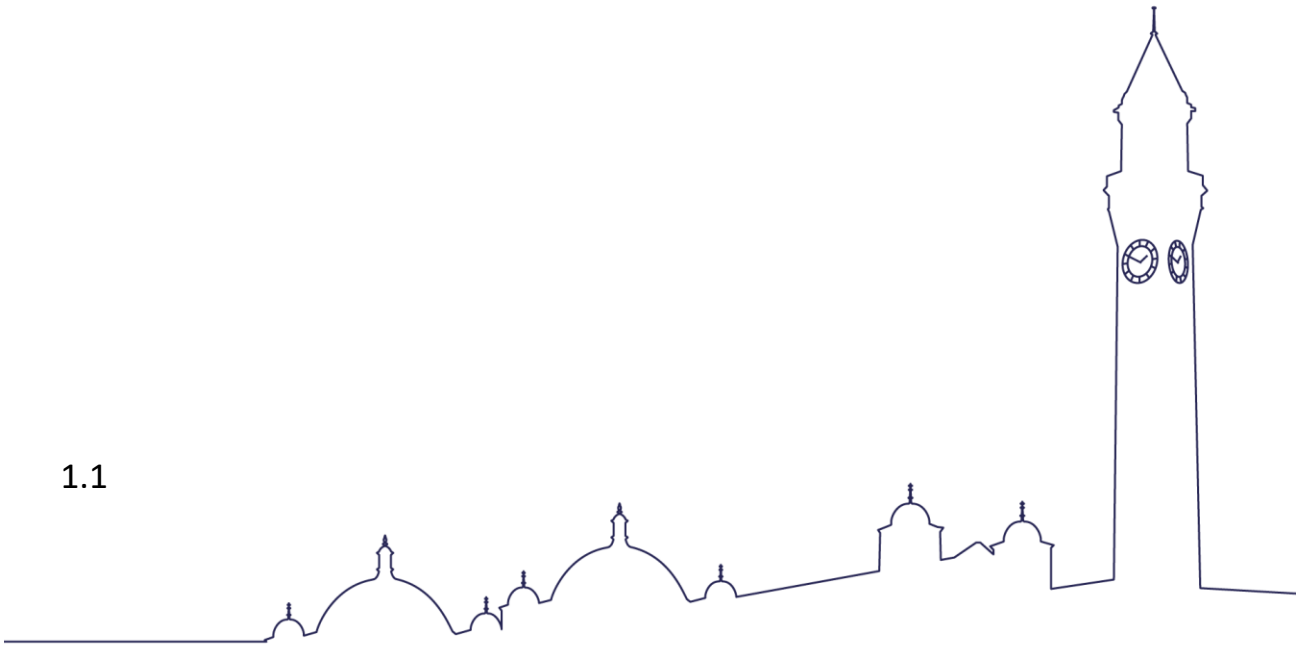
Professor Judith Smith, University of Birmingham

Judith is Professor of Health Policy and Management in the Health Services Management Centre (HSMC) at the University of Birmingham. She is Director of the Birmingham RAND and Cambridge (BRACE) Rapid Evaluation Centre funded for five years (2018-2023) by the National Institute for Health and Care Research (NIHR).

In December 2020, Judith was appointed as Deputy Director of the NIHR Health and Social Care Delivery Research (HSDR) Programme. She also has a part-time role within the executive team of Birmingham Health Partners, as Director of Health Services Research.

Judith is a widely published health services researcher and policy analyst, with a particular interest in how to bridge the worlds of research, management and practice. Her research focuses on the management and organisation of primary and integrated care, evaluation of new models of care, and healthcare governance. Judith is Trustee and Deputy Chair of the board of Health Services Research UK, and Trustee of Ex Cathedra, a sacred music choir and company based in Birmingham. She has previously served as a Non-Executive Director of the Birmingham Women's and Children's NHS Foundation Trust (2014-2022) and of South Birmingham Primary Care Trust.

ORAL ABSTRACTS



1.1

Acute hospitals managing general practice services: a qualitative rapid evaluation of staff and patient experiences of care delivery and provision as part of a vertically integrated model

Dr Manbinder Sidhu, Frances Wu, Gemma McKenna, Ian Litchfield, Jon Sussex, Charlotte Davis, Catherine Saunders *University of Birmingham*

Biography:
Dr Manbinder Sidhu is an Associate Professor at the Health Services Management Centre (HSMC) working with the National Institute of Health Research (NIHR) funded BRACE Rapid Evaluation Centre.

Background:
Fostering greater integration between primary and secondary care, sustaining primary care given workforce shortages, and managing patient flows to acute hospitals are prominent themes in UK healthcare policy. One approach to address such challenges is acute hospitals managing general practices, a form of 'vertical integration' (VI).

Aims:
We aimed to understand staff and patient experiences, based on service delivery changes following VI implementation.

Methods/Approach:
As part of a larger evaluation including quantitative analysis, we undertook a qualitative cross-comparative evaluation across three heterogenous case study sites in England (two of which had been included in a prior evaluation by the same team) from April to October 2022. We spoke to 22 members of staff and 14 patients.

Data analysis was informed by the framework method using the (SELFIE) framework1 and by Corbin and Strauss's2 seminal paper on three lines of work.

Results/Evaluation:
The rationale for VI was to bring stability to general practice, continue to support healthcare redesign and facilitate integrated working across the local health economy. Effective leadership was necessary and achieved by senior acute trust and primary care colleagues building rapport and mutual understanding. VI is associated with health service improvements for patients by trusts adopting a bottom-up, collaborative approach of re-designing patient care across primary, community, and secondary care and piloting innovative services.

Patients reported on their experience of care in vertically integrated practices but did not attribute any of the experience specifically to VI. Patients with MLTCs encountered significant 'navigation work' concerned with accessing health provision.

Conclusions:
VI is one model of integrated care that can help general practices remain open and introduce novel ways to clinically integrate care. While there were examples of secondary care clinicians becoming more embedded in general practice, the greatest impact to integrated working was between primary and community care.

1.2

GP Access Systems - A Scoping Review

Dr Abi Eccles, Dr Carol Bryce, Dr Annelieke Driessen, Prof Catherine Pope, Dr Jennifer MacLellan, Toto Gronlund, Dr Brian Nicholson, Prof Sue Ziebland, Dr Helen Atherton

Biography:
Helen Atherton is Associate Professor of Primary Care Research and Digital Health lead at the Unit of Academic Primary Care, Warwick Medical School. Helen is a health services researcher with a PhD in Primary care research and has worked in academic primary care research since 2005. Her ***Background:*** *is in public health and anthropology. Helen's expertise is in use of digital routes of access to general practice, and alternatives to the face-to-face consultation, such as online and video. She leads studies that focus on how digital routes of access into general practice impact on patients and healthcare professionals.*

Background:
It is well documented that access to GP appointments is becoming increasingly challenging in many high-income countries, with an overstretched workforce and rising patient demand. Various systems to manage demand have been developed and evaluated in the UK (1, 2) and elsewhere (3, 4). The Covid-19 pandemic saw disruption of established approaches within practices. Now, it is timely to understand the current evidence base relating to access systems in general practice.

Aims:
This scoping review aimed to systematically consolidate and describe current international evidence related to different types of GP access systems.

Methods/Approach:
Literature searches were run across relevant databases in May 2022. Title, abstract and full text screening was carried out for each reference independently by two researchers. Data from included studies were extracted, collated, and mapped to synthesise and represent the types of GP access systems that have been studied.

Results/ Evaluation:
After screening 11,326 records, 49 studies were included in the review. Some access systems featured heavily in the literature, and others less so. There were two key strategies adopted by systems which related to either changing appointment capacity or modifying patient pathways. Components related to these strategies are summarised and illustrated as a schematic representation in the paper. Most rationales behind access systems were practice-focused (e.g., reducing GP workload, managing demand) rather than patient-focused.

Conclusions:
This scoping review provides a comprehensive synthesis of the various components that make up GP access systems. The synthesis and schematic representation provide a useful tool for GPs, academics, policy makers and patients interested in understanding more about their **Aims:**, design, and implementation. Patient-focused outcomes appear to be under investigated, in favour of more practice-focused outcomes, and therefore are at danger of being overlooked in the design and implementation of such systems.

1.3

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

Jens Søndergaard, Elle Lüchau, Dr Helen Atherton, Finn Olesen, Elisabeth Assing Hvidt

Background: Video consultations (VCs) were introduced in Danish general practice in 2020, and by the end of 2024 all general practitioners (GPs) must offer VCs (1). However, VCs make up less than 1% of all consultations (2), and little is known about how GPs interpret VCs and how these interpretations influence their use or non-use of VCs.

Aims:
To explore how GPs' individual and shared interpretations of VCs influence the use or non-use of the technology in Danish general practice.

Methods/Approach:
This study is based on 30 qualitative interviews with 27 Danish GPs conducted from August 2021 to August 2022. The interviews were analyzed using reflexive thematic analysis (3) and guided by the conceptual framework of technological frames to identify the nature of VC, VC strategy and VC in use (4).

Results/Evaluation: Nature of VC: GPs' interpretations and use of VC are influenced by occupational identity, values and anticipations about the broader context of digitalization of the healthcare sector. VC strategy: GPs reframed VC from it being a need-to-have crisis tool, due to covid, to a nice-to-have technology. In this regard, some GPs experienced a strategic vacuum leading to a decrease in VC use, while others identified new visions for their VC use. VC in use: Revealed two different dominant interpretations: VCs framed as a liberating tool that increases job satisfaction, or VCs framed as a time-consuming technology with no relative advantage to existing consultation forms and workflows.

Conclusions VCs are differently adopted across general practices due to different interpretations of the technology and its relative advantage. Despite political goals for increased VC use, the future of VC still seems unpredictable. An increased focus on the sensemaking of VCs is essential, and the relationship between occupational identity, values and use of VCs needs more political and scientific attention.

1.4

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

Dr Elizabeth Lovegrove[1], Mr Seamus Gate[2], Dr Stephanie MacNeill[3], Miss Yumeng Liu[3], Dr Sophie Rees[4], Dr Jonathan Banks[4], Dr Robert Johnson[5], Prof Matthew Ridd[2], , on behalf of the ATHENA trial team[2]
[1]Primary Care Research Centre, University Of Southampton, Southampton, United Kingdom, [2]Centre for Academic Primary Care, University of Bristol , Bristol, United Kingdom , [3]Population Health Sciences, University of Bristol, Bristol, United Kingdom , [4]Bristol Medical School, University of Bristol, Bristol, United Kingdom , [5]Translational Medicine, Faculty of Health Sciences, University of Bristol, Bristol, United Kingdom

Biography:
Dr Elizabeth Lovegrove is an Academic Clinical Fellow in Primary Care at the University of Southampton.

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

Aims:
To assess whether a practice-level educational intervention, aimed at non-clinical patient-facing staff, improves the timely assessment of patients with shingles.

Methods/Approach:
A cluster (GP surgery level) randomised study within a trial (SWAT) with nested qualitative study was undertaken, hosted by the ATHENA trial.(1) Participating SWAT surgeries were cluster randomised (1:1) and stratified by centre and minimised by practice list size and index of multiple deprivation score. Intervention surgeries were sent a poster, desktop **Background:** and one-minute animation video highlighting the common symptoms and signs of shingles, the importance of early recognition and action to take. The primary and secondary outcomes were the mean proportion of patients seen within 72 hours and 144 of rash onset, respectively. Comparison between groups was conducted using linear regression, adjusting for randomisation variables.

Results/Evaluation:
The mean difference in proportion of patients seen within 72 and 144 hours was -0.132 (95% CI -0.308, 0.043) and -0.039 (95% CI -0.158, 0.080) respectively. 12 participants were interviewed and the poster component of the intervention was reported to be easiest to implement.

Conclusions:
Our educational intervention did not improve the timely assessment of patients with shingles. Further analysis regarding the implementation of the intervention and impact on primary and secondary outcomes is underway and will be presented.

2.1

High levels of under-reporting and ethnicity-related differences in recording a diagnosis of polycystic ovary syndrome in UK primary care 1995-2019

Dr Anuradhaa Subramanian[1], Dr Nicola Adderley[1], Dr Konstantinos A Toulis[1], Prof Shakila Thangaratinam[2,3], Prof Wiebke Arlt[2,3,4], Prof Krishnarajah Nirantharakumar[1,5]
[1]Institute of Applied Health Research, University Of Birmingham, Birmingham, United Kingdom, [2]Institute of Metabolism & Systems Research, University Of Birmingham, Birmingham, United Kingdom, [3]Birmingham Women's and Children's NHS Foundation Trust, Birmingham, United Kingdom, [4]Medical Research Council London Institute of Medical Sciences (MRC LMS), Birmingham, United Kingdom, [5]Midlands Health Data Research UK, Birmingham, United Kingdom

Biography:
Ms. Anuradhaa Subramanian is a MSc Health Research ***Method:****s graduate and Health Informatics research fellow at the University of Birmingham with expertise in epidemiological and pharmacoepidemiological research using large routinely collected data, particularly primary care data. She is also particularly interested in the epidemiology of polycystic ovary syndrome.*

Background:
In the UK, real world evidence suggests that PCOS is a severely under-recognised condition. (1)

Aims:
To explore incidence trends and ethnic variations in PCOS diagnosis within UK primary care.

Methods/Approach:
A retrospective open cohort study of reproductive aged women was conducted between 01/01/1995 and 31/12/2019 using Clinical Practice Research Datalink (CPRD) Gold database. Annual incidence rates were estimated based on diagnostic code records, followed by a combination of symptom records fulfilling each of the three diagnostic criteria – National Institute of Child Health and Human Development (NICHD), Rotterdam, and Androgen Excess Society (AES) – to define PCOS, (2) and cumulative incidence rates were stratified by ethnicity.

Results/Evaluation:
A total of 4,236,388 women were identified and followed up for a median of 4.81 years. Incidence of coded PCOS diagnosis increased gradually over the years until 2004, when incidence increased more than five-fold, from 13.3 (in 2003) to 75.6 (in 2004) per 100,000 person-years. Increase in incidence in 2004 coincides with the implementation of the broad Rotterdam criteria for PCOS diagnosis as well as the implementation of Quality and Outcomes Framework to improve recording of conditions within primary care. (2,3) Incidence of PCOS based on symptom records remained stable between the years 1995 and 2014 (216-213, 259-295 and 234-272 per 100,000 person-years based on NICHD, Rotterdam and AES criteria, respectively), and gradually dropped thereafter. Overall, the incidence rate of PCOS was highest among the South Asian ethnicity, followed by mixed ethnicity, Black Afro-Caribbean, White Caucasian, and other ethnic minorities [157, 104, 81, 68 and 51 per 100,000 person years respectively].

Conclusions:
There is a high level of missed PCOS diagnosis and ethnic variation in PCOS diagnosis within UK primary care. Addressing this will facilitate improved risk stratification for long term health surveillance and care pathway implementation.

2.2

Community Care for Stillbirth and Second Trimester Miscarriage Patient and Public Engagement

Dr Catherine Grimley[1], Dr Becky MacGregor[1], Dr Sarah Hillman[1]
[1]University Of Warwick

Biography:
Becky is an Academic Clinical Fellow in Primary Care based at the Unit of Academic Primary Care at the University of Warwick. She has a ***Background:*** *in Obstetrics and Gynaecology and her research interests are in Women's Health in the community.*

Background:
Stillbirth and second trimester miscarriage are devastating life events; women from a minority ethnic group and those living with socioeconomic deprivation are at increased risk. Women receive initial care in secondary or tertiary care, but after discharge to the community there is no formal guidance for community-based care provision.

Aims:
To understand the current provision of care in the community for women and families who have experienced a stillbirth and identify research gaps

Methods/Approach:
The project used three different approaches to carry out PPIE:
- Creation of a national stakeholder group
- Listening groups with women who have been experienced a stillbirth or second trimester miscarriage
- GP trainee survey of current care at GP practices in the West Midlands

The project partnered with third-sector organisations to specifically reach participants from underserved groups.

Results/ Evaluation:
The quality and consistency of care was variable and practice dependent. The quality and consistency of communication, along with the timing of communication was also variable. This included not only communication between participants and healthcare professionals, but also between healthcare professionals across disciplines. Care provision was frequently delivered by third-sector providers and women often needed to proactively seek care because of a lack of signposting

Conclusions:
There is substantial variability and no uniform approach between GP practices. The 'normal' pathway is a 6–8-week postnatal check but in stillbirth and second trimester pregnancy loss, there is an infrequent 'non normal' pathway and even no pathway.

More research is needed to identify the components of optimal community-based care and how this should be delivered.

2.3

STRONG MAGIC -- THE DANCE OF LIFE

Mr Jeremy Leslie-Spinks[1]
[1]University of Oxford, Oxford, United Kingdom

Biography:
Worked (50+ years) as a dancer, ballet-master, choreographer, director in major elite companies worldwide. Currently Rosamund Snow Scholar, Nuffield Dept. of Primary Care Health Sciences. MSc (Distinction) Dance Science. Currently writing DPhil thesis exploring the little-researched interaction between dancers suffering career-ending illness and injury, and clinical reactions (a multi-disciplinary, qualitative study using biographical narrative interviews).Several peer-reviewed academic publications, numerous conference presentations. Fluent in several European languages.

Background:
Previous research has demonstrated the value of dance in various medical conditions but there has been relatively little interdisciplinary dialogue between the academic traditions of primary health care and dance. The author has a background in elite ballet dancing, teaching ballet, and choreography, and is currently studying for a PhD looking at the illness narratives of sick and injured dancers.

Methods/ Approach:
This presentation, which summarises the background to my PhD work, examines and theorises the mechanisms by which dance may improve biopsychosocial wellness and contribute to population health. I will provide an overview of evidence supporting the use and relevance of dance in diverse medical contexts, including alleviation of chronic pain, treatment of depression, rehabilitation of stroke or trauma patients, reduction of isolation and loneliness, improvement of physical and mental fitness and quality of life in older people, lower health and social care costs, extension of social and leisure opportunities to socio-economically deprived groups, reduction of intercultural conflict among divergent groups and ethnicities, opportunities for societal cohesion and mutual comprehension, and rehabilitation of prisoners.

Aims:
I aim to unite practitioners and researchers in the fields of dance and primary health care, and begin a dialogue on how dance therapy may become more widely mainstreamed as in a host of therapeutic and prophylactic situations.

Conclusions:
Dance, appropriately deployed, is not only a powerful force for good at community level, it is also a versatile and under-researched medical resource to enhance and enrich people's lives and potentially reduce costs.

2.4

Patient engagement to develop resources to support social prescribing in Wales

Dr Nicole Abel[1], Dr Kate Lifford, Prof Fiona Wood, Dr Freya Davies
[1]Cardiff University, Cardiff, Wales

Biography:
Education and Qualifications
2022: Fellow of Higher Education Academy (FHEA), Advance HE
2022: PG Certificate Medical Education (Merit), Cardiff University
2021: MRCGP, Royal College of General Practitioners
2016:MBBCh, Cardiff University Medical School

Career Overview:
2021-present: Academic GP Fellow, Division of Population Medicine, Cardiff University
2019-2021: AiT Wales Representative, Royal College of General Practitioners
2018-2021: GP Registrar, Gwent & South Powys training scheme, Wales Deanery
2016-2018: Foundation Doctor, Wales Deanery

Background:
Supporting people to manage their own health is important as hospital waiting lists increase. One way to provide non-medical support for health problems is through social prescribing. The "Wellness Improvement Service" (WISE), a multi-component initiative, was set up by Cwm Taf Morgannwg University Health Board to offer coaching and social prescribing for people referred from primary care. The service aims to optimise health and prevent deterioration while waiting and even remove the need for hospital review. The service commenced in February 2022 and is offered to people with predefined chronic health problems.

Aims:
To understand what people expect and gain from social prescribing, and to create resources which increase understanding of social prescribing amongst members of the public.

Approach:
A 'patient engagement' approach was used. Workshops and discussions explored views for social prescribing services of participants and staff. One workshop was run to explore overall expectations and views of WISE (n=7), with one-to-one discussions completed for those unable to attend (n=2). Two further creative workshops were undertaken; Taiko drumming (n=7) and creative crafts (n=4). A film crew recorded footage of the sessions and individual "talking heads" pieces to camera to capture views of participants and staff.

Results/Evaluation:
Two infographics were created from the workshops. One focused on views of the WISE programme, in particular expectations and barriers, the other focused on views of the arts activities. Four films (two in English and two in Welsh) were produced; two focusing on the overall WISE programme and two on the arts activities. A logic model of the service was also produced.

Conclusions:
Using an engagement approach we co-created resources to support social prescribing for people on waiting lists in Wales.

3.1

Parents' Experiences and Perceptions of Help Seeking for Common Infant Symptoms: A Qualitative Interview Study

Dr Samantha Hornsey[1], Ms Amy Dobson[1], Dr Daniela Ghio[2], Ms Kate Sykes[1], Ms Sue Adams[3], Dr Elizabeth Lovegrove[1], Ms Anna Hardy[1], Professor Miriam Santer[1], Dr Ingrid Muller[1]
[1]University Of Southampton, [2]University of Manchester, [3]Solent NHS Trust,

Biography:
Sam Hornsey is a Research Fellow at the University of Southampton. Sam completed her PhD in 2022 which explored the management of childhood insomnia in primary care. Sam's research interests are focussed on child/family health such as the management of sleep problems and about supporting parents with unsettled infants. Sam is currently training as a Health Psychologist via the British Psychological Society.

Background:
Parents commonly report infant symptoms such as excessive crying and vomiting. Although usually normal infant behaviour, symptoms can cause parental distress and are often mislabelled as milk allergy or reflux. This can lead to feeding changes (e.g., early breastfeeding cessation, dietary exclusion) and over-prescribing of specialist formula and reflux medications which cause significant NHS costs [1-3]. These are also linked to negative outcomes such as parental anxiety and risk of obesity/tooth decay. Research has highlighted emotional impacts on parents and their coping strategies [4]. Online forum research highlighted influence of parental uncertainty on diagnosis seeking [5]. Further research is needed to explore parents' help-seeking, including experiences with health professionals.

Aims:
To explore parents' perceptions/experiences of help-seeking for common infant symptoms.

Methods/Approach:
Participants were recruited via social media, GP practices and health visiting teams. 25 remote semi-structured interviews were conducted with parents of babies' (<12 months) who had experienced common infant symptoms. Transcribed verbatim was analysed with reflexive thematic analysis. Data was handled using NVivo.

Results/Evaluation:
Findings suggest parents often feel desperate and seek help due to needing answers about suspected underlying causes and uncertainty about normality. Consulting in healthcare was important; parents commented on access to and the role of health professionals, and the impact their support has on their perceptions/management of symptoms. Experiences of their advice were mixed but this appeared impacted by health professional-patient communication. Social support and online help appeared a foundation to help-seeking, for validation of experiences and practical support.

Conclusions:
It would be helpful to support parents to self-manage symptoms and reduce uncertainties about normality and underlying causes of symptoms. Further research is needed with health visitors, the first point of access for parents. Findings will inform future development of an online intervention to support families managing symptoms and health professionals advising about them.

3.2

How GPs see their role in postnatal care, and why it matters

Dr Clare Macdonald[1], Dr Becky MacGregor[2], Dr Sarah Hillman[2], Professor Christine MacArthur[1], Prof Debra Bick[2], Dr Beck Taylor[1]
[1]University Of Birmingham, Birmingham, UK, [2]University of Warwick, Warwick, UK

Biography:
Clare is a GP in Leicester and is undertaking a PhD at University of Birmingham researching the maternal GP 6-8 week postnatal check and how to improve it. This research examines current provision of the postnatal check and the barriers and facilitators to best possible care, particularly from the perspective of the GPs who provide it.

Clare was the GP member of the NICE Clinical Guideline Committee for Postnatal Care and is Deputy Chair of GPs Championing Perinatal Care, a professional group formed in 2021 with the aim of collaborating to improve perinatal care in primary care.

Background:
A 2020 contractual change means that GPs in England are required to offer women a GP appointment 6-8 weeks after birth.(1) MBRRACE(2) highlights the risks to women postnatally, a time when most are solely managed in the community. Little is known about how GPs view their role in postnatal care, or what interventions could influence its impact or outcomes for women.

Aims:
To further the understanding of the views and experiences of GPs' about provision of postnatal care, including: What GPs say about the content of the 6-8 week check; When GPs say a review should happen; What GPs see as facilitators and barriers to high-quality care; What GPs perceive to be their role, and the role of other primary care professionals in postnatal care.

Methods/Approach:
Qualitative systematic review of studies reporting on GPs' perspectives of postnatal care, including discrete clinical conditions in the postnatal period. Data analysis was by thematic synthesis. The COM-B model(3) was used to develop analytical themes.

Results/Evaluation:
18 studies reporting on 469 GPs were included. Five themes were identified, four mapped to COM-B: psychological capability, physical opportunity, social opportunity, motivation. One additional theme was identified inductively: content and timing of postnatal checks. Strongest influences were physical and social opportunity, with time and organisation of services prominent factors. These factors sometimes influenced findings in the motivation theme.

Conclusions and Further Research:
GPs perceived their role postnatally as a positive opportunity for relationship building and health promotion. Addressing organisational barriers could impact positively on GPs' motivation to provide best care. A subsequent qualitative study women's and GPs' views has collected data via focus groups of 18 women and 14 GPs. Analysis underway echoes findings from the systematic review, adds women's perspectives of interactions with GPs and highlights the impact of COVID-19 on delivery of care.

3.3

The GP's Role in Improving Care for Women with Anal Incontinence due to Childbirth Injury

Dr Abi Eccles[1], Dr Jo Parsons[1], Anna Clements[2], Julie Cornish[3], Sarah Embleton[2], Prof Michael Keighley[2], Jen Hall[2], Dr Abi Mcniven[4], Chloe Oliver[2], Prof Kate Seers[1], Prof Debra Bick[1], Dr Sarah Hillman[1]
[1]University of Warwick, Coventry, United Kingdom, [2]The MASIC Foundation , , United Kingdom, [3]University Hospital of Wales, Cardiff, United Kingdom, [4]University of Oxford, Oxford, United Kingdom

Biography:
Abi Eccles is an Assistant Professor in the Unit of Academic Primary Care, at the University of Warwick. Abi has over 12 years' experience researching health experiences over a broad range of conditions, with a particular interest in Women's Health, Patient Involvement and Access to Healthcare.

Background:
Over 20% of women develop anal incontinence (AI) within five years of vaginal birth (1). Some experience problems after childbirth, whilst others' symptoms develop or worsen during menopause. AI has undesirable and often life-changing effects on psychosocial and emotional wellbeing as women may struggle to achieve their basic activities of daily living (2). Less than 25% of women discuss their problems with GPs unless prompted (3) and it takes on average 7 years to be seen by a professional with the experience and training to improve her symptoms (4). The literature examining GPs and women's experiences of postnatal consultations regarding AI is lacking.

Aims:
This study aimed to identify barriers and facilitators to providing appropriate GP care for women experiencing AI soon after labour, or around the time of menopause.

Methods/Approach:
In March 2022, three focus groups were convened with GPs (n=13) stratified according to experience. During the focus groups we explored GPs' experiences of, and views about, providing care to women with AI due to childbirth injury. Thematic analysis of focus group data was carried out and considered in relation to relevant themes from the interview stage of the study, during which we conducted interviews with 41 women experiencing AI due to labour injuries.

Results/ Evaluation:
Mediating factors in GP care for women with AI centred around four key areas: Experience and training; Routine postnatal consultations; Language and discussion; and GPs' actions and role.

Conclusions:
GPs have varied levels of confidence in providing care for women with AI due to labour injuries, often related to their experiences of training and years as a GP. There are key areas where care could be improved relating to knowledge and continuity regarding referrals; access to resources; information about tears and long-term impacts; and the benefits of proactivity and direct language.

4.1

Antibiotic treatment for respiratory tract infection and risk of bleeding in anticoagulant users: cohort study

Dr Harry Ahmed[1], Dr Nicola Reeve[1], Dr Mark Ponsford[5], Dr Fergus Hamilton[4], Dr Heather Whitaker[3], Professor Julia Hippisley-Cox[2], Professor Simon Noble[1], Professor Daniel Farewell[1]
[1]Division of Population Medicine, Cardiff University, Cardiff, Wales, [2]Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, England, [3]UKHSA, London, England, [4]University of Bristol, Bristol, England, [5]Division of Infection and Immunology, Cardiff University, Cardiff, Wales

Biography:
Harry Ahmed is a GP and Senior Clinical Lecturer in Epidemiology. His work focuses on the diagnosis, treatment, and wider implications of common infections. He has a particular interest in the impact of infection amongst people with specific long-term conditions, such as cardiovascular diseases. He has experience of using routine health data including the SAIL databank and CPRD.

Background:
There is no clear guidance for what people who use oral anticoagulants should do when they have an intercurrent illness such as an acute infection. We did a self-controlled case series of people with untreated (no antibiotic) respiratory tract infections (RTI) and found an increased risk of bleeding in the 0-14 days after consultation. The aim of this study was to assess whether this risk differed in those prescribed immediate antibiotics versus those not.

Method:
This was a retrospective cohort study using the Clinical Practice Research Datalink (CPRD). Eligible participants were incident users of warfarin or DOACs between 1st January 2011 and 31st December 2019. We identified the first RTI during their anticoagulant treatment period and classified them as exposed (immediate antibiotic prescription) and unexposed (no antibiotic prescription). Propensity scores for the probability of immediate antibiotics were calculated using inverse probability of treatment weighting, with model variables (confounders) identified from a directed acyclic graph. Cox proportional hazard models were used to estimate hazard ratios adjusting for propensity scores. Outcomes were major bleeding and clinically relevant non-major bleeding.

Results/Evaluation:
Of 61,790 eligible incident oral anticoagulant users, 14,817 had a consultation for an RTI during their oral anticoagulant treatment period, of whom 8768 (59%) were prescribed immediate antibiotics and 6049 (41%) were not. Immediate antibiotics were associated with reduced risk of major bleeding (15 days; adjusted HR 0.38, 95% CI 0.25 – 0.58, 30 days; adjusted HR 0.65, 95% CI 0.47 – 0.91). This was consistent across several sensitivity analyses. Results for non-major bleeding were less consistent.

Conclusion:s:
Amongst oral anticoagulant users consulting with General Practice for an RTI, immediate antibiotic prescriptions were associated with a reduced risk of major bleeding. Further work is warranted to better understand the mechanisms and implications for this finding.

4.2

Symptoms and risk factors for long COVID in non-hospitalized adults

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Biography:
Research fellow at University of Birmingham with expertise in epidemiological and pharmacoepidemiological research using large routinely collected data.

Background:
Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection is associated with a range of persistent symptoms impacting everyday functioning, known as post-COVID-19 condition or long COVID. (1)

Aims:
To assess which symptoms are associated with confirmed COVID-19 beyond 12 weeks post-infection in non-hospitalised individuals, their risk factors, and how they cluster.

Method:
We undertook a retrospective matched cohort study using a UK-based primary care database, Clinical Practice Research Datalink (CPRD) Aurum. (2) We selected 486,149 adults with confirmed COVID-19 and 1,944,580 propensity score matched uninfected adults without confirmed or suspected COVID-19. Outcomes included 115 separate symptoms, (3) and Long COVID, defined as a record of at least one of the 115 symptoms significantly associated with COVID-19. Cox proportional hazards models were used to estimate adjusted hazard ratios (aHR) for the outcomes. Latent class analysis (LCA) was conducted among patients with Long COVID to identify symptom clusters. The study was approved by the CPRD Independent Scientific Advisory Committee.

Results/Evaluation:
62 symptoms were significantly associated with COVID-19 after 12 weeks. The largest adjusted hazard ratios were for anosmia (6.49, 95% CI 5.02-8.39), hair loss (3.99, 3.63-4.39), sneezing (2.77, 1.40-5.50), difficulties with ejaculation (2.63, 1.61-4.28), and reduced libido (2.36, 1.61-3.47). Among the infected cohort, risk factors for Long COVID included younger age, female sex, belonging to an ethnic minority group, deprivation, smoking, obesity, and a range of comorbidities.
In LCA among patients with Long COVID, 80.0% belonged to class 1 (dominated by a broad spectrum of symptoms including pain, fatigue and rash), 5.8% to class 2 (dominated by cough, shortness of breath and phlegm), and 14.2% to class 3 (dominated by depression, anxiety, insomnia and brain fog).

Conclusion:
SARS CoV-2 in non-hospitalised adults is associated with a plethora of symptoms ≥12 weeks post-infection, with specific risk factors.

4.3

Views on the feasibility of a placebo-controlled trial of antibiotics for possible urinary tract infections in care homes: a qualitative interview study

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Biography:
NIHR Academic Clinical Fellow in General Practice from University of Southampton. Early career researcher.

Background:
Accurate diagnosis of urinary tract infection (UTI) in care home residents is challenging, and non-specific symptoms (e.g. confusion) are the most common reason for suspecting a UTI, potentially leading to innaporoate antibiotic prescription [1-4]. The safety of withholding antibiotics in these cases has not been established, and a randomised trial (RCT) of antibiotics for suspected UTI in care home residents with non-specific symptoms may help address this uncertainty [1,5]. Due to the vulnerability of this patient group, such a trial would require robust monitoring processes, and support from care home staff, clinicians, residents, and families.

Aims:
To explore the views of care home staff and primary care clinicians on the feasibility and design of a potential future placebo-controlled randomised trial of antibiotics for possible UTI in care home residents with no locaslising urinary symptoms.

Design and Setting:
Qualitative interviews with UK care home staff and primary care clinicians.

Method:
Semi-structured interviews with 16 care-home staff and 11 primary care clinicians were transcribed and thematically analysed.

Results/Evaluation:
Participants were broadly supportive of the proposed RCT. The safety of residents was a priority, and there was strong support for using formal tools to monitor patients (NEWS2/RESTORE2) but concerns about associated training requirements. Effective communication (with residents, families, and staff) was deemed essential, but carers were confident that residents and families would be supportive if the rationale was clearly explained and safety systems were robust. There were mixed views on a placebo-controlled design. The perceived additional burden was seen as a potential barrier, and the use of bank staff and the out-of-hours period were highlighted as potential risk areas.

Conclusion:
The support for this potential trial was encouraging. Future development will need to prioritise patient safety (especially in the out-of-hours period), effective communication, and minimising additional burden on staff to optimise recruitment.

4.4

Exploring the feasibility of running a Chinese Herbal Medicine randomised clinical trial to combat antibiotic resistance in the COPD population in UK Primary Care – the EXCALIBUR feasibility trial

Mr Tom Oliver[1]
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Biography:
Tom Oliver is a Trial Manager at the Southampton Clinical Trials Unit. He has worked on a number of respiratory trials, including randomised controlled trials of COVID-19 treatments; the use of alternative medicines to combat antibiotic resistance; large mechanistic studies on available asthma therapies; and delivery of complex interventions to manage chronic respiratory diseases.

Background:
Acute exacerbations of COPD (AECOPD) account for >2 million antibiotic prescriptions annually in the UK. However, many exacerbations are triggered by non-bacterial causes for which antibiotics have no benefit[1].

Preliminary research in China suggests that "Shufeng Jiedu" (SFJD), a Chinese herbal medicine, may improve symptoms in patients with AECOPD and therefore reduce the necessity for antibiotics[2].

Aims:
To assess the feasibility of running a fully-powered Chinese Herbal Medicine trial for AECOPD in UK primary care.

Methods/Approach:
The trial aimed to opportunistically recruit patients experiencing an AECOPD from GP practices. Participants were randomised 1:1 to SFJD or placebo plus usual care. Participants, GPs and research nurses allocating the patient pack were blinded to which arm they had been randomised. GPs could prescribe immediate, delayed or no antibiotics, with delayed prescribing encouraged where appropriate.

Participants were provided with 2 weeks of SFJD or placebo and asked to complete a participant treatment, EXACT-Pro and CAT questionnaire diary for up to 4 weeks. A final questionnaire was provided to participants at Week 12.

Results/Evaluation:
Over 6 months, 19 participants were recruited from 4 of the original 8 GP practices on the trial, 6 in the intervention arm and 13 in placebo. Endpoint data was provided by 16 participants. 1.3 participants were recruited per 1000 patients on the COPD register per site per month open.

From the diary data, participants took on SFJD capsules for on average 9.4 days vs. 9.1 days of placebo. Average symptom resolution time was 7.8 days on SFJD vs. 6.5 days on placebo. 4 side effects were experienced on SFJD vs. 4 on placebo.

Conclusion:
Recruitment was less than planned, as practices reported low rates of presentation with COPD exacerbation. Nevertheless, the study was able to recruit and randomise participants and all study procedures were feasible.

5.1

Developing Acne Care Online: early insights from the development process of a digital behaviour change intervention to support effective treatment of acne in young people

Dr Rosie Essery[1], Dr Mary Steele[1], Miss Charlotte Cairns[1], Rebekah Le Feuvre[1], Professor Nick Francis[1], Professor Paul Little[1], Prof Matthew Ridd[2], Professor Alison Layton[3], Professor Sinéad Langan[4], Professor Andrew Thompson[5], Professor Mahendra Patel[6], Adam Yates[7], Professor Tracey Sach[1], Miss Sophie Dove[1], Mrs Kate Heneghan-Sykes[1], Dr Ingrid Muller[1], Professor Miriam Santer[1]
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Biography:
Rosie is a Senior Research Fellow and Health Psychologist working in the Primary Care Research Centre at the University of Southampton. She has expertise in the development and evaluation of complex behaviour change interventions, particularly in applying the Person Based Approach.

Background:
Acne is very common. It is associated with physical discomfort, and frequently negatively impacts mental wellbeing.(1) Topical treatments for mild-to-moderate acne are effective, but many young people are unaware of appropriate treatment options. This leads to reliance on ineffective off-the-shelf products, and/or avoidable treatment with oral antibiotics.(2) Amongst those who do access topical treatments, adherence is often low due to slow onset of action, or lack of advice on how to manage side effects.(3)

Aims:
The Acne Care Online programme aims to develop a digital behaviour change intervention to support young people to access and effectively use topical treatments to improve acne outcomes. The primary aim of this development work was to understand beliefs and expectations about acne and acne treatments, help-seeking, and adherence-related behaviours amongst young people with acne and their parents/carers, to guide content development.

Method:
Employing the Person-Based Approach (4) to intervention development, we conducted semi-structured qualitative interviews with a diverse sample of 24 people with acne aged 13-25 years, and 8 of their parents/carers. Interviews were audio-recorded and transcribed. Field notes documented immediately after interview were triangulated with the draft logic model and key publication findings to rapidly identify context-specific behavioural issues.

Results/Evaluation:
Findings highlighted the importance of clearly communicating key messages including: 1) the distinction between proven acne treatments and general skincare products; 2) acne is a medical condition that warrants medical help-seeking; and 3) individuals should take action in treating their acne if it is impacting them physically and/or mentally, rather than a need to change the way their skin appears.

Conclusion:
Alongside insights from patient and public contributors, published literature, and relevant theory, these insights informed provisional intervention 'guiding principles' underpinning the development of early intervention structure and content. Qualitative think aloud interviews are ongoing to iteratively optimise Acne Care Online content.

5.2

“Eczema shouldn’t control you; you should control eczema”: qualitative process evaluation of online behavioural interventions to support young people and parents/carers of children with eczema

Dr Kate Greenwell[1], Dr Katy Sivyer[1], Dr Laura Howells[2], Dr Mary Steele[3], Prof Matthew Ridd[4], Ms Amanda Roberts[2], Ms Amina Ahmed[2], Ms Sandra Lawton[5], Professor Sinéad Langan[6], Ms Julie Hooper[3], Ms Sylvia Wilczynska[3], Dr Paul Leighton[2], Professor Gareth Griffiths[7], Professor Tracey Sach[8], Professor Paul Little[3], Prof Hywel Williams[2], Professor Kim Thomas[2], Professor Lucy Yardley[1,9], Professor Miriam Santer[3], Dr Ingrid Muller[3]

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Biography:
Dr Kate Greenwell is a Health Psychologist and Senior Research Fellow in the Primary Care Research Centre, Faculty of Medicine.

Kate’s main research focus is on developing and evaluating health interventions that support people to prevent illness and self-manage health conditions. She has a particular interest in digital interventions and has led on the development and evaluation of numerous digital interventions for people with eczema, asthma, diabetes, tinnitus, and recurrent respiratory tract infections.

Background:
There is a lack of randomised controlled trials (RCTs) evaluating the effectiveness of online eczema interventions. To address this, we previously developed and demonstrated the effectiveness of two online behavioural interventions (Eczema Care Online): one for parents/carers of children with eczema, and another for young people with eczema [1].

Aims:
To explore the views and experiences of people who have used the Eczema Care Online interventions.

Methods/Approach: Qualitative interviews were conducted with 17 parents/carers of children with eczema and 17 young people with eczema. Participants were purposively sampled from two RCTs of the interventions and recruited from GP surgeries in England. Transcripts were analysed using inductive thematic analysis and intervention modifications were identified using the person-based approach table of changes method.

Results/Evaluation:
Both young people and parents/carers found the interventions easy to use, relatable, and trustworthy, and perceived that they helped them to manage eczema; thus, suggesting that Eczema Care Online may be acceptable to its target groups. Our analysis suggested that the interventions may reduce eczema severity

by facilitating empowerment among its users, specifically, through improved understanding of, and confidence in, eczema management, reduced treatment concerns, and improved treatment adherence and management of irritants/triggers. Reading about the experiences of others with eczema helped people to feel 'normal' and less alone. Some (mainly young people) expressed firmly held negative beliefs about topical corticosteroids, beliefs that were not influenced by the intervention. Minor improvements to the interventions' design, navigation and content changes were identified and made ready for wider implementation.

Conclusions: People with eczema and their families can benefit from reliable information, specifically on the best and safest ways to use eczema treatments from the outset of their eczema journey. Together, our study findings and those from the corresponding trials suggest wider implementation of Eczema Care Online (EczemaCareOnline.org.uk) is justified.

5.3

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

Dr Mary Steele[1], Dr Rosie Essery[1], Miss Sophie Dove[1], Mrs Irene Soulsby[1], Mrs Kate Heneghan-Sykes[1], Miss Charlotte Cairns[1], Miss Rebekah LeFeuvre[1], Professor Nick Francis[1], Prof Matthew Ridd[2], Professor Lucy Yardley[1,2], Professor Paul Little[1], Dr Ingrid Muller[1], Professor Miriam Santer[1]
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Biography:
Mary is a research fellow working in primary care. She has 11 years of experience in developing digital behavioural interventions for a wide range of conditions.

Background:
Acne is very common and can substantially affect quality of life(1). The Acne Care Online program is developing an intervention for young people to improve acne-related outcomes. PPI is vital in ensuring that the range of experiences and perceptions of target users are included, so that their needs can be met(2). In previous acne research people aged under 18 and from ethnic minority backgrounds have been underserved(3).

Aims:
To ensure we involved public contributors in a meaningful way we aimed to recruit an advisory group of young people with acne in addition to including three experienced public contributors in an intervention development group.

Methods/ Approach:
To form the group, young people were recruited through social media and school engagement. We used targeted social media advertising, and focused on areas of high ethnic and LGBTQIA+ diversity. In schools we delivered workshops and approached student groups. We also attended in-person meetings of young people's PPI groups.

Invitations to optional activities such as completing online questionnaires or discussion groups are shared when they become available.

Results/ Evaluation:
Social media advertising attracted diverse interest from young people. The group includes 24 people (13 white, 18 female, 17 aged under 18, 7 LGBTQIA+). So far, they have given feedback on possible outcome measures.

Challenges encountered include; automated algorithms affecting social media advertising, members joining the group using false details, members providing minimal feedback and little interest in attending group events. This has been mitigated by seeking in-person feedback from existing groups, such as schools/colleges and existing young people's PPI groups.

Conclusions:
Experienced public contributors provide longitudinal input to intervention development. Our advisory group has provided input from people who may not have the confidence to speak in an academic setting. Reporting difficulties encountered can help inform strategies for future involvement of young people.

5.4

Quantitative process evaluation of online behavioural interventions to support young people with eczema and parents/carers of children with eczema

Dr Taeko Becque[1], Dr Kate Greenwell[1], Dr Katy Sivyer[2], Dr Mary Steele[1], Dr Laura Howells[3], Prof Matthew Ridd[4], Ms Amanda Roberts[3], Ms Amina Ahmed[3], Ms Sandra Lawton[5], Professor Sinéad Langan[6], Ms Julie Hooper[1], Ms Sylvia Wilczynska[1], Dr Paul Leighton[3], Professor Gareth Griffiths[7], Professor Tracey Sach[8], Professor Paul Little[1], Prof Hywel Williams[3], Professor Kim Thomas[3], Professor Lucy Yardley[9], Dr Ingrid Muller[1], Professor Miriam Santer[1], Professor Beth Stuart[10]
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Biography:
Taeko Becque is a Senior Statistician working on randomised trials and observational studies in primary care. She works with GPs and health researchers, and contributes statistical expertise to the design, analysis and interpretation of data from randomised trials, observational cohort studies, prognostic studies and meta-analyses. She has worked on trials in a variety of areas, including respiratory infections, asthma, COPD, mental health problems, dementia, low back pain, neck pain, eczema, acne and cellulitis.

Background:
Eczema Care Online is an online behavioural intervention to support parents/carers of children aged 0-12 years with eczema and young people aged 13-25 with eczema. Published randomised controlled trialsª have shown that the intervention provides a sustained improvement in eczema severity over 24 weeks compared to usual care.

Aims:
To describe Eczema Care Online intervention use, examine potential mechanisms of impact, and investigate contextual factors that may influence intervention delivery and outcomes.

Methods/Approach:
Intervention use was summarised descriptively, and socio-demographic and other factors potentially associated with higher use were explored with logistic regression. Mediation analysis investigated whether patient enablement (ability to understand and cope with health issues), treatment use, and barriers to adherence were mediators of the intervention effect. Subgroup analysis compared intervention effects among pre-specified subsets of participants.

Results/Evaluation:
Participants were recruited through primary care in the UK, and 340 parents/carers of children and 337 young people were randomised. Most intervention participants met the effective engagement threshold of completing the core introductory content (88% parents/carers and 93% young people). Users spent a

median of less than 30 minutes on the interventions. Among parents/carers, higher intervention use was associated with a higher level of education, uncertainty about how to carry out treatment and doubts about treatment efficacy. Among young people, higher intervention use was associated with higher baseline eczema severity. Patient enablement was a statistically significant mediator of the intervention, accounting for approximately 30% of the intervention effect among parents/carers and 50% among young people. Most subgroup analyses did not display statistically significant differences in intervention effects.

Conclusions:
User engagement with the Eczema Care Online intervention was high, and a minimal time investment was sufficient to improve eczema severity. A substantial proportion of the intervention effect was mediated by increasing patient enablement.

5.5

Risk factors for asthma-related hospital and intensive care admissions in children, adolescents, and adults: a cohort study using primary and secondary care data

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Biography:
Shamil is a public health researcher and general practice trainee with a special interest in respiratory and chronic disease epidemiology and clinical informatics. He has experience working in public health and clinical practice, and a number of applied health research **Method:**s, with a focus on the use of large healthcare databases for epidemiological studies.

Background:
Asthma remains a common cause of hospital admissions across the life course.

Aims:
To estimate the contribution of key risk factors to asthma-related hospital and intensive care unit (ICU) admissions in children, adolescents, and adults.

Methods/Approach:
This was a cohort study using linked primary and secondary care data. We used a large UK-based primary care database, the Clinical Practice Research Datalink (CPRD) Aurum and Hospital Episode Statistics Admitted Patient Care (HES APC) data. Patients were eligible if they were aged five years and older and had been diagnosed with asthma. This included 90,989 children aged 5-11 years, 114,927 adolescents aged 12-17 years, and 1,179,410 adults aged 18 years or older. The primary outcome was asthma-related hospital admissions from 1st January 2017 to 31st December 2019. The secondary outcome was asthma-related ICU admissions. Incidence rate ratios (IRR) adjusted for demographic and clinical risk factors were estimated using negative binomial models.

Results/Evaluation:
In children, the risk factors for the primary outcome were belonging to an ethnic minority group, increasing socioeconomic deprivation, allergies and atopic eczema. In adolescents they were being female, belonging to an ethnic minority group, increasing socioeconomic deprivation, former smoking, and allergic rhinitis. In adults, they were being younger, female, belonging to an ethnic minority group, increasing socioeconomic deprivation, being underweight, overweight, or obese, currently smoking, depression, allergies, gastro-oesophageal reflux disease, anxiety, and chronic rhinosinusitis. Similar risk factors were observed for asthma-related ICU admissions.

Conclusions:
There are significant sociodemographic inequalities in the rates of asthma-related hospital and ICU admissions. Treating modifiable risk factors should be considered an integral part of asthma management which could potentially reduce the rate of avoidable hospital admissions.

5.6

Diagnosing Urinary Tract Infections in Children Under 2 Years: Effectiveness of Urine Sample Strategies

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[1]School of Medicine, Cardiff University, Cardiff , United Kingdom , [2]PRIME Centre Wales, Cardiff University, Cardiff, United Kingdom, [3]Centre for Trials Research, Cardiff University, Cardiff, United Kingdom

Biography:
Rhian is a 5th year medical student at Cardiff University currently intercalating in Population Medicine.

Background:
UTIs are relatively common amongst children, with nearly 6% of all acutely unwell children under the age of 5 years presenting to primary care with the infection, (1) however, it is estimated that approximately 50% of UTIs in young children are missed in primary care. (2) Guidelines produced by NICE for the diagnosis of UTIs in children are relatively non-specific. A systematic review into the clinical features of UTI concluded that prediction tools may be more accurate, providing they have been externally validated. (3)

Aims:
To determine which prediction tools most accurately indicate when urine should be sampled to identify UTIs in acutely unwell children under the age of 2 years presenting to primary care in England and Wales.

Methods/Approach:
A comprehensive literature search was conducted using Medline and Embase to identify prediction tools. External validation of these prediction tools will be done by conducting secondary analysis of the DUTY Cohort. This includes acutely unwell children presenting in primary care, with urine samples systematically requested from all children. (4) We matched the prediction tools' variables to the data and children with UTI were identified. The accuracy of identified prediction tools at determining which children should have their urine sampled will be calculated.

Results/Evaluation:
3 prediction tools (other than the DUTY score) were identified via the search including the Gorelick Score, (4) UTICalc, (4) and the EURICA Sampling Strategy. (1) In the DUTY study there were 6797 acutely unwell children who presented to their GP, of which 3292 were under 2 years old. Of these, 2662 (80%) of children had urine specimens cultured and 198 (7.4%) had UTI diagnosis.

Data analysis is still underway but will be completed before the conference.

This research is a university dissertation and forms partial fulfilment of the author's iBSc Population Medicine course.

Conclusion:
N/A

6.1

Accessing bereavement support – lessons for primary care: A secondary analysis of UK Commission on Bereavement (UKCB) evidence

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Biography:
Catherine Grimley is a research fellow in the Unit of Academic Primary Care at University of Warwick and is also a BACP registered counsellor. Her research interests are in bereavement, palliative and end of life care, womens' health, counselling and health psychology.

Background:
There are significant social and healthcare inequalities in the provision and access to bereavement services which is often accessed via primary care. With the increase in deaths and experiences of bereavement, the Covid-19 pandemic accelerated the need to address this crucial area of psychological, social and healthcare support. The UKCB (https://bereavementcommission.org.uk/) was set up to respond to the challenges of the pandemic by hearing about the lived experience of bereavement.

Aims:
The study aimed to analyse the experiences of those bereaved in the last five years to explore how age, gender, ethnicity, and sexual orientation were associated with inequalities relating to access, effectiveness, satisfaction, and delivery of services and provide recommendations for practice in primary care.

Methods/Approach:
An in-depth qualitative thematic secondary analysis was conducted of free text data from 1119 individual and 130 organisational UKCB survey responses.

Results/Evaluation:
Age, gender, ethnicity, or sexual orientation affected many respondents' access to formal and informal bereavement support as well as the effectiveness, satisfaction, and delivery of services. Those over 50 reported not wanting to cause a fuss, saw seeking help as a weakness and were reluctant to access digital support. Family pressures, lack of time, and perceptions of less support available for younger people were reported in respondents under 50 years. Men leaned toward a preference for more informal and practical support, finding difficulties in talking with those unconnected with family and friends.

Conclusions:
Healthcare staff working in primary care should be conscious of the barriers that can affect different groups access to bereavement support. Recommendations for practice: Primary care HCPs should be aware that, as well as Cruse Bereavement which has long lead-in times, participants reported benefits of referral to a range of types of bereavement support: from informal peer support groups to Improving Access to Psychological Therapies (IAPT) programme.

6.2

Developing an inclusive approach to multidimensional assessment of people with mental health symptoms in UK primary care: A qualitative study and community outreach approach

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Biography:
Dr Adam Geraghty is an Associate Professor of Psychology and Behavioural Medicine with the Primary Care Research Centre at the University of Southampton.

Background:
The four-dimensional symptom questionnaire (4DSQ) is a measure recommended in Dutch national guidelines. The 4DSQ uniquely provides patients' symptoms on dimensions of distress, depression, anxiety and related physical symptoms (splitting stress from disorder). The 4DSQ is not widely used the UK. It may facilitate diagnostic conversations, support targeted treatment, and potentially reduce antidepressant over-treatment.

Aims:
To explore peoples' experiences of completing the 4DSQ and their perceptions of their score profile across the four symptoms. To explore a diverse groups' experiences and perceptions of distinctions between distress and disorder through community outreach work.

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

Results/Evaluation:
Twenty-four interviews were conducted. Early analysis suggests a positive response to the 4DSQ: people described that that their emotional experiences were validated, that the 4DSQ may be helpful in opening conversations, and valued the potential to score differently on each dimension (e.g. distress and depression). Four community outreach events were held at a local Sure Start, two BJF meetings, five individual meetings. There was wide agreement that distinguishing distress from disorder would be helpful, along with proposals for support for distress without disorder.

Conclusion:
This research is ongoing, however, broadly the 4DSQ appears to have potential for use in UK general practice. Further research is needed to develop processes for UK implementation.

6.3

Exploring the relationship between socio-economic inequality and overprescribing of opioids and antidepressants

Dr Stuart Spicer[1], Prof Pat Schofield, Professor Richard Byng, Dr Ian Maidment, Richard Blackwell, Magdalena Bartnicka
[1]University Of Plymouth,

Biography:
I am a Research Fellow at PenARC (NIHR Applied Research Collaboration - South West Peninsula), and part of the Community & Primary Care Research Group at University of Plymouth. I am currently involved in several research projects, predominantly within mental health, frailty and dementia. I have an interest in the overprescribing of medication for pain and mental health conditions, and the relationship between overprescribing socio-ecomonic inequality. My published research from previous projects encompasses both applied and cognitive psychology.

Background:
An estimated 13% of adults in England have been prescribed opioids within the past year, and 17% have been prescribed antidepressants. Prescribing of both medications is correlated with deprivation at a national level. The importance of reducing overprescribing of such medications is emphasised in current recommendations from the DHSC and NICE. However, high prescribing of opioids and antidepressants remains a major challenge, with associated issues around dependence and withdrawal.

Aims:
This presentation will cover early-stage research findings focusing on two areas; the South-West and Midlands. The **Aims:** included building a picture of overprescribing and inequality at a local practice level, and identifying patients in low-income communities, using electronic healthcare records (EHCR's), who might benefit from deprescribing of opioids and antidepressants.

Methods/ Approach:
Quantitative analysis of openly available practice-level prescribing data, combined with deprivation (IMD) data, and geographic data. Analysis of patient-level prescribing and demographic data from EHCR's combined with deprivation (IMD) data.

Results/ Evaluation:
The results illustrate relationships between the prescribing of opioids, antidepressants, and socio-economic deprivation, which exceed national trends. The results also include important initial findings from patient-level EHCR data that will be useful for practices looking to identify patients to help deprescribe.

Conclusions:
These results illustrate the current challenge of reducing overprescribing in low-income communities, and suggest how we might move forward, with important roles for researchers and practitioners, alongside patient involvement and lived-experience expertise.

6.4

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

Dr Jo Parsons[1], Dr Carol Bryce[1], Dr Jennifer Newbould[3], Dr Stephanie Stockwell[3], Prof. Gary Abel[2], Prof John Campbell[2], Dr Helen Atherton[1]
[1]University Of Warwick, Coventry, United Kingdom, [2]University of Exeter, Exeter, United Kingdom, [3]RAND Europe, Cambridge, United Kingdom

Biography:
Jo is a qualitative health researcher with a **Background:** in Health Psychology. Current research projects include exploring access to primary care amongst patients with a mental health condition, examining why patients miss primary care appointments and work looking at the uptake of vaccinations amongst pregnant women.

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

Aims:
This study aimed to examine how patients living with a mental health condition interact with and experience online services at their general practice.

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

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

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

(Lead author is Early Career Researcher)

6.5

‘It was a mixture of relief, of knowing that something was wrong and despair’- a qualitative exploration of the journey to heart failure diagnosis

Dr Clare R Goyder[1], Dr Lisa Hinton[2], Dr Nicola Newhouse[1], Professor Richard Hobbs[1], Dr Clare Taylor[1]
[1]Nuffield Department of Primary Care Health Sciences, Oxford, UK, [2]THIS Institute, Cambridge, UK

Biography:
Clare is a Wellcome Trust Doctoral Fellow and a GP in East Oxford.

Background:
Timely diagnosis of heart failure (HF) is a research priority. Although missed opportunities for diagnosis in UK primary care have been identified, the impact on patient experience is poorly understood.[1]

Aims:
To explore patient experience of HF diagnosis and identify recommendations for practice.

Method:
Qualitative study using semi-structured interviews with a maximum variation sample of people with a diagnosis of HF. Interviews were conducted remotely (telephone or online) and data were analysed thematically.

Results/Evaluation:
A total of 24 participants were recruited from four GP practices and a community HF nursing service. Three main themes were identified: liminality and suffering at the threshold of diagnosis; the relief and despair of diagnosis; and the value of truth telling and sense-making. Diagnostic delay resulted in significant suffering and symptom burden, inducing a liminal existence. A diagnosis was often made only when a ‘tipping-point’ was reached that triggered alternative help-seeking strategies. Participants described paradoxical reactions in response to the diagnosis: although receiving the diagnosis was a relief, for many it came as a shock due to an association of the term ‘heart failure’ with imminent death. Despair at the diagnosis was exacerbated by poor communication and some participants did not feel that they were properly ‘told’ the diagnosis. They described only finding out indirectly and not having the opportunity to ask questions to build an understanding of HF diagnosis and what it meant for them.

Conclusions:
There is an urgent need to minimise delay in HF diagnosis.[2] This study has demonstrated significant suffering at the thresholds of diagnosis and reinforces the problematic nature of the term ‘heart failure’. Clear and effective communication is important to ensure the diagnosis is timely, fully explained and understood by patients, with further opportunities for discussion when needed.

7.1

Uptake of Covid-19 vaccines in the immunocompromised population – A cohort study of over half a million individuals in the UK

Dr Daniel Chen[1], Dr Jennifer Hirst[1], Dr Emma Mi[1], Ms Emma Copland[1], Dr. Sharon Dixon[1], Professor Carol Coupland[1,2], Professor Julia Hippisley-Cox[1]
[1]University Of Oxford, , , [2]University of Nottingham

Biography:
Dr. Daniel Tzu-Hsuan Chen is a research fellow in the Primary Care Epidemiology group, Nuffield Department of Primary Care Health Sciences, University Of Oxford. His current research projects include COVID-19 vaccination safety and effectiveness among vulnerable and disadvantaged populations with low uptakes, such as immunocompromised, the BAME ethnic groups, and pregnant people using the QResearch database with the aim to inform policymakers and healthcare professionals on the progress of the COVID-19 vaccination campaign.

Background:
Individuals with immunocompromised conditions (having organ transplant procedures or dialysis or receiving immune-modifying drugs or chemotherapy treatments) represent a vulnerable population at risk from COVID-19. Hence, this population was prioritised for COVID-19 vaccination(1).

Aims:
This study aims to evaluate the uptake of COVID-19 vaccination in a cohort of immunocompromised individuals among the UK primary care population using the QResearch primary care database(2).

Methods/Approach:
Data on COVID-19 vaccination and demographics of all individuals aged 12 years and older were extracted from 1 December 2020 to 11 April 2022. . Data on vaccine uptake in those who had immunocompromised conditions were compared with the general population in the analysis. Vaccine uptake was described by population characteristics and adjusted Cox regression models were used to evaluate factors associated with COVID-19 vaccine uptake.

Results/Evaluation:
A total of 583,541 individuals met the criteria for having an immunocompromised condition. A downward trend in vaccine uptake for each subsequent dose among the population was identified during this period: 547,885 (93.9%) individuals received the first dose and 98,274 (16.8%) received the fourth booster. In addition, we observed a trend in vaccine uptake by level of deprivation, whereby the most deprived group was less likely to receive the first primary dose (Hazard Ratio 0.75, 95% CI 0.76—0.79) as well as the subsequent booster doses compared to those in least deprived group. Compared to the white ethnic group, all other ethnic groups were less likely to receive vaccination.

Conclusions:
This study is, to our knowledge, the largest study of COVID-19 vaccine uptake in the immunocompromised population. Our findings suggest that there are significant ethnic and social inequalities in COVID-19 vaccine uptake in immunocompromised populations. Further work and policy action are needed to remove barriers to vaccine uptake among this vulnerable population.

7.2

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

Professor Paul Little[1], Professor Chris Butler, Professor Richard Hobbs, Dr Oghenekome Gbinigie, Dr Gail Hayward, Dr Jienchi Dorward, Dr Mark Lown, Professor Nick Francis, Associate Professor Ly-Mee Yu
[1]University Of Southampton, Southampton, UK

Biography:
Paul Little has been a GP for 20 years, and is Professor of Primary Care Research at the University of Southampton. He is a Fellow of the Academy of Medial Sciences, a National Institute of Health Research (NIHR) Senior Investigator (emeritus), and winner of the Maurice Wood award (for Lifetime contribution to primary care research). His expertise is in pragmatic trial design and the development of complex interventions, but is perhaps best known for research on prescribing to address one of the major global threats to public health, antibiotic resistance

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

Aims:
To assess the effectiveness of molnupiravir among the largely vaccinated UK population where the Omicron variant of COVID-19 is prevalent.

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

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

Conclusions:
Molnupiravir is not effective in reducing hospitalisations/deaths among higher risk, vaccinated adults with COVID-19 in the community, but improves recovery time, reduces viral load, and modestly reduced consultations in primary care.

7.3

Satisfaction with remote GP consultations during the COVID-19 pandemic: a population survey of UK adults

Dr Kate Lifford[1], Dr Detelina Grozeva[2], Dr Rebecca Cannings-John[2], Dr Harriet Quinn-Scoggins[1], Yvonne Moriarty[2], Dr Ardiana Gjini[3,5], Mark Goddard[2], Julie Hepburn[4], Jacqueline Hughes[2], Prof Graham Moore[6], Kirstie Osborne[7], Prof Michael Robling[2,6], Dr Julia Townson[2], Dr Jo Waller[8], Victoria Whitelock[7], Prof Katriina Whitaker[9], Prof Kate Brain[1]

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Biography:
Kate Lifford is a Research Associate, with a background in psychology, at Wales Centre for Primary and Emergency Care Research (PRIME Centre Wales). Much of her recent research is within the areas of doctor-patient communication and cancer screening. This has focused on decision-making around cancer risk management, risk reduction and treatment.

Background: Since the COVID-19 pandemic, the use of remote consultations has become widespread within general practice in the UK. With increased usage it is important to understand patients' perceptions and experiences of remote consultations and any resulting inequalities. Prior to the pandemic, inequalities in usage of remote primary care consultations were identified(1). Studies examining demographic variation in satisfaction with remote consultations during the pandemic have not shown a clear pattern of **Results/Evaluation:**(2).

Aims:
To examine satisfaction with remote GP consultations during the pandemic and associations with key demographic characteristics.

Methods/Approach:
Cross-sectional online survey data were collected from a sample of UK adults between February and March 2021, as part of a wider study(3). Self-reported satisfaction with remote consultations (seven items) and demographic data (nine items) were gathered from 1426 participants who reported seeking help for health problems in the previous six months. Principal components analysis was used to create a satisfaction scale, followed by univariable and multivariable analyses to examine associations with demographic characteristics.

Results/Evaluation:
Six items formed the satisfaction with remote GP consultations scale with good internal consistency (α=0.86). Mean satisfaction score was close to the scale mid-point (mean=15.4, SD=4.29). Education and country of residence were statistically significantly associated with satisfaction. Participants with higher levels of education had greater levels of satisfaction than those with mid-level (B=-0.82, 95% CI -1.41, -0.23) and low-level or no qualifications (B=-1.65, 95% CI -2.29, -1.02). People living in Wales reported greater satisfaction than those living in Scotland (B=-1.94, 95% CI -3.11, -0.78), though caution is noted due to small numbers.

Conclusions: Use of remote consultations in primary care may need to be adapted, or indeed face-to-face consultations offered if feasible, for those with lower levels of education in order to improve their experience and ensure equitable care.

7.4

GPs' experiences with potentials and pitfalls of video consultations:

Qualitative analysis of free-text survey answers among regular GPs in Norway during pandemic lockdown

Mr Børge Norberg[1]
[1]Nse / Ntnu, Trondheim, NORWAY

Biography:
GP, taking a PhD, interested in digital consultations and communication

Background: The use of video consultations (VCs) in Norwegian general practice rapidly increased during the COVID-19 pandemic. During societal lockdowns, VCs were used for nearly all types of clinical problems, as physical consultations were kept to a minimum.

Objective: To explore GPs' experiences of potential and pitfalls associated with the use of VCs during the first pandemic lockdown.

Methods/Approach: Between April 14th and May 3rd, 2020, all regular Norwegian GPs (N=4858) were invited to answer an online survey, which included open-ended questions about their experiences with advantages and pitfalls of VCs. A total of 2558 free text answers were provided by 657 of the 1237 GPs who participated in the survey. The material was subjected to reflexive thematic analysis.

Results/Evaluation: Four main themes were identified. First, VCs appear most suitable when the GPs encounter known patients or previously presented health problems. Secondly, GPs describe new potentials: opportunities to tailor trajectories more seamlessly, to gain valuable insight into patients' psychosocial life, and to get in contact with vulnerable patients who might otherwise not seek medical help. Thirdly, the communication style on video is scarce with loss of smalltalk and non-verbal hints. This was seen as effective but could also imply risks. Finally, VCs might lead to erosion of the therapeutic relationships with negative implications for patient safety in a longer perspective.

Conclusions: During the pandemic societal lockdown, VCs were most suitable for consultations with previously known patients. The study revealed potentials including relationship-building with vulnerable patients who might otherwise be reluctant to seek help. Pitfalls of VCs were possible negative impact on quality of care and patient safety.

The findings have relevance for future implementation of VCs and deserve further exploration under less stressful circumstances.

7.5

Safety of COVID-19 vaccination in people with blood cancer and immunocompromised groups

Ms Emma Copland[1], Dr Jennifer Hirst[1], Dr Emma Mi[1], Dr Martina Patone[1], Professor Carol Coupland[1], Professor Julia Hippisley-Cox[1]
[1]Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, United Kingdom

Biography:
Emma is a Research Fellow in Medical Statistics/Data Science at the Nuffield Department of Primary Care Health Sciences, University of Oxford. Her current research primarily focuses on using routinely collected data in the QResearch database to assess uptake, safety and effectiveness of COVID-19 vaccination in different groups across the UK population.

Emma's previous research has focused on non-communicable diseases, including hypertension, cardiovascular disease and cancer. Her methodological areas of expertise include the analysis of large datasets and advanced statistical modelling, including mixed effects regression, survival analysis and individual patient-level meta-analysis.

Background:
Despite blood cancer patients and immunocompromised populations being prioritised for COVID-19 vaccination since December 2020, the safety profile of COVID-19 vaccines in these groups compared to the general population is currently unknown[1].

Aims:
The aim of this study is to assess the risk of adverse outcomes after a COVID-19 vaccine dose in blood cancer patients and immunocompromised people compared to the general population.

Methods/Approach:
We analysed data from individuals ≥12 years in the QResearch UK primary care database. Immunocompromised groups were defined as transplant or dialysis patients, or those receiving immune-modifying drugs or chemotherapy. We included adverse events of special interest for vaccine safety and others identified from published literature, including cardiovascular disease, autoimmune conditions and allergy-related diseases. The risk of safety outcomes 1-28 days after 1st, 2nd and 3rd vaccine dose was assessed using the self-controlled case series method[2]. We investigated the effect of vaccine type where numbers were sufficient. We corrected for multiple testing by specifying a 1% significance level.

Results/Evaluation:
The analysis included 12,274,948 people, of whom 97,707 had blood cancer and 590,844 were immunocompromised. There were sufficient numbers of events in the dataset to analyse 26 adverse outcomes in blood cancer patients and 52 outcomes in the immunocompromised population. We found no increased risk across any of the outcomes investigated within 1-28 days following a dose of COVID-19 vaccine in the blood cancer or immunocompromised populations compared to people without these conditions. There was no evidence of differences in risk between Pfizer-BioNTech BNT162b2, Moderna mRNA-1273 or Oxford-AstraZeneca ChAdOx1-s/nCoV-19 vaccines.

Conclusions:
This study has shown that the safety profile of COVID-19 vaccines is similar in people with and without blood cancer and immunocompromising conditions. Therefore, these groups should continue to be prioritised for COVID-19 vaccination and reassured of their safety by general practitioners and health providers.

7.6

Impact of the COVID-19 Pandemic on Rural Dispensing Practices in England

Ms Georgina MacDonald[1], Dr Rosina Cross[1], Dr Sinéad McDonagh[1], Dr Emma Cockcroft[1], Mr Malcolm Turner[1], Mr Matthew Isom[2], Dr Robert Lambourn[3]
[1]University of Exeter, Exeter, UK, [2]Dispensing Doctor's Association, Kirkbymoorside, UK, [3]Cheviot Primary Care Centre, Wooler, UK

Biography:
Dr Rosina Cross is a Postdoctoral Research Fellow with a background in health psychology and behavioural medicine. She joined the University of Exeter, in the Primary Care research team in 2020, following working as a PhD researcher at the University of Bath on the Retirement in ACTion (REACT) Study, a community based physical activity intervention to prevent mobility-related disability in older people. More recently her research has focused on primary care, in particular, the challenges facing rural dispensing practices and the measurement and management of postural hypotension.

Background:
General Practice (GP) surgeries in rural England struggle to recruit and retain multidisciplinary primary healthcare staff members, thus risking reduced quality of care and patient experience. Uniquely, some rural practices also dispense medications, however, little is known about the challenges of maintaining dispensing services in the context of staff recruitment and retention. The COVID-19 pandemic imposed considerable changes to healthcare delivery with shortages of healthcare staff and resources, thus exacerbating existing workload issues. The impact of the COVID-19 pandemic has not been explored in the rural dispensing setting.

Aims:
To examine the impact of the COVID-19 pandemic on rural dispensing practices in England.

Methods/Approach:
The RETAIN study explored barriers and facilitators to recruitment and retention, across the multidisciplinary team, in rural dispensing practices.1 Semi-structured remote interviews were undertaken with multidisciplinary rural primary care team members throughout England between July and November 2021. Interviews were audio-recorded, transcribed and anonymised. Thematic analysis was conducted using NVivo 12. A secondary analysis of the primary qualitative data was undertaken, seeking to identify and report COVID-19 related themes.

Results/Evaluation:
Seventeen staff members in 12 rural dispensing practices across England were interviewed. These included, five GPs, two practice nurses, one healthcare assistant, seven administrative staff and three dispensers (with some staff working across multiple roles). Two main themes were identified: firstly, 'Impacts on Dispensing Practices' which included increased workload, changes in healthcare delivery and staff leaving post. Secondly 'Attitudes and Responses of The Professionals' including resilience and emotional distress. Full findings will be presented at the conference.

Conclusions:
The Covid-19 pandemic impacted day-to-day working of rural dispensing practices. Whilst many practices adapted, recruitment and retention of staff was affected by increases in workload, changes in healthcare delivery approaches and the emotional toll of trying to cope within the changing climate imposed by the COVID-19 pandemic.

8.1

Prevalence and socio-demographic variation of physical and mental health conditions in 12 million English primary care records

Dr Jennifer Cooper[1], Dr Shamil Haroon, Dr Thomas Jackson, Dr Francesca Crowe, Dr Niluka Gunathilaka, Dr Amaya Azcoaga- Lorenzo, Professor Tom P Marshall, Prof Krishnarajah Nirantharakumar
[1]University Of Birmingham, Birmingham, United Kingdom

Biography:
GP Partner, PhD student and Clinical Research Fellow at University of Birmingham. Exploring physical and mental health multimorbidity within primary care electronic health records.

Background:
Primary care health databases are widely used in epidemiological studies. However, the completeness of reporting of health conditions in primary care needs to be validated to have confidence in these analyses. Reporting of these health conditions may also vary by socio-demographic characteristics including age, sex, ethnicity and deprivation.

Aims:
To report the prevalence of key health conditions in the new CPRD Aurum primary care database and variation in prevalence by socio-demographic characteristics.

To compare condition prevalences in CPRD Aurum with prevalences in other UK studies.

Methods/Approach:
We searched the literature for the most recent UK studies reporting population prevalence of 18 common health conditions and compared with the prevalence of these conditions in CPRD. We used logistic regression to determine the association between each condition and socio-demographic characteristics.

Results/Evaluation:
The CPRD Aurum dataset included over 12 million patients. Depression (16.0%, 95%CI 16.0-16.0%) and hypertension (15.3%, 95%CI 15.2-15.3) were the most common conditions. The prevalence of most conditions in CPRD matched other estimates of diagnosed disease prevalence in the UK. However, studies screening for health conditions found much higher prevalence rates than CPRD, especially for PTSD, bipolar disorder and eating disorders.

The prevalence of most conditions increased with age and deprivation. Black patients were twice as likely as white patients to have hypertension or diabetes diagnoses but had lower prevalence of cardiovascular diseases. Mental health conditions were recorded twice as frequently in white patients compared with black patients except for PTSD and schizophrenia, which were more common in black patients.

Conclusions:
Most conditions are typically well recorded in CPRD Aurum and this database can be reliably used in future research. However, we found evidence of a significant burden of underdiagnosed mental health conditions especially in men, children, and black and Asian patients.

8.2

Trends in UK primary care clinical workload 2005-2019

Mrs Lyvia De Dumast[1]
[1]University Of Birmingham,

Biography:
Lyvia de Dumast is a third-year PhD student at the Institute of Applied Health Research, University of Birmingham. She received a B.A. in Economics at Cambridge University and an M.Sc. in Health Economics at Chulalongkorn University, Bangkok. Her thesis focuses on the derivation of a new weighted capitation model for primary care in the UK and in Thailand.

Background:
There is a perception that clinical workload in UK primary care has been increasing over many years but there is limited understanding of the factors driving the increase.

Aims:
Our aim was to investigate the changes in mean annual workload per patient in primary care overall, by age/sex group and morbidity level, from 2005 to 2019.

Method/ Approach:
A retrospective analysis of primary care consultations was carried out for over 10 million patients from 826 practices contributing to the IVQIA Medical Research Data UK (IMRD-UK). Clinical workload was defined as the total number of GP contact minutes per year per patient, determined as the length of time the clinical record was open. Data for individual patients included information about age, gender and any of 120 chronic conditions recorded using Read codes. Summary statistics were calculated after stratifying the study population by age/sex group and morbidity level.

Results/Evaluation:
Annual average GP workload per person-year increased by 65.0% from 26.9 minutes in 2005 to 44.4 minutes in 2019. Workload rose across all age groups, increasing the most for people of 85+ years from 50.6 minutes in 2005 to 94.6 minutes in 2019 (+86.8%).

Workload per person-year increased with the number of conditions: in 2005 average workload for patients with no chronic conditions was 12.3 minutes per year compared to 56.6 minutes per year for those with four or more conditions. In 2019, workload increased to 19.0 minutes for those with no conditions and 74.3 minutes for those with four or more conditions. The share of the study population with higher levels of multimorbidity (4+ conditions) doubled over the period to 36%.

Conclusions:
The large rise in workload per person-year over the period appears to be related to the increased prevalence of multimorbidity together with higher utilisation by elderly patients.

8.3

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

Mrs Rachel Winder[1], Dr Jeff Lambert, Dr Abodunrin Aminu, Prof John Campbell, Dr Carol Bryce, Dr Christopher Clark, Dr Mayam Gomez-Cano, Dr Nada Khan, Dr Nurunnahar Akter, Dr Caroline Jenkinson, Dr Helen Atherton, Prof. Gary Abel
[1]University of Exeter, Exeter, United Kingdom, [2]University of Bath, Bath, UK, [3]University of Warwick, Coventry, UK

Biography:
Having previously had a career in nursing I moved over to research over 20 years ago. I have been involved in a wide range of primary care and health services research projects across several institutions, often using mixed methods. Areas of interest include access to primary care, cancer diagnosis, asthma, mental health, older people and pre-diabetes. I also work as a research facilitator in a research practice.

Background:
Adoption of online services by general practices accelerated especially rapidly during the Covid pandemic1. While welcomed by some, engaging with services online may be difficult for others. Little is known about what processes, procedures, and personnel are employed in general practice to support NHS patients in using online services (what we have termed digital facilitation) and patient's views regarding this support.

Aims:
To explore digital facilitation from the patient's perspective.

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

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

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

8.4

Understanding measurement of postural hypotension: a nationwide survey of primary care practice in England

Dr Sinéad McDonagh[1], Dr Rosina Cross[1], Dr Jane Masoli[1], Dr Judit Konya[1], Prof. Gary Abel[1], Associate Professor James Sheppard[2], Dr Bethany Jakubowski[3], Dr Cini Bhanu[4], Mrs Jayne Fordham[5], Professor Katrina Turner[6], Professor Sallie Lamb[1], Professor Rupert Payne[1], Professor Richard McManus[2], Prof John Campbell[1], Dr Christopher Clark[1]
[1]University Of Exeter, Exeter, England, [2]University of Oxford, Oxford, England, [3]King's College London, London, England, [4]University College London, London, England, [5]Mid Devon Medical Practice, Tiverton, England, [6]University of Bristol, Bristol, England

Biography:
Dr Sinead McDonagh is a NIHR SPCR Postdoctoral Research Fellow with special interests in the detection and management of postural hypotension, hypertension and atrial fibrillation in primary care, as well as heart failure and the implementation of a home-based cardiac rehabilitation programme (REACH-HF).

Background:
Postural hypotension (PH), the drop in blood pressure (BP) on standing, is associated with falls, all-cause mortality and cognitive decline. PH diagnostic criteria require lying-to-standing BP measurements. PH occurs in ~19% of older primary care patients but is infrequently (<1%) recorded in routine English primary care data, suggesting that testing for and/or recording of PH is under-utilised.

Aims:
To understand current PH measurement and management strategies in primary care in England.

Methods/ Approach:
Clinical Research Networks circulated an online survey to primary care staff who take BP measurements from 10th August until 8th December 2022. Responses were summarised with percentages and/or median (inter-quartile ranges (IQR)) and chi2 tests. Modelling is underway to explore response variations according to professional and practice characteristics.

Results/ Evaluation:
Replies from 703 practitioners in 242 practices were received; predominantly from doctors (51%), nurses (28%) and healthcare assistants (HCAs; 11%), plus pharmacists, paramedics and other roles; median age 45 (IQR 38 to 53) years, 72% female. Overall, doctors (97%) and nurses (92%) reported checking for PH more often than HCAs (82%) or pharmacists (80%; $p<0.001$). They all usually check when symptoms are present (97%). Other reasons for checking - patients aged over 80 (24%); hypertension reviews (17%); medication reviews (12%) or diabetes reviews (11%) – were all more commonly undertaken by allied health professionals than by doctors ($p<0.001$). Standing BP measurements are regarded as feasible, usually (77%) following sitting; only 22% use lying-to-standing measurements. 64% observe a rest period (median 5 (2 to 5) minutes) before sitting or lying measurements and 1 (IQR 1 to 2) standing BP measurements are made, usually (66%) within the first minute of standing.

Conclusions:
Findings suggest that most PH assessments in primary care do not meet current guideline criteria. Results from this survey will inform future national guidelines to support PH detection.

8.5

The trends in the incidence and prevalence of 281 common conditions

Dr Neil Cockburn[1], Mr Samuel Cusworth[1], Mr Ben Hammond[1], Mr Krishna Gokhale[1], Dr Aditya Acharya[1], Dr Anuradhaa Subramanian[1], Ms Sonica Minhas[1], Dr Nicola Adderley[1], Dr Francesca Crowe[1], Dr Rasiah Thayakaran[1], Dr Shamil Haroon[1], Prof Krishnarajah Nirantharakumar[1], Dr Joht Singh Chandan[1]
[1]University Of Birmingham,

Biography:
Dr Neil Cockburn is a Public Health Registrar and current PhD student. He has a keen passion to explore inequities in healthcare delivery and access.

To date there have been few studies that comprehensively outline the incidence and prevalence for common health conditions broken down by socio-demographic factors. The quality outcomes framework does provide a prevalence dashboard that is updated yearly, however, this is limited to twenty conditions with no demographic or socio-economic information [1]. Incidence and prevalence studies for individual conditions do exist (e.g. ranging from common conditions such as Atrial Fibrillation [2] to rarer ones such as Behcet's Disease [3]), however, their comparability is limited by 1) lack of sub-group analyses, 2) inability to compare local and regional statistics to national ones and 3) comparison of estimates when the conditions have been studied across different years.

Aims:
We aimed to undertake an epidemiological analysis of 281 common conditions, updated annually with estimates split by socio-demographic factors.

Methods/Approach:
We have conducted a population-based retrospective cohort study of patients in CPRD GOLD between 1st January 2006 to 31st December 2020. The incidence rate has been calculated using annually sliced cohorts in the data whereas point prevalence will be calculated in a cross-sectional format on the 1st of January each year., both broken down age, sex, ethnicity and deprivation.

Results/Evaluation:
The top ten most prevalent conditions (which had similarly high incidence rates) by the year 2020 were dermatitis (22,060 (95% CI 22,011- 22,010) per 100,000 population), depression, hypertension, enthesopathy, asthma, anxiety, allergic rhinitis, osteoarthritis, gastric oesophageal reflux disorder, and acne.

Conclusions:
Our study reports variation in the incidence by different socio-economic groups among common conditions. We also note the prevalence of many conditions increased likely due to 1) improved coding or 2) increased life expectancy. This study presents comprehensive trends of conditions to 1) uncover unknown inequalities, and 2) support commissioners with service planning in areas of greatest need.

8.6

Managing asthma in the context of COVID-19 pandemic: a qualitative longitudinal study with patients

Dr Marta Wanat[1], Dr Marta Santillo, Dr Kay Wang, Dr Sarah Tonkin-Crine
[1]Nuffield Department Of Primary Care Health Sciences, University Of Oxford, Oxford, UK

Biography:
Marta is a researcher in the Infectious Diseases Research Group at the University of Oxford. She is a social scientist with a background in psychology, working at the interface between social science and medicine in primary care setting. She is particularly interested in exploring new models of care delivery in primary care, and managing infections and other respiratory conditions from the perspective of both patients and clinicians in primary care. She is passionate about bringing methodological excellence and innovation to qualitative research in primary care.

Background: Without appropriate treatment and monitoring, asthma patients are at greater risk of acute asthma exacerbations. As a result of the COVID-19 pandemic, asthma management in primary care has experienced significant disruption [1], which may in turn have created difficulties for patients.

Aims: To explore experiences and views of asthma patients in English primary care over time in the context of the COVID-19 pandemic.

Methods/Approach: We conducted a qualitative longitudinal study using semi-structured interviews with asthma patients usually managed in primary care. Interviews were audio recorded, transcribed and analysed using inductive temporal thematic analysis [2] and trajectory approach [3].

Results/Evaluation: We have conducted forty-six interviews with 18 asthma patients over eight months that covered contrasting stages of the pandemic. We found that in light of limited information, participants struggled to make sense of their vulnerability related to asthma and suffering with consequences of COVID. Patients felt less vulnerable as the pandemic subsided but the process of making sense of risk was dynamic and influenced by multiple factors. With asthma reviews often postponed, patients reported relying on pre-existing self-management strategies, such as continuing with or changing medication, symptoms diaries, or peak flow measurements, and highlighted limited opportunities to discuss their asthma with health care professionals. Patients with well controlled symptoms felt that remote reviews were largely satisfactory but still felt that face to face reviews were necessary for certain aspects such as physical examination and patient-led discussion of sensitive or broader issues associated with asthma including mental health.

Conclusion: Our study highlights what asthma patients may find helpful in management of their condition in times of more limited contact with healthcare professionals and what aspects they may struggle with, highlighting the role of primary care in addressing these.

9.1

What are the Perspectives of Using general practice to Support the Health of parents of children and young people with intellectual disabilities? A qualitative study. (The PUSH study)

Mrs Nicky Thomas[1]
[1]University of Warwick, Coventry, England

Biography:
Nicky Thomas is in her third year of doctoral research studies, at the University of Warwick and part of the NIHR, Applied Research Collaboration, West Midlands (ARC WM). The PhD focuses on exploring the role of general practice for parents who care for children and/or young people with intellectual disability or global developmental delay. Nicky has a background in Health Psychology and has a passion for research that explores better mental health and wellbeing support for informal carers and the people they care for, using qualitative methodology.

Background:
Parents who have caring responsibilities for children and young people (c&yp) with intellectual disability are at risk of long-term mental wellbeing and physical health concerns compared to parents of neurotypical children (1,2). The Covid-19 Pandemic has exacerbated these concerns (3,4).
General practice is often the first point of contact for mental or physical health support and can offer long term contact with this parent carer group in their local community. However, there is limited evidence on the experiences of parents who care for c&yp with intellectual disability accessing mental wellbeing and physical health support through general practice for themselves.

Aims:
1) To understand access and utilisation of general practice for mental and physical health from the perspectives of parents who care for c&yp with intellectual disability 2) To explore general practice staff perceptions of this, including carer expectations and views on how this patient groups' health needs are addressed by general practice teams.

Method:
Semi-structured interviews were conducted via telephone or videoconference with parent carers and 4 focus groups were conducted with general practice staff.

Results/Evaluation:
This study is currently ongoing, and data will be available to present in March. Preliminary findings from interviews with parents of children with a learning disability will be presented. Eight interviews with parents have been completed so far and two focus groups with general practice staff. Recruitment for this study will continue until February with ongoing analysis throughout.

Conclusions:
This study will address the evidence gaps to gain an in depth understanding of accessing and utilising general practice from the perspectives of this patient group. It is an important step forward in addressing the need to understand how general practice can support the mental and physical health vulnerabilities often faced by this parent carer group.

9.2

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

Mrs Zakia Shariff[1], Dr Rachel Spencer[1]
[1]Warwick Medical School, Coventry, United Kingdom

Biography:
Zakia is a community pharmacist and has an interest in patient centric care for older people. Her doctoral work focussed specifically on how medications can be designed to improve adherence and acceptance in this population. She is currently working as a Research Associate on the GP-MATE project, looking at developing an intervention to assist older people's communication with their GP practice following discharge from hospital.

Background:
Discharge from hospital is a critical part of the patient journey, particularly for older patients with multi-morbidity and polypharmacy. While national standards for discharge summary creation in secondary care exist (1), there are no agreed standards or interventions for primary care management after discharge. Furthermore, despite the speed of discharge summary processing in primary care, omissions and errors are occurring (2). To address this issue, there is a need to first visualise and understand the current processes in place.

Aims:
To visualise and understand practices' systems for post-discharge management of older patients and therefore what types of intervention will work well.

Methods /Approach:
Purposeful sampling was used to select ten practices based on size, geography (rural/urban) ethnic diversity, and socioeconomic status. Systems information was gathered from fieldwork at the practices, including informal discussions with administrative and clinical staff. Function Resonance Analysis **Method:** (FRAM) (3) was used to illustrate practices' systems.

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

Conclusions:
There is currently a large degree of variability in the general practice care offered to patients following discharge. While there is no one-size-fits-all approach, it is useful to understand commonalities and variances due to the potential to enhance access for patients following discharge.

9.3

Navigating the system: The role of primary care in supporting patient experiences following unexpected hospital admissions

Dr Lucy Frost[1], Dr Cervantée Wild[1], Prof Sue Ziebland[1]
[1]University Of Oxford, Oxford, United Kingdom

Biography:
Dr Lucy Frost is a NIHR Academic Clinical Fellow in Oxford. Her academic work is based in the Medical Sociology and Health Experiences Research Group in the Nuffield Department of Primary Care. She has a background in public health and medical anthropology, and is interested in the links between social systems and personal health experiences.

Background:
Hospital admissions, especially when unexpected, are significant events in patient's lives.(1,2) The role of primary care in avoiding hospital admissions has been central to policy and research conversations(3), with less attention on the support primary care can provide in the aftermath. More evidence is needed about how patients experience unexpected admissions and how primary care might better support them

Aims:
To identify common challenges in patients' experiences of navigating unexpected hospital admissions and to identify areas for support from primary care

Method/ Approach:
A qualitative secondary analysis of narrative interviews is underway using the Health Experiences Research Group archive at the University of Oxford. This includes 125 interviews from the near miss maternal mortality, type 1 diabetes and cancer diagnosis collections. We are undertaking a modified framework analysis, using inductive coding and charts to make a summary description of data across a set of categories. These will then be developed into themes, which will be compared across cases and between conditions to identify general and specific areas of challenge.

Results/ Evaluation:
Early results suggest a perceived lack (or contradictory) communications from healthcare professionals can make admissions that are already difficult more traumatic. This is exacerbated where family members receive varying information, or it is difficult to ask for clarification. Transfers between hospital wards and lack of continuity on discharge are key points of fragmentation.

(Initial) **Conclusions:** GPs are often aware of the potential psychosocial impact and trauma of unexpected hospital admissions and should be well positioned to help patients to make sense of what happened and provide ongoing support. We will discuss the role for multi-disciplinary primary care support and suggest approaches to help alleviate intersectional disadvantages after unexpected hospital admissions.

9.4

Creating a patient experience film to convey experiences and emotions of older people and their carers' interaction with general practice following discharge from hospital

Mrs Zakia Shariff[1], Dr Rachel Spencer[1]
[1]Warwick Medical School, Coventry, United Kingdom

Biography:
Zakia is a community pharmacist and has an interest in patient centric care for older people. Her doctoral work focussed specifically on how medications can be designed to improve adherence and acceptance in this population. She is currently working as a Research Associate on the GP-MATE project, looking at developing an intervention to assist older people's communication with their GP practice following discharge from hospital.

Background:
The immediate post-discharge period for older, vulnerable patients is a complex and error-prone time for GPs and patients/carers to navigate (1). GP-MATE uses a co-production technique, Experience Based Co-Design (EBCD), to create a communication-based solution to this problem. Creating a patient experience film is a prerequisite for EBCD, allowing participants to tell their own stories of general practice care following discharge.

Aims:
To create a patient experience film to convey the experiences and insights of older people and their carers which triggers emotional and creative responses to stimulate co-production.

Methods/ Approach:
Nine older patients discharged from hospital in the last three months or their carers were recruited from five practices in the West Midlands Participants were interviewed in person on film using a journey format to the interview guide (2), allowing participants to talk about their post-discharge experiences with minimal interruption. **Results/Evaluation:** were analysed using framework analysis (3) based on Leveque's Conceptual Access Framework (4).

Results /Evaluation:
We present video clips from the film interviews that impactfully convey the experiences of older people and their carers. Participants spoke about the difficulties accessing general practice care following discharge due to vulnerability, frailty and a rapid change in appointment systems. They also spoke about the difficulties being empowered at this time of care transition, with a general preference for proactivity from the GP practice. Continuity of care was highlighted as key, with a preference for seeing the same clinician. Participants were very aware of the pressures in general practice and did not want to place additional burdens on the system.

Conclusions:
The film clips from these interviews are a powerful catalyst for the co-production stage of EBCD, where participants will be directly involved in the design and development of a communication intervention that aims to enhance patient experiences of post-discharge care

9.5

‘I put my whole life in his hands as I do not know English.’ – a qualitative study of the use of interpreters for asylum seekers and refugees in primary and emergency health care consultations

Dr Alison Porter[1], Dr Rabeea'h Aslam[2], Ms Thanuja Hettiarachchi[3], Dr Ashra Khanom[1], Ms Josie Nicholas[4], Mr Faruk Ogut[5], Mrs Helen Rose-Jones[4], Ms Solmaz Safari[3], Dr Anna Schwappach[4], Professor Niroshan Siriwardena[6], Professor Helen Snooks[1], Dr Gill Richardson[4]
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Biography:
Alison is Associate Professor of Health Services Research in Swansea University Medical School, specialising in unscheduled and emergency care, and also initiatives in primary and community care to reduce unscheduled health care use, such as predictive risk modelling and chronic conditions management.

Alison is joint lead for emergency and unscheduled care for PRIME Centre Wales, the research centre focusing on primary and emergency care, funded by Health and Care Research Wales to develop and coordinate research proposals and support researchers. Alison is primarily a qualitative researcher and often collaborates on mixed methods studies, including those using anonymised linked datasets.

Background:
HEAR2 was a multiple methods study of interpretation services in primary and emergency care for asylum seekers and refugees (ASR); we report qualitative findings here.

Aims:
We aimed to describe clinicians’ and ASRs’ experience of interpretation and their perspective on quality of services and challenges in accessing and using them.

Methods/Approach:
We interviewed 10 clinicians (GPs, paramedics and ED clinicians) in five sites in Wales; four interpretation providers; and 14 ASR, sampled from survey respondents. Interviews were recorded and transcribed, and translated into English as required. We conducted a thematic analysis and combined results for presentation here.

Results/Evaluation:
The need for interpretation is not a simple yes/no choice. It varies according to the patient’s presenting symptoms and underlying health conditions, and degree of trust and confidence.

Clinicians and ASR were generally happy with the quality of interpretation services, and confident about accuracy, though they have limited ability to check. Interpretation services need to be sensitive to preferences about the gender of interpreters, and specific in responding to language and dialect requirements.

The first point of contact can present a challenge to patients, particularly when making interpretation needs known on the phone.
Access processes, in particular for ‘on demand’ telephone interpretation, could be streamlined, to reduce the workload on clinicians.

Specialist providers of healthcare for asylum seekers are able to incorporate interpretation more smoothly into their daily workload than other healthcare providers.

Professional interpreters were seen to have varied training and experience, with some use of unqualified ‘community interpreters’.

Conclusions:
Identifying the need for interpretation is complex and there can be challenges to access and processes of care, including demands placed on the time of pressured clinicians. Levels of expressed satisfaction were generally high, though the service available may not always be appropriate.

Patient Experiences with Managing Recurrent Vulvovaginal Thrush in Primary Care

Ms Tori Ford[1], Prof Sue Ziebland, Dr Gail Hayward, Dr Sarah Tonkin-Crine, Dr Abi Mcniven
[1]University Of Oxford, , , [2]NIHR Doctoral Research Fellow, ,

Biography:
Tori Ford is a feminist health researcher completing a DPhil in Primary Health Care at the University of Oxford funded by an NIHR Doctoral Research Fellowship. She holds a BA from McGill University in Gender Studies and an MPhil from the University of Cambridge in Health, Medicine, and Society. Tori is also the founder of Medical Herstory, an international award-winning youth-led non-profit on a mission to eliminate sexism, shame, and stigma from health experiences. Her work on advancing gender health equity has been recognised by the McGill Scarlet Key Award and the University of Cambridge Vice-Chancellor Social Impact Award.

Background:
75% of people assigned female at birth will experience thrush, with symptoms including genital itching, burning, discomfort, and changes in vaginal discharge (Yano 2019). For 1.2 million women in the UK, this discomfort and related embarrassment becomes a repeated or persistent experience, often labelled recurrent thrush (Denning et al. 2018). In high-income countries, lost productivity due to recurrent thrush is estimated to be up to $14 billion annually (Denning et al. 2018). Recurrent thrush can result in poor mental health, damaged relationships, and disengagement from medical care (Fukazawa 2019). There is a gap in the literature regarding how patients and healthcare professionals understand, prioritise, and manage this condition.

Aims:
This study aims to improve understandings of how recurrent thrush is experienced in England and provide resources to support self-management and clinical care.

Methods/Approach:
We are conducting an interview study to understand the experiences of people who have had recurrent thrush. Narrative and semi-structured interviews have been conducted with a diverse sample of 20 women and people assigned female at birth who have had recurrent thrush. A final 20 interviews are underway. Interview transcripts are being analysed thematically to identify patients' expectations and concerns.

Results/Evaluation:
This study is underway and preliminary findings will be presented. Themes of interest include testing, diagnosis, decision-making, and continuity of care. We will explore how recurrent thrush is identified, labelled, and understood by patients and clinicians. In doing so, we will address questions about how recurrent thrush relates to diagnostic challenges, uncertainties, and accumulative experiences.

Conclusions:
This study will fill knowledge gaps and produce research that is informed by and responsive to patient voices. Findings will be used to create a patient-facing online resource for Healthtalk.org. Presenting this work with conference participants will help us gain feedback on our initial analysis and shape our ideas.

10.1

AI and Health Equity in Primary Care: A qualitative, inductive stakeholder exploration of how AI can be implemented in a manner beneficial for health equity.

Dr Alexander d'Elia[1], Professor Mark Gabbay, Doctor Lucy Frith, Professor Ciara Kierans
[1]University of Liverpool,

Biography:
Alexander d'Elia is a GP Trainee and PhD student.
Trained in Gothenburg, Sweden, he has always had an interest in health inequities, conducting his MSc on rapid tuberculosis diagnosis in South Africa followed by an internship at the department of Gender Equity and Human Rights at the World Health Organisation (WHO). Meeting his future wife at WHO eventually led him to Birmingham, where the stark health inequities in the UK society, but also the strong academic discourse into health equity led him to pursue a PhD on how AI can be applied in an equitable manner in primary care.

Background:
AI-augmented interventions are currently being rolled out across primary care, but the sociotechnical theory for deploying AI remain relatively neglected [1], and the applied literature focuses on e.g. performance metrics and more recently, formal methods for fairness and obliquely, health equity (HE) by minimising algorithmic bias [2]. However, applying AI in healthcare will affect HE beyond algorithmic bias, through interactions with existing societal health inequities [3]. There is need to understand how the ecosystem in which AI is being implemented can be made to benefit HE through AI.

Aims:
To map the ecosystem involved in the implementation of AI in English primary care, and from a sociotechnical perspective assess how this network of actors can be make conducive for improving HE.

Methods/ Approach:
Grounded-theory-driven ethnographical inquiry based on 30 interviews with stakeholders including commissioners, decision makers, AI developers, researchers, GPs and patient groups.

Results/ Evaluation:
Regulation and policy cannot do guarantee equitable implementation of AI, but needs to provide a baseline framework to enable other stakeholders to work equity-promoting: a shared understanding of the causal mechanisms of AI and HE, how to measure HE, and how to share necessary data.

All stakeholders needs to be on board for implementation success with regards to above. Currently, innovation typically leaves clinicians and patients behind.

Capacity building is needed to enable addressing the above, in particular on commissioning and clinician level.

Whilst true for most innovations, the difference with AI the pace of innovation. Previous waves of innovations have happened at a more gradual pace, allowing for a more controlled implementation.

Conclusions:
AI in primary care holds great potential. However, if the current implementation is to benefit the health of everyone, careful consideration is needed on the sociotechnical context in which the process is taking place.

10.2

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

Dr Bethan Treadgold[1], Mrs Rachel Winder[1], Dr Helen Atherton[2], Dr Carol Bryce[2], Prof John Campbell[1], Dr Jennifer Newbould[3], Dr Stephanie Stockwell[3], Dr Emma Pitchforth[1]
[1]University of Exeter, Exeter, , [2]University of Warwick, Warwick, , [3]RAND Europe, Cambridge,

Biography:
Bethan Treadgold is a Chartered Psychologist and Postdoctoral Research Fellow within the Primary Care Research Group, University of Exeter Medical School, and qualitative advisor for the NIHR Research Design Service South West. Bethan's research interests are interdisciplinary, with a focus on health services research, online health, patient experiences, and employing qualitative research methods.

Background:
The adoption of NHS digital primary care services has been encouraged in England for some time. With concerns around digital exclusion and inequalities, it is unclear what is actively being done to support patients or staff in using these services (i.e., 'digital facilitation').

Aims:
To explore the views of national, regional, and local stakeholders around the drivers, priorities and policy context influencing digital facilitation.

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

Results/Evaluation:
Nineteen stakeholders were interviewed. Stakeholders articulated an ambitious vision for online primary care services that may align patient experience to that experienced in other sectors such as retail and banking. Current key drivers for digital services were identified as the need for efficiency within general practice, and rising patient demand for access. In terms of digital facilitation, stakeholders were aware of the concept, but could not easily identify policies designed to support in practice. There were varied views on who should be responsible for digital facilitation and for priority groups needing support. Barriers to the use of online services were seen to vary by patient group, and in some cases felt to be beyond the remit of the healthcare system to address.

Conclusions:
The study indicates a perceived need for support in the use of online services in primary care, but a lack of clear guidelines to drive this, and differing views on where responsibility lies. Together with other findings from the Di-Facto study, our recommendations will guide the future development and implementation of promising approaches to digital facilitation.

10.3

Accuracy, Feasibility, and acceptability of Mobile App-based Gait Assessment alongside perception at different speeds in primary care

Dr Glen Cooper, Professor Helen Dawes, Dr Athia Haron, Dr Ted Hill, Dr Maedeh Mansoubi, Dr Garry Massey, Professor Nancy Mayo, Jiawei Shuang, Dr Andrew Weightman

Background:
The accuracy of measuring gait and walking patterns, along with symptoms and perceptual factors, is essential for monitoring overall health and mobility, especially in detecting and managing long-term conditions like Parkinson's and diabetes. The feasibility of accurately measuring these parameters at different speeds has yet to be determined.

Aims:
This study aims to evaluate the feasibility of using the Gaitcapture phone app, developed by the University of Exeter and PhysioBiometrics, for accurately generating walking data and measuring perceptual factors at various speeds.

Methods/ Approach:
In a laboratory setting, the Gaitcapture app was tested on 10 participants (50% female) healthy control group (The study will continue with Diabetes and Parkinson's patients). Participants walked at three self-selected (slow, normal and fast) speeds while gait data were collected and recorded on the phone and cloud server. The results of line perception, recorded as short or long, were also documented on the Redcap platform.

Results/ Evaluation:
The Borg Rating of Perceived Exertion(RPE) average was 7.7 ± 1.7 for slow walking, 8.5 ± 2.92 for normal walking, and 9.2 ± 2.89 for fast walking. Although the RPE scores were low, 2 participants' perceptions changed during normal and fast walking compared to slow walking. The app collected complete data for all participants with no missing data. The collected gait data will be compared to data obtained from the Qualisys motion capture system.

Conclusions:
The development of this highly successful app for collecting data with limited missing data demonstrates the potential to greatly improve the ability to detect and manage patients in primary care settings by providing a convenient and accurate way to assess gait and walking patterns. The line perception results provide valuable information for individualising exercise programs and adjusting exercise intensity. However, further testing and research are necessary to validate the app's use in clinical practice.

10.4

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

Dr Carol Bryce[1], Prof John Campbell, Dr Laura Sheard, Dr Stephanie Stockwell, Dr Bethan Treadgold, Dr Jennifer Newbould, Mrs Rachel Winder, Dr Helen Atherton
[1]UAPC Warwick University, Coventy, UK

Biography:
Carol Bryce is an Assistant Professor (research) in the unit of academic primary care at the University of Warwick. Her research focusses on access to primary care and digital services in primary care.

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

Aims:
To understand how general practices facilitate patient use of online and digital services.

Methods /Approach:
As part of a wider mixed method study looking at digital facilitation in primary care, we conducted an in-depth focussed ethnographic case study. We collected data through non-participant observation, document collection and semi-structured interviews with staff and patients. Sites were selected to include maximum variation in terms of practice size, patient demographics and levels of digital facilitation.

Results/ Evaluation:
We recruited eight practices and conducted 33 interviews with patients and 36 with staff. There was hidden work associated with supporting patients to use digital services. Practices lacked written strategies and policies for digital service implementation including how to support patients. Administrative staff were left to work out for themselves how to support patients and often this work was defaulted to members of staff perceived as tech savvy. A lack of planning for digital support led to a 'collusion of anonymity'1 where responsibility for implementation and support was disjointed.

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

10.5

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

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[1]University of Warwick, , , [2]University of Exeter,

Biography:
Ash Sexton is a PhD based in the Unit of Academic Primary Care at Warwick Medical School. Her PhD project is focussed on urgent care delivery via telephone based digital triage.

Background:
England's urgent care is delivered via a two-step triage model, where initial (primary) triage is conducted by a non-clinician, this contrasts with other countries who do not widely use non-clinician led triage. In both models, software based digital triage is widely used by call takers to support the provision of referral and/or self-care advice, based on the patient's symptoms. Despite wide adoption of digital triage, there is limited evaluation of patterns of use, triage outcomes, and patient experience within these services, particularly in the context of two-step triage.

Methods/Approach:
A mixed methods study including an analysis of routine data from four urgent care providers in England to evaluate patterns of triage outcomes, including clincians' overriding of: 1) primary triage outcomes and 2) digitally recommended triage outcomes. A qualitative study using semi-structured interviews and thematic analysis was used to explore patients' experiences. A convergent design was used, with triangulation used to integrate findings.

Results/Evaluation:
Non-clinician triage was found to be risk averse, however, in calls about certain symptoms clinical risk appeared to be underestimated. There was substantial variation between clinicians in how likely they were to override urgency levels from the urgency assigned by the non-clinician, as well from the digital recommendation. Complexity in two-step triage, and variation in call takers conduct of triage was evident in patients' experiences, additionally the patient's confidence and knowledge were seen to influence the triage outcome urgency.

Discussion:
This research has identified potential clinical risk and the highlighted the importance of clinician triage within the two-step model. The very high variation in how clincians use digital triage suggests inconsistency in care provision; further research is required to better understand why this occurs to improve the safety and consistency of care. Service providers should focus monitoring, auditing, and training on key areas of risk identified.

11.1

Understanding the diagnostic timeliness of cancer patients with pre-existing morbidities: What do different methodological approaches tell us?

Prof. Gary Abel[1], Dr Bianca Wiering[1], Dr Sarah Price[1], Mr David Shotter[1], Professor José Maria Valderas[2,1], Dr Samuel Merriel[3], Dr Sarah Moore[1], Prof Willie Hamilton[1], Dr Luke Mounce[1]
[1]University of Exeter, Exeter, United Kingdom, [2]National University of Singapore, Singapore, Singapore, [3]University of Manchester, Manchester, United Kingdom

Biography:
Gary Abel is an Associate Professor, statistician ,and health services researcher from the University of Exeter. He leads the NIHR funded SPOttting Cancer among Comorbidities programme grant known as SPOCC. The aims of SPOCC are to find out how pre-existing medical conditions put patients at higher risk of having a delayed cancer diagnosis and to use this information to help improve the diagnosis of cancer and survival rates in these patients. His work on the early diagnosis of cancer focusses on the use of large routinely collected healthcare datasets and advanced statistical methods deployed using these datasets.

Background:
Studies have suggested that cancer patients with pre-existing co-morbidities experience longer times between presentation in primary care and diagnosis (diagnostic interval) than patients without co-morbidities, potentially contributing to worse outcomes in these patients[1]. However, establishing these timelines depends on the identification of an index consultation, which has the potential to introduce bias when comparing groups with different background consulting patterns.

Aims:
To compare findings from traditional approaches of investigating diagnostic timeliness with an alternative approach based on trends in the rate of consultations prior to diagnosis.

Methods/Approach:
Using linked primary care and cancer registration data for patients diagnosed cancer (2012-2018) we constructed 4 groups with varying multimorbidty burden using the Cambridge Multimorbidity Score. The diagnostic interval was calculated for all patients with a feature of possible cancer in the year before diagnosis. We also used a novel maximum likelihood based methods to estimate the time before diagnosis when population consultation rates increased (the inflection point) stratified by multimorbidity burden group.

Results/Evaluation:
The median diagnostic interval was 63 days which varied by multimorbidity burden; 35 days in those without pre-existing comorbidities; 135 days in the highest burden group. Contrastingly, the consultation rate inflection point varied little by morbidity burden; 126 days in those without pre-existing comorbidities or low/medium morbidity burdens; 112 days in those with high burden (p=0.054). Results by cancer site will also be discussed.

Conclusions:
Our findings that cancer patients with multimorbidity have longer diagnostic intervals concur with previous work using similar methodology. However, using a different approach we reach the conclusion that multimorbidity has little impact on diagnostic timeliness. We posit this difference can be explained by an artefactual bias in traditional approaches. Given these findings, explanations for worse outcomes in patients with pre-existing morbidities, other than delayed diagnosis, should be sought.

11.2

Multimorbidity in patients with incident cancer

Dr Luke Mounce[1], Dr Bianca Wiering[1], Dr Sarah Price[1], Mr David Shotter[1], Professor José Maria Valderas[1], Dr Samuel Merriel[1], Dr Sarah Moore[1], Prof Willie Hamilton[1], Professor Rupert Payne[1], Prof. Gary Abel[1]
[1]University Of Exeter, Exeter, UK

Biography:
Dr Mounce is a health services researcher, statistician and data scientist. He is based in the Department of Health and Community Sciences at Exeter, a member of the NIHR School for Primary Care Research. His work has focussed on the impacts of multimorbidity, and the facilitation of earlier cancer diagnoses. He co-leads an investigation of how pre-existing conditions may lead to disadvantage in the cancer diagnostic process, as part of the Spotting Cancer Among Comorbidities NIHR programme grant (SPOCC).

Background:
The increasing burden of multimorbidity in primary care may further complicate the challenging process of early cancer detection. We conducted a large quantitative exploration of how pre-existing conditions may disadvantage patients in the cancer diagnostic pathway.

Aims:
To describe the multimorbidity context of patients with incident cancer and matched controls.

Methods/Approach:
Retrospective cohort study of patients aged 40+ with incident cancer in England with electronic primary care records linked to cancer registry data. Each cancer patient was matched 1:1 to a non-cancer control on age, sex, and general practice. Morbidity burden was determined using Cambridge Multimorbidity Score weightings, which include 36 non-cancer conditions captured using SNOMED codes and prescriptions data 12-24 months before cancer diagnosis. We describe the prevalence of conditions across cancer sites and controls, and differences in overall disease burden.

Results/Evaluation:
Our sample included 288,297 cancer patients each with a matched control. The prevalence of individual conditions was broadly similar between cancer patients as a whole and controls, and for both samples the percentage with at least one condition was 83.8%. Overall multimorbidity burden was greatest in patients with lung and liver cancers, and least for testicular cancer. Alcohol misuse was most prevalent in patients with oral (25.2%), laryngeal (23.3%), or liver cancer (23.1%), diabetes was most common in liver (34.2%) and pancreatic cancer (23.1%) patients, and chronic pain was most common in lung (42.1%) and liver (39.8%) cancer patients.

Conclusions:
Overall, the prevalence and burden of multimorbidity is similar between cancer patients and controls matched on age and gender. There are, however, large variations in patterns of multimorbidity and resultant burden depending on the site of the cancer. Research exploring the early diagnosis of cancer in the primary care setting must consider the context and impact of pre-existing conditions, which could introduce significant artefacts or confounding.

11.3

SMARTscreen to SMARTERscreen: using a novel SMS with narrative communication to increase uptake of the National Bowel Cancer Screening Program in Australia, learning from a pilot study.

A/ Prof Jennifer McIntosh[1], Dr Belinda Goodwin[2], Ms Anna Wood[1], Dr Larry Myers[2], A/ Prof Patty Chondros[1], Dr Tina Campbell[3], Ms Edweana Wenkart[4], Ms Clare O'Reilly[5,6], Mr Ian Dixon[7], Ms Julie Toner[7], Dr Javiera Martinez Gutierrez[1], Dr Louisa Flander[1], Prof Jon Emery[1], Prof Carlene Wilson[1], Prof Mark Jenkins[1]
[1]The University Of Melbourne, Melbourne, Australia, [2]Cancer Council Queensland, Fortitude Valley, Australia, [3]Healthily, Melbourne, Australia, [4]PenCS, Sydney, Australia, [5]VACCHO, Melbourne, Australia, [6]Cancer Council Victoria, Melbourne, Australia, [7]Consumer, Melbourne, Australia

Biography:
A/Prof McIntosh has been conducting research in Primary Care in Australia since 2005, including sexual health, diabetes and most recently cancer prevention and early detection. She has a strong interest in digital interventions and implementation science, and is currently working in the School of Population and Global Health on research to increase colorectal cancer screening using novel interventions.

Objectives: (required)
Increasing participation in the Australian National Bowel Cancer Screening Program (NBCSP) is the most efficient and cost-effective way of reducing mortality associated with colorectal cancer by detecting and treating early-stage disease (1). Currently, only 44% of Australians aged 50–74 years complete the NBCSP (2).

Aims:
To test the efficacy, acceptability, and feasibility of sending an evidence-based multi-intervention SMS from general practice to prompt patients to complete NBCSP kits.

Method:
We recruited general practices in the western region of Victoria, Australia into a cluster randomised controlled trial, and patients aged 49-60 years old who were due to receive a NBCSP kit in the next month were sent the SMS. The SMS used evidence-based methods including: general practice endorsement of NBCSP, a motivating video, a step-by-step instructional video of how-to do the kit, and link to NBCSP information. The primary outcome was the difference in the FOBT results between the intervention and control group over 12 months. Qualitative interviews explored acceptability and feasibility with clinical staff and patients. The results informed a larger trial to be tested in a broader population.

Results/Evaluation:
21 general practices were recruited and randomly allocated [(10 control practices:11 intervention practices)(2537 control patients:2914 intervention patients)]. The difference in FOBT uptake between the intervention and control arms was 16.5% (95% CI: 2.02, 30.9%). Qualitative process evaluation found the SMS was feasible and acceptable.

Conclusions:
The SMARTscreen SMS combination increased uptake of the NBCSP in 50- to 60-year-old general practice patients. Trialing the SMS in a rural area and using the data collected from general practice records were limitations of SMARTscreen. Developing and testing the SMS in a broader Australian population, using data from the National Cancer Screening Register is currently being developed with funding from the NHMRC [The 'SMARTERscreen trial'].

11.4

Breast and Gynaecological Cancer Risk in Women with Polycystic Ovary Syndrome: A Retrospective Matched Cohort Study

Ms Dilek Celik[1,2], Dr Nicola Adderley[2], Dr Michael W. O'Reilly[3], Prof Krishnarajah Nirantharakumar[2,4], Prof Wiebke Arlt[5,6,7], Dr Anuradhaa Subramanian[2]
[1]Department of Cardiac, Thoracic, and Vascular Sciences and Public Health, University Of Padova, Padova, Italy, [2]Institute of Applied Health Research, University of Birmingham, University of Birmingham, Birmingham, United Kingdom, [3]Department of Medicine, Royal College of Surgeons in Ireland (RCSI), University of Medicine and Health Sciences, Dublin, Republic of Ireland, [4]Midlands Health Data Research UK , Birmingham, United Kingdom, [5]Institute of Metabolism and Systems Research, University of Birmingham, Birmingham, United Kingdom, [6]NIHR Birmingham Biomedical Research Centre, University of Birmingham and University Hospitals Birmingham NHS Foundation Trust, Birmingham, United Kingdom, [7]Medical Research Council London Institute of Medical Sciences (MRC LMS) , London, United Kingdom

Biography:
Dilek Celik is a PhD Fellow at the Universiy of Padova in Italy, who pursued her MPH in University of Birmingham. The dissertation for her master's project used THIN to explore the link between PCOS and the risk of gynaecological cancer. Her PhD research focuses on epigenetic basis of low birthweight and sarcopenia in older age.

Background:
Polycystic ovary syndrome (PCOS) is a common disease among women of reproductive age, typically manifesting with symptoms such as hyperandrogenism, hirsutism, irregular menstrual cycles and obesity(1–3). Many studies have found that PCOS may increase the risk of various gynaecological malignancies.

Aims:
This study aimed to investigate the association between PCOS and breast and gynaecological cancers such as endometrial and ovarian cancers, using The Health Improvement Network (THIN) primary care database, in women with PCOS compared to age and body mass index (BMI) matched control women without PCOS.

Methods/Approach:
The study included women with PCOS (100,981) and women without PCOS (318,937) who were followed up between 1 January 2000 and 31 December 2021. Cox regression model was performed to assess the association adjusting for age, smoking status, alcohol consumption, ethnicity, deprivation, BMI, hypertension, hyperthyroidism, and type-2 diabetes. A BMI-based subgroup analysis was conducted to determine whether there is an effect of BMI on the association between PCOS and cancer.

Results/Evaluation: Women with PCOS had significantly higher risk of the composite outcome, i.e., breast and gynaecological (Adjusted HR: 1.32, 95% CI= 1.11-1.58), and endometrial cancer in specific (2.15, 1.56-2.96) compared to women without PCOS. Although the risk of ovarian (1.37, 0.99-1.90) and breast cancers (1.07, 0.96-1.18) were higher among women with PCOS compared to women without PCOS, these results were not statistically significant. In the subgroup analysis, women with PCOS were at higher risk of gynaecological (2.13, 1.51-3.00), ovarian (2.57, 1.05-6.28), and endometrial (3.35, 2.00-5.60) cancers compared to women without PCOS in the highest BMI group (>35 kg/m2).

Conclusion:
This retrospective matched cohort study presents evidence of the risk of gynaecological cancer, especially endometrial cancer in women with PCOS. However, to confirm the study findings, more research may be required to understand the specific mechanisms that underpin this association.

11.5

The impact of anxiety or depression on early diagnosis of cancer – cohort study using linked electronic health records

Dr Luke Mounce[1], Dr Bianca Wiering[1], Dr Sarah Price[1], Mr David Shotter[1], Professor José Maria Valderas[1], Dr Samuel Merriel[1], Dr Sarah Moore[1], Prof Willie Hamilton[1], Professor Rupert Payne[1], Prof. Gary Abel[1]
[1]University Of Exeter, Exeter, UK

Biography:
Dr Mounce is a health services researcher, statistician and data scientist. He is based in the Department of Health and Community Sciences at Exeter, a member of the NIHR School for Primary Care Research. His work has focussed on the impacts of multimorbidity, and the facilitation of earlier cancer diagnoses. He co-leads an investigation of how pre-existing conditions may lead to disadvantage in the cancer diagnostic process, as part of the Spotting Cancer Among Comorbidities NIHR programme grant (SPOCC).

Background:
Pre-existing anxiety or depression may impact the early diagnosis of cancer, possibly influencing patients' health-seeking behaviour or clinicians' assessments of symptom severity or risk associated with referral for further investigation.

Aims:
We explored the impact of recorded anxiety or depression on subsequent cancer stage, route to diagnosis, and 30-day mortality.

Methods/Approach:
We conducted a retrospective cohort study using electronic primary care records linked to national cancer registry and mortality data. We selected patients aged 40+ with incident cancer between 2012-2018 and excluded patients with <3 years prior registration at their GP practice. Anxiety/depression diagnoses were captured through relevant SNOMED codes and prescriptions. We conducted logistic regressions for each outcome; advanced stage (I-II vs III-IV), 30-day all-cause mortality, emergency routine (y/n) and two-week wait referral route (y/n).

Results/Evaluation:
Of 288,297 patients with a cancer diagnosis, 12.4% had anxiety or depression. The impact of anxiety/depression on outcomes varied considerably by cancer site, though with no clear associations with stage. Anxiety/depression increased odds of 30-day mortality for prostate, rectum, ovary and stomach cancers, and of emergency route for 12/25 sites. The sites where the largest impact of anxiety/depression on emergency route to diagnosis were cervix, myeloma, ovary, liver, stomach, and prostate cancers. There were only a few notable cancer sites where patients with anxiety/depression had more favourable outcomes.

Conclusions:
Pre-existing anxiety or depression was associated with disadvantage in the cancer diagnostic process across multiple sites. In particular, patients with anxiety or depression were more likely than those without to be diagnosed via an emergency route to diagnosis, considered the least desirable route, with correspondingly higher likelihood of dying within a month of diagnosis. Anxiety is a potential alternative explanation for key symptoms of stomach cancer, for which disadvantage related to anxiety/depression was found over 3/4 outcomes.

12.1

Comparing patients' and healthcare professionals' experiences and views on the management of recurrent UTIs: qualitative evidence synthesis and meta-ethnography.

Dr Leigh Sanyaolu[1], Miss Catherine Hayes[2], Dr Donna Lecky[1,2], Dr Alison Weightman[1], Dr Harry Ahmed[1], Dr Rebecca Cannings-John[1], Professor Adrian Edwards[1], Prof Fiona Wood[1]
[1]Cardiff University, , , [2]UK Health Security Agency ,

Biography:
I am a General Practitioner and a Health and Care Research Wales NIHR Doctoral Fellow at Cardiff University. My current research focuses on the management of recurrent UTIs in women and improving long-term antibiotic use through the development of an evidence-based decision aid. I am collaborating with the Primary Care and Interventions unit at the UK Health and Security Agency and the HDR UK team at Population Data Science Swansea University on this research, with support from Bladder Health UK.

Background:
Urinary tract infections (UTIs) are common and result in significant morbidity, negative impacts on daily life, reduced quality of life and reduced work attendance (1–5). Recurrence is common and recurrent UTIs have an estimated annual prevalence of 3% (1). The experience of women with recurrent UTIs is not well understood and how this compares to the views of healthcare professionals (HCPs) is unknown.

Aims:
This qualitative evidence synthesis aims to understand the experiences of women with recurrent UTIs and compare them to primary care HCPs.

Methods/Approach:
We systematically searched MEDLINE, Embase, CINAHL, PsychInfo, ASSIA, Web of Science and the grey literature from inception to June 2022 for primary qualitative studies. Meta-ethnography was conducted to synthesise the studies and the findings for women with recurrent UTIs and HCPs were then compared.

Results/Evaluation:
Twelve primary qualitative studies published from 2005 to 2022 and conducted in Europe and the USA were included. Two studies involved primary care staff, 9 studies involved women with experience of recurrent UTIs. One study involved both.

Patients and HCPs had similar views in terms of the causes of recurrent UTIs and self-management and similar concerns about an underlying cause and antibiotic use. They also had similar views on the impact of recurrent UTIs, however patients felt HCPs did not appreciate the impact of recurrent UTIs. There were conflicts in terms of the expectation for antibiotics and the need for further investigation and referral.

Conclusion:
This is the first qualitative evidence synthesis on the experiences of women with recurrent UTIs and the views of primary care HCPs. It demonstrates that women with recurrent UTIs and HCPs share several similar views and concerns but there were significant communication gaps. Further guidance development and a patient decision aid could help address these gaps.

12.2

Using microbiological data to improve the use of antibiotics for respiratory tract infections: an individual patient data meta-analysis

Dr Taeko Becque[1], Dr Irene Boateng[1], Professor Beth Stuart[2], Professor Nick Francis[1], Ms Lucy Carr-Knox[2], Dr Gail Hayward[3], Dr David Gillespie[4], Professor Kerry Hood[4], Ms Mandy Lau[4], Dr Peter Muir[5], Professor Paul Little[1], Ms Jennifer Bostock[6], Ms Kirsty Samuel[6], Professor Alistair Hay[7]
[1]Primary Care Research Centre, Faculty of Medicine, University Of Southampton, Southampton, UK, [2]Centre for Evaluation and methods, Wolfson Institute of Population Health, Queen Mary University of London, London, UK, 3Nuffield Department of Primary Care Health Sciences, Medical Sciences Division, University of Oxford, Oxford, UK, [4]Centre for Trials Research, College of Biomedical & Life Sciences, Cardiff University, Cardiff, UK, [5]UK Health Security Agency Regional Laboratory, Bristol, UK, [6]Patient and Public Involvement and Engagement, , , [7]Centre for Academic Primary Care, Bristol Medical School, University of Bristol, Bristol, UK

Biography:
Taeko Becque is a senior statistician working on randomised trials and observational studies in primary care. She works with GPs and health researchers, and contributes statistical expertise to the design, analysis and interpretation of data from randomised trials, observational cohort studies, prognostic studies and meta-analyses. She has worked on trials in a variety of areas, including respiratory infections, asthma, COPD, mental health problems, dementia, low back pain, neck pain, eczema, acne and cellulitis.

Background:
A key challenge for primary care clinicians is identifying patients with respiratory tract infections who are likely to benefit from antibiotics. Development of rapid microbiological point-of-care tests is accelerating, but there is a lack of evidence about the relationship of these results to illness progression and clinical outcomes in primary care. An individual patient data meta-analysis will bring together all the available data, substantially increasing the power to detect any true relationships between pathogens and outcomes.

Aims:
To undertake a synthesis of individual patient data from randomised controlled trials and observational cohort studies of respiratory tract infections in order to investigate the prognostic value of microbiological data.

Methods/Approach:
A full systematic search of the literature will be conducted to identify relevant studies[12] including:
(1) population: all patients attending a primary or community care setting with a respiratory tract infection;
(2) prognostic data: microbiological data on the presence or absence of pathogens classified as virus, bacterium or combination viral/bacterial;
(3) outcomes: duration of illness, severity of illness, re-consultation with new or worsening symptoms, and hospitalisation.

Evaluation:
One stage analysis will combine all the data in a single meta-analysis based on a multilevel model stratified by study. Regression models will explore the relationship between outcome measures and microbiological data, comparing viral/bacterial/combination categories to none detected. Any additional prognostic value of microbiology over baseline symptoms and signs will be analysed using the area under the ROC curve. Differences in the effectiveness of antibiotics in the presence of different pathogens will be explored by testing for interactions between antibiotic treatment and pathogen.

Conclusions:
This study will help develop the evidence base for the role of upper respiratory tract microbes in the primary care setting, potentially guiding the use of point-of-care tests as antimicrobial stewardship tools.

12.3

What is the effectiveness of brief interventions on changing alcohol use in young people? A systematic review.

Dr Kate King[1]
[1]Academic Dept. Of Military General Practice,

Biography:
Kate King is a Royal Navy GP, trainer and academic, currently leading the Academic Department of Military General Practice. A longstanding educator, she has been the training programme director for Defence GP speciality training and helped develop a programme which bridged the gap between the RCGP curriculum and the extended role of a military GP. Current research is focused on alcohol behaviour change in military personnel.

Abstract:
Alcohol consumption is highly prevalent in the UK population, causing both direct and indirect health problems resulting in increased morbidity and mortality. Young people particularly have risky alcohol use behaviours; being likely to drink large volumes and in binge patterns.

Brief interventions are effective in reducing alcohol consumption in the general population but there is a lack of evidence of their effect in young people. This systematic review aimed to determine their effectiveness on changing the behaviour of alcohol use in young people between 16 and 24 years.

Medical, psychological and nursing databases and trials registries were searched for randomised controlled trials considering the effectiveness of brief interventions delivered in primary care settings. Manual screening limited the results to the population age of interest. The primary outcome measures were change in the volume and frequency of alcohol consumption. A secondary outcome measure was a change in binge drinking behaviours. A meta-analysis of a sub-group of face-to-face interventions was undertaken.

Face-to-face brief interventions are effective in the limited data available for this age of population. Digital interventions show potential for reducing binge drinking and would be resource light and cheap to deliver.

Face-to-face brief interventions reduce alcohol consumption in young people, but come with a huge burden of clinician contact time which limits their real-world effectiveness. Digital interventions avoid this, and appear to show an effect in reducing binge drinking; something of specific benefit in the young person population. A digital solution to brief interventions may be desirable to a digital native population. Ultimately, individual level approaches to hazardous alcohol use will fail without system level changes too. The affordability, accessibility and drinking cultures that promote alcohol as a social lubricant should be addressed to support effective individual behaviour change.

12.4

GPs' views on discontinuation of long-term antidepressants: a systematic review and thematic synthesis

Dr Ellen Van Leeuwen[1], Dr Catherine Woods[2], Prof Tony Kendrick[2], Prof Sibyl Anthierens[3], Dr Emma Maund[4], Prof Thierry Christiaens[1]
[1]Unit Clinical Pharmacology, Department of Basic and Applied Medical Science, Ghent University, Ghent, Belgium, [2]Primary Care, Population Sciences & Medical Education University of Southampton, Southampton, UK, [3]Department of Family Medicine and Population Health, University of Antwerp, Antwerp, Belgium, [4]Southampton Health Technology Assessments Centre, University of Southampton, Southampton, UK

Biography:
Ellen Van Leeuwen is a GP and a clinical pharmacologist at Ghent University, Belgium. She obtained her Ph.D. with a thesis on the discontinuation of psychotropics in primary care. She is a visiting researcher at the School of Primary Care, Population Sciences and Medical Education, University of Southampton

Background:
Long-term antidepressant use, much longer than recommended by guidelines (1), is common, and may cause harm and generate unnecessary costs (2). Most antidepressants are prescribed by general practitioners (GPs (3).

Aims:
To explore GPs views on discontinuing long-term antidepressant treatment, and their barriers and facilitators to discontinuing

Methods/Approach:
Systematic review with thematic synthesis. We included primary studies that used qualitative data collection and had data on GPs views on continuing or discontinuing long-term AD use. The review searched nine database sources from inception until May 2022. Study quality was assessed using the Critical Appraisal Skills Programme (CASP) checklist. A thematic synthesis was performed.

Results/Evaluation:
Eleven studies were included in the review. Nine studies were of general practitioners' (GPs) perspectives, one study of GPs and nurses working in nursing homes, and one of GPs and a mix of health professionals. The thematic synthesis yielded six themes: 'perception of long-term AD', 'fears', 'self-confidence to manage discontinuation', 'role and responsibility of the GP', 'perceived patients expectations and personal circumstances', and 'process related and organisational factors'.

Conclusions:
Barriers and facilitators to discontinuing long-term antidepressants for GPs are numerous and complex. More awareness of the lack of evidence and the potential harm of long-term AD continuation is required to improve HPs' motivation to discontinue AD. The review shows a need to support for GPs around their fear of patient relapse and to initiate discussions around discontinuation.

12.5

Within-individual variation of HbA1c and FEV1: systematic reviews and cohort analyses from a primary care database.

Mr Alex Gough[1], Professor Tom P Marshall, Dr Alice Sitch
[1]University of Birmingham, Birmingham, UK

Biography:
Alex Gough is a final year PhD student in the Institute of Applied Health Research, working on a thesis investigating within-individual variation in various measures in primary health care.

Background:
All clinical measurements show within-individual variation, much of which is chance variation (1). Variation introduces an element of random error to both diagnosis and treatment decisions informed by monitoring. For many clinical measurements, the extent of within-individual variation is unknown.

Aims:
To summarise the within-individual variability of glycosylated haemoglobin (HbA1c) and forced expiratory volume in one second (FEV1) in published research and compare this to observed variation in a large database of primary care records.

Methods/Approach:
Systematic reviews: Research databases including Medline and Embase were searched for any papers reporting multiple within-individual measurements of HbA1c and FEV1. There were no exclusions for language or date. Individuals had to be in a steady state to be included. Reported coefficients of variation (CV) were summarised.

Cohort analysis: Patients with ≥2 measurements of HbA1c and FEV1 were identified in the IQVIA Medical Research Database (IMRD). The within-individual coefficient of variation was calculated from the population mean, using linear regression to give the within-individual standard deviation

Results/Evaluation:
Systematic reviews: For HbA1c, 2321 abstracts were screened and 105 studies were included in the analysis. For FEV1, 3178 abstracts were screened and 104 studies included. For HbA1c , the median within-individual CV of was 0.070 (range 0.0029 to 0.179) and for FEV1 was 0.0366 (range 0.011 to 0.177)
Analysis of IMRD gave a CV for the full population for HbA1c of 0.1666 and for FEV1 of 0.2636.

Significance:
Compared to published research, within-individual variation of HbA1c in primary care data is twice as high and FEV1 is eight times higher. The potential for within-individual variation to affect clinical decisions is therefore considerably greater.

Conclusions:
The within-individual variability of HbA1c and FEV1 in primary care records are much higher than in published research.

12.6

Developing Through Life Education for the Military General Practitioner

Dr Toby Holland[1]
[1]Academic Department of Military General Practice, Birmingham

Biography:
Senior Lecturer in Military General Practice
GP Trainer

Background:
The learning needs of First5 GPs have been established by teh RCGP. Defence GPs have a broad scope of practice with a focus on clinical leadership, prehospital care, operational medicine, force health protection and occupational health, in addition to the Core RCGP Curriculum.

Residential VTS courses support Defence GP STs in bridging the gap between NHS and military practice. This proposed study aims to perform a structured analysis of the additional learning needs of Defence First5s.

Questions:
- Revaluate the differences between military and NHS GP practice.
- Identify the specific learning needs of military GPs in their First5.

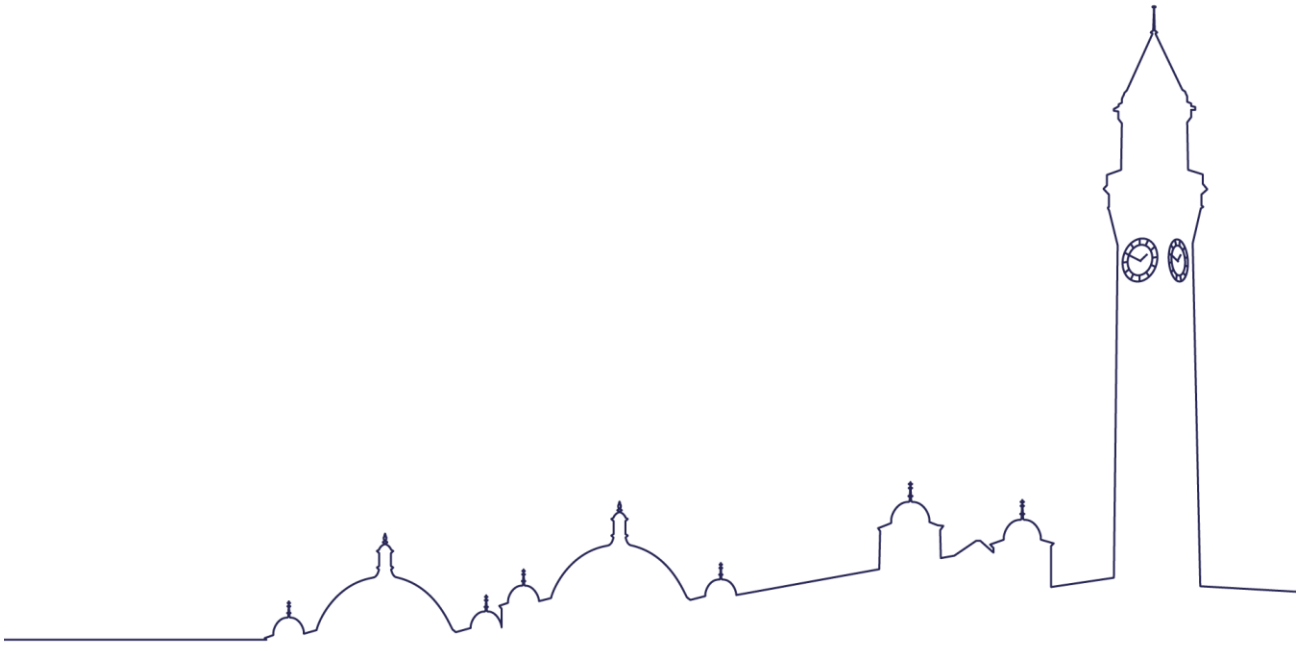
Methods/Approach:
Convene an expert panel drawn from Defence First5 GPs and senior GPs and educators (military and civilian) to engage in a Delphi process to define and prioritise key themes for a programme of learning.

Outcomes:
- A revaluated comparison of NHS and Defence General Practice.
- A structured curriculum and programme of learning to support military First GPs.

Discussion:
Military GPs are frequently placed in leadership positions and deployed on operations within their First5. This study will explore, identify and compare the learning needs of NHS and military First5 GPs to support the development of a structured programme for the latter. It is anticipated that these findings will be available in time for the conference.

Take Home Message for Practice:
- Establish of a curriculum for Defence First5 GPs.
- Recommendations for a training programme to deliver this.
- Support for a robust business case to fund such a programme.

POSTER ABSTRACTS



I-01

Lung Health Check Wales: Electronic Health Record toolkit for automated coding of smoking status

Dr Nicole Abel1, Dr Jean Engela-Volker, Dr Sinan R Eccles
[1]Cardiff University - Early Career Researcher and Academic Fellow,

Biography:
Education and Qualifications
2022: Fellow of Higher Education Academy (FHEA), Advance HE
2022: PG Certificate Medical Education, Cardiff University (Merit)
2021: MRCGP, Royal College of General Practitioners
2016: MBBCh, Cardiff University Medical School

Career Overview:
2021-present: Academic GP Fellow, Division of Population Medicine, Cardiff University
2019-2021: AiT Wales Representative, Royal College of General Practitioners
2018-2021: GP Registrar, Gwent & South Powys training scheme, Wales Deanery
2016-2018: Foundation Doctor, Wales Deanery

Background:
In Wales Lung cancer is the leading cause of cancer related deaths with late presentation and poor outcomes. Lung health checks (LHC) are a targeted health intervention that include targeted low dose CT screening for lung cancer in current or ex-smokers. GP Electronic Health records (EHR) can be used to identify those eligible for the lung health checks based upon their age and smoking history (1).

Aims:
To create a toolkit for GP practices to ensure smoking status of their patients aged 50 to 74 (+364 days) years old had been coded in preparation for the LHC roll out in Wales. This was done using validated patient mobile numbers on EHRs and text messaging services.

Methods/Approach:
Two toolkits were created for the GP EHR systems used in Wales: EMIS and Vision. EHRs were searched electronically based upon predefined search criteria – age and smoking status. Texts were sent to patients with no smoking code and a validated mobile number. This was done using the inbuilt software of Vision or using IPLATO for EMIS. This allowed automated coded responses to be added to EHRs automatically.

Results/Evaluation:
The toolkits allowed searches to be completed of the EHR. For Vision 724/21,956 (3.3%) of the population had no smoking code, using the toolkit and text messaging updated N=183 of those. The toolkit created for EMIS showed that 311/7,356 (4.2%) of the population had no smoking code. Using the toolkit, this updated N=91 patients with a smoking code.

Conclusions:
A toolkit incorporating automated searches of EHR and utilizing inbuilt software for text messaging and automated updating of smoking codes is a feasible and acceptable way of preparing the population of Wales for the launch of LHC.

I-02

Improving the detection of atrial fibrillation in primary care: a qualitative study exploring the patient path to diagnosis

Dr Patricia Apenteng[1], Ms Fatihah Iman[1], Dr Veronica Nanton[2], Mrs Trudie Lobban[3], Professor Richard Lilford[1]
[1]University of Birmingham, Edgbaston, UK, [2]University of Warwick, Coventry, UK, [3]Atrial Fibrillation Association, Stratford-Upon-Avon, UK

Biography:
Patricia is an applied health researcher at the University of Birmingham. Her work includes research on the detection and management of atrial fibrillation and implementation science around integrated care models and point-of-care ultrasound.

Background:
Atrial Fibrillation (AF) is a common heart rhythm disorder.(1) AF leads to a five-fold increase in the risk of stroke and double the risk of death.(2) These risks can be reduced by anticoagulation therapy.(3) However, AF can be difficult to detect because it is often intermittent and not always symptomatic, and where symptoms are present, they can be non-specific. Currently at least one-third of people with AF remain undiagnosed;(4) this equates to an estimated 500,000 people in the UK.

Aims:
The study aims to explore the patient path to a diagnosis of AF, to improve understanding of the presentations of AF

Approach:
This is a qualitative study set in GP practices in the West Midlands. Approximately 30 semi-structured interviews will be conducted with patients with AF, within 6 months of diagnosis, to explore their journey to diagnosis. Up to 20 interviews will be conducted with GPs and practice nurses to explore their experiences of the presentations of AF.

A workshop will be held with relevant stakeholders, including patients, to interpret the data and identify key messages to improve recognition of AF. These will be used to develop educational resources for healthcare professionals and the public.

Evaluation:
The interviews will be analysed using framework analysis. Andersen's model of Total Patient Delay(5) will be applied to understand the trajectory to a diagnosis of AF.

Conclusions:
Recommendations to improve the detection of AF will be made, drawing on the identified patient pathways. For example, pathways characterised by AF diagnosis following a long period of symptoms may indicate a need to raise awareness, whereas pathways characterised by incidental diagnoses or asymptomatic AF may indicate a need for targeted approaches to detection such as screening.

Improved detection of AF will allow timely initiation of anticoagulation therapy where required, to reduce AF-related strokes and mortality.

I-03

COPD patients' attitudes towards Chinese herbal medicine for the treatment of acute exacerbations: A qualitative study

Ms Cherish Boxall[1], Professor Michael Moore[2], Dr Xiao-Yang Hu[2], Mr Tom Oliver[1], Mrs Catherine Simpson[1], Professor Nick Francis[2], Dr Merlin Willcox[2]
[1]Southampton Clinical Trials Unit, University Of Southampton, Southampton, United Kingdom, [2]Primary Care Research Centre, University Of Southampton, Southampton, United Kingdom

Biography:
Cherish Boxall is a mixed-methodologist working at the Southampton Clinical Trials Unit, leading on qualitative work in fields ranging from CBT for prostate cancer to the use of traditional Chinese medicine in COPD. She is about to embark on a PhD exploring the wider use of digital tools within clinical trial research.

Background:
Giving Shufeng Jiedu® (SFJD), a Chinese herbal remedy, to patients with acute exacerbation of COPD (AECOPD), can reduce treatment failure, duration of admission to hospital and antibiotic use[1]. We conducted a feasibility randomised controlled clinical trial of SFJD for AECOPD in UK general practice (EXCALIBUR), and a nested qualitative study[2].

Aims:
To explore the attitudes of COPD patients in the UK towards Chinese herbal medicine to treat AECOPD.

Methods/Approach:
Eligible patients who did and did not enrol in the EXCALIBUR[2] trial were invited to take part in a semi-structured interview. A total of 13 participants (7 non-participants and 5 participants) were interviewed.

Results/Evaluation:
Offsetting the need to try new treatment with personal risk.

Trial participants felt they had less severe COPD and were altruistically motivated to trial herbal medicine. Most people who had not consented to take part in the trial were concerned about potential side-effects or unanticipated reactions, and some feared that their COPD was life threatening and believed that delaying antibiotic use would worsen their symptoms.

Concerns about the use of animals in Chinese medicine.

Several patients were concerned about animal welfare and the moral consequence of taking part in the trial. One trial interviewed participant associated animal slaughter with Chinese medicine and another made the instant decision not to take part upon seeing 'Chinese medicine'.

Accessing trusted information from multiple sources.

Many patients used multiple sources to seek information on herbal medicine including online websites and newspapers with the most trusted being health care staff. Some non-participants would like to have been given more information on the results of previous research.

Conclusions:
Future trials should consider addressing patients' fears of worsening symptoms or side-effects, concerns of the use of animal ingredients in Chinese medicine, and should provide more information on existing research.

I-04

How data visualisation using historical medical journals can contribute to current debates around antibiotic use and antimicrobial resistance in primary care

Dr Barbara Caddick[1], Professor Alistair Hay[1], Mr Mike Jones[1], Dr Kieren Pitts[1], Mr Mark McLaren[1], Dr Alyson Huntley[1], Professor Rupert Payne[2]
[1]University Of Bristol, Bristol, , [2]University of Exeter, Exeter

Biography:
Barbara is Senior Research Associate in the Centre for Academic Primary Care and works on projects relating to medicines and prescribing, telephone consultations and the collection, storage, and reuse of research data. Her background is rooted in historical study, and she has a PhD in social and cultural history. She is developing a programme of interdisciplinary research focusing on the history of primary care and everyday health and is keen to utilise digital approaches in this work.

Background:
The early years of antibiotic use in primary care (c1950-1969) has received little attention. Medical journals provide a rich source for studying historic healthcare practitioners' views and interests, with the potential to inform contemporary debate around issues of overuse and antimicrobial resistance.

Aims:
Pilot study to test the application of digital methods to interrogate historical medical journal data in relation to antibiotic use.

Methods/ Approach:
Meta-data and scanned articles were extracted from the online British Journal of General Practice (BJGP) archive from inception (1953) to 1969. Searchable text was generated using an application called ABBYY optical character recognition, and Python used to generate data visualisations exploring (1) how BJGP changed during the period, (2) mentions of terms 'antibiotic(s)', 'penicillin', 'resistance/resistant' and mapping when and where they occurred.

Results / Evaluation:
From 1953-1969, BJGP expanded in terms of number of annual issues (4 to 17) and annual pages (<25 to >1100). Heatmap visualisations were used to facilitate understanding of the frequency with which use of the term 'antibiotic(s)' occurred. By 1969 an article mentioning 'antibiotic(s)' was published monthly. Bigram searches found 'treatment' and 'therapy' to be the two most common terms that appeared with 'antibiotic(s)'. The fourth and seventh most common terms were 'resistant' (first appearing in 1955) and 'resistance' (1962).

Conclusions:
This pilot work shows that primary care publications increased considerably between 1953-1969. Articles on antibiotics featured frequently in relation to therapeutic intervention, and concerns around resistance occurred at an early stage. This approach provides new insights into how attitudes and behaviours around antibiotic use by primary care have evolved over time. It may also have the potential to inform study of the future use of antibiotics in primary care.

I-05

Experiences of Initiating and Maintaining Romantic Relationships Among Adults with Acne: A Qualitative Study

Miss Charlotte Cairns[1], Dr Kate Greenwell[1]
[1]University Of Southampton, Southampton , United Kingdom

Biography:
I am a recent MSc Health Psychology graduate from Southampton University and previously studied BSc Psychology at Winchester University. I will also be starting a PhD at Southampton University in April 2023 working on developing a set of core outcome measures for young people with cancer. During my studies, I have utilized both quantitative and qualitative methodologies and I am now applying these skills to my new position at the School of Primary Care as a Senior Research Assistant on the 'Acne Care Online' intervention development funded by The National Institute for Health Research.

Background:
Acne can significantly affect individuals' quality of life and those with acne may encounter negative stigmatisation from others (1; 2). Previous research has shown that those with acne may experience an impaired sense of attractiveness, negative body image views, avoidance of intimacy and sexual acts, and feelings of romantic rejection (3). Although this topic has received attention, there is little qualitative research on how acne impacts romantic relationships among adults carried out in the UK.

Aims:
To explore the experiences of initiating and maintaining romantic relationships among adults with acne.

Methods/Approach:
Semi-structured interviews were conducted with a diverse sample of fifteen adults with acne aged 20-36 years. Participants were recruited through social media, charities, and snowball sampling before being checked against the inclusion criteria. The interviews were transcribed verbatim and inductive reflexive thematic analysis was carried out.

Results/Evaluation:
Findings emphasised the impact of acne on romantic relationships through participants' withdrawal from social situations and, at times, intimacy with their significant other, often caused by negative reactions from peers and the wider society. Participants expressed feelings of powerlessness over the unpredictability of their acne and employed a variety of coping strategies, including avoidance of social situations and being in photographs, and concealment of visible acne. Participants' self-confidence in their visual appearance improved as time spent in their romantic relationships increased.

Conclusions:
These results suggest that negative reactions from peers and the wider society can negatively impact an individual's self-confidence to engage in romantic relationships and intimacy. Furthermore, their current and potential significant other's perception of their appearance held great importance and often created a barrier to forming and maintaining social relationships, especially romantic ones. Self-management interventions and healthcare professionals should provide individuals with acne with information and support to enhance their psychological and sexual well-being.

I-06

The incidence and prevalence of Hepatitis C Virus

Mr Ben Hammond[1], Mr Harpal Aujla[1], Dr Neil Cockburn[1], Mr Krishna Gokhale[1], Prof Krishnarajah Nirantharakumar[1], Dr Joht Singh Chandan[1]
[1]University Of Birmingham

Biography:
Ben is a medical student with a keen interest in health informatics.

Background:
Hepatitis C (HCV) is an often-asymptomatic viral infection that causes liver inflammation and is a key public health concern (1). With the introduction of direct-acting antivirals (DAA) in 2015, (2) there has been a drive to identify new and existing undiagnosed cases of HCV with the UK currently being on track to eliminate HCV 5 years ahead of the WHO global target of 2030. (3)

Aims:
This study aims to estimate trends in the incidence and period prevalence of HCV in a primary care database between 2000 and 2019 broken down by markers of inequality.

Methods/Approach:
We conducted a population-based analysis of hepatitis C in primary care. Data were extracted from The Health Improvement Network database of electronic health records between January 1st, 2000, to December 31st, 2019. Clinical codes indicating a HCV diagnosis were used to identify cases. Crude and adjusted incidence and prevalence were reported yearly overall and for relevant subgroups.

Results/Evaluation:
11,365,379 patients were eligible for inclusion in the study, with 14,450 patients having HCV. Across the period, crude yearly incidence increased from 0.043 (0.034-0.056) cases per 1000 person-years in 2000 to 0.072 (0.063-0.082) in 2019. Similarly, crude prevalence rose from 0.195 (0.17-0.22) per 1000 in 2000 to 1.40 (1.36-1.45) in 2019.

Conclusions:
Our study reported an increase in both the incidence and prevalence of HCV between 2000 and 2019. Efforts to identify potentially undiagnosed or untreated HCV have increased. (2,4) Considering the highest reported values in our study occurred in between 2016-2019, an increase in HCV consultations or more accurate coding of old HCV cases returning for treatment may, explain the growth in cases. Overall, this methodology may provide an additional way to evaluate public health interventions focused on eradicating HCV in the build up to the WHO global target of eradication by 2030. (5)

I-07

The association between domestic abuse and breast cancer

Ms Sonica Minhas[1], Ms Cory Spencer[1], Ms Jasleen Mohr[1], Mr Ben Hammond[1], Mr Krishna Gokhale[1], Prof Julie Taylor[1], Prof Caroline Bradbury-Jones[1], Prof Siddhartha Bandyopadhyay[1], Prof Krishnarajah Nirantharakumar[1], Dr Nicola Adderley[1], Dr Joht Singh Chandan[1]
[1]University Of Birmingham

Biography:
Dr Minhas is an FY1 doctor with a keen interest in public health and in particular the prevention of Gender-Based Violence

Background:
Breast cancer is the most common cancer type globally [1] and the most diagnosed cancer in females in the UK [2], posing a major public health burden. Some studies have identified an association between abuse exposure and increase risk of cancer incidence [3,4]. Yet very few studies have examined the relationship between exposure to domestic abuse (DA) and the risk of breast cancer .

Aims:
The aim of this study was to explore the risk of breast cancer (primary outcome) in adult women (aged 16 years and above) with a GP-recorded DA exposure, compared to women without.

Methods/Approach:
A population-based, retrospective open cohort study using UK primary care data between 1st January 1995 to 31st January 2021. Exposed cases were matched to four unexposed women by general practice, age and deprivation. Crude and adjusted hazard ratio were calculated using cox regression analysis and a sensitivity analysis for age group was carried out to account for potential non-linear variance in oestrogen levels.

Results/Evaluation:
23,859 women with recorded DA exposure were eligible for this study and matched to 84,232 controls. An adjusted HR of 0.87 (95% CI 0.70 - 1.10, p 0. 295) was reported. Sensitivity analysis revealed a slightly increased aHR of 0.93 (95% CI 0.68 - 1.27, p0.774).

Conclusions:
We found no significant association between domestic abuse exposure and breast cancer incidence in adult women. Similarly, no significant association was found in a sensitivity analysis accounting for natural oestrogen variation over a women's life course. Weak associations between breast cancer and DA have been seen in the literature, however, the evidence base is limited. Our study does not detract away from the urgent need to adopt a public health approach to preventing violence and the need to further investigate the life course effects of abuse.

I-08

The use of technology to improve medication adherence in heart failure patients: a systematic review of randomised controlled trials

Dr Zahraa Jalal[1], Miss Chloe Cheng[1]
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Biography:
Dr Jalal is a lecturer in Clinical pharmacy and Therapeutics, her research is around adherence to medication, cardiovascular diseases and pharmacy role development.

Chloe Cheng is a final year MPharm student, conducted this research as part of her final year research project.

Background:
Heart failure is an ever-growing contributor of morbidity and mortality in the aging population. Medication adherence rates are reported between 37%-71%. Technologies have been developed to improve adherence with therapies and other clinical outcomes.

Aims:
This systematic review aims to investigate the effect of different technologies on medication adherence in patients with heart failure. It also aims to determine its effects on other clinical outcomes and the future potential of these technologies in clinical practice.

Methods/Approach:
This systematic review was conducted using the following databases: PubMed Central UK, Embase, MEDLINE, CINAHL Plus, PsycINFO and Cochrane Library, until October 2022. Studies were included if they were randomised controlled trials that used technology to improve medication adherence as an outcome in heart failure patients. The Cochrane Collaboration's Risk of Bias tool was used to assess individual studies. This review was registered with PROSPERO (ID: CRD42022371865).

Results/Evaluation:
A total of nine studies met the inclusion criteria. Two studies showed statistically significant improvement in medication adherence following their respective interventions (p= 0.015 [74% versus 35%] and p= 0.030, 95% CI -0.51 [-0.97, -0.05]). Eight studies had at least one statistically significant result in the other clinical outcomes it measured, including self-care, quality of life and hospitalisations. All studies that evaluated self-care showed significant improvement. Improvements in the other outcomes were inconsistent.

Conclusion:
There is limited evidence for the use of technology to improve medication adherence in heart failure patients. Further studies with larger study populations and validated self-reporting methods are required.

I-09

Exploring the enrolment of people most at risk from obesity in weight management studies: A scoping review of weight management study characteristics

Ms Helene Davis[1], Dr Dawn Swancutt[2], Dr Jenny Lloyd[1], Prof Mark Tarrant[1], Prof Jonathan Pinkney[2], Dr Shokraneh Moghadam[1], Dr Lily Hawkins[1], Dr Ross Watkins[1], Prof Rod Sheaff[2]
[1]The University Of Exeter, Exeter, United Kingdom, [2]University of Plymouth , Plymouth, United Kingdom

Biography:
Helene Davis is a BSc Medical Sciences student at The University of Exeter. This academic year she is undertaking a Professional Training Year placement as an Undergraduate Associate Research fellow with the PROGROUP research team, trialling the feasibility, effectiveness, and cost effectiveness of a group-based weight management treatment for people living with severe obesity in the UK. Her particular interest lies in health inequalities and ways of reducing them within primary care and health policy. As part of PROGOUP her research focuses on assessing characteristics of weight management studies which enrol demographic groups that are most at risk from obesity.

Background:
15 million people live with obesity in the UK. By 2040 this is set to rise to 21 million, putting pressure on primary care services to treat and manage patients with increasing comorbidity. Those patients most at risk, however, are typically underrepresented in weight management studies, leading to an evidence, and thus translation gap in how best to treat these high-risk groups.

Aims:
This study aims to: i) investigate the characteristics of weight management studies that recruit and retain a representative sample and ii) explore the experiences of participants in such studies.

Methods/Approach:
A scoping review will be used to ensure a broad range of relevant studies are sourced. A participation to obesity prevalence ratio score of equal to or above 0.8 will indicate that the study adequately represents those most at risk and will be included in the analysis. Characteristics of these studies will be reviewed alongside analysis of process evaluations and qualitative studies which will provide an understanding of what works for whom and in what context.

Evaluation:
Understanding characteristics of studies that have successfully recruited and retained those typically underrepresented in weight management research will enable the development of a framework to guide study design. As a result, more appropriate treatments could be developed for high-risk patients which may result in a more targeted reduction in obesity rates and comorbidities.

Conclusion:
Focusing on reducing obesity rates using this more targeted approach could ultimately lessen stress on workload and staffing alongside reducing health inequalities. Nevertheless, this alone is not a solution. Investment in obesity prevention is needed to ensure the differences in obesity rates between demographic groups does not widen further. Overall, academia and healthcare have the potential to shrink societal inequalities through reducing obesity-related inequalities.

I-10

Family experiences of Long Covid: exploring communication between general practitioners and families through an interactive theatre workshop

Dr Anna Dowrick[1], Dr Cervantée Wild[1], Dr Alice Maclean[2], Professor Kate Hunt[2], Dr Charlotte Albury[1], Dr Madeline Tremblett[1], Dr Lisa Hinton[3], Professor Louise Locock[4], Prof Sue Ziebland[1], Dr Tanvi Rai[1], Dr Kaveri Qureshi[5], Performing Medicine[6]
[1]University of Oxford, Oxford, UK, [2]University of Stirling , Stirling, UK, [3]University of Cambridge, Cambridge, UK, [4]University of Aberdeen, Aberdeen, UK, [5]University of Edinburgh, Edinburgh , UK, [6]Performing Medicine, London, UK

Biography:
Ann is an interdisciplinary social scientist. Her research explores how social injustice can be seen and acted upon through understanding experiences of health and illness, with a view to informing and improving the design of public services. Performing Medicine provide creative training programmes to support health professionals and medical students, as part of the broader work of the Clod Ensemble performing arts company.

Background:
Over a million people in the UK live with Long Covid (1). Primary care is the first point of call for patients seeking help (2) . Children's experiences and the impact on families have received little attention. There are few resources available to families or clinicians to navigate healthcare interactions about Long Covid.

Aims:
- Share findings from research about the current challenges in communication between GPs and families affected by Long Covid
- Deliver an interactive theatre-based forum workshop aimed at improving communication between professionals and patients

Methods/ Approach:
The research team undertook qualitative research with families and general practitioners. This aimed to understand how parents and young people experience Long Covid, and develop resources to improve communication. Participants were children/adolescents with Long Covid (aged 10-18 years) (n=23), parents/caregivers of children or adolescents with Long Covid (n=17), and GPs (n=16). Maximum variation sampling was used and data were analysed thematically.

The research team partnered with Performing Medicine – an initiative from Clod Ensemble (a performance and visual arts company) – who provide creative training programmes to support health professionals and medical students (3). Using the data, they crafted an interactive performance session. The session will draw on forum theatre approaches based on a set of dramatical techniques created by Augusto Boal. The format allows audience members to watch scenarios and interact directly with actors, giving advice on how to improve the situation.

Results/Evaluation:
The scenario will cover themes identified in the research: validating patient experiences; impacts on the family unit; patient load and staff wellbeing; dealing with uncertainty; supporting colleagues.

Conclusions:
Primary care professionals can provide high-quality support to families affected by Long Covid despite uncertainty in outcomes. The interactive session will foreground existing good practice in communication, highlighting the importance of listening and working in partnership with patients/families.

I-11

Cohort study investigating the natural history of gout in UK general practice

Dr Samuel Finnikin[1], Prof Edward Roddy[2], Prof Christian Mallen[2]
[1]University of Birmingham, [2]Keele University

Biography:
Dr Finnikin is an academic GP with an interest in shared decision making and how can use routinely collected data to inform this process. He is also a National Clinical Specialist Advisor in Personalised Care for NHSE

Background:
Gout is the most common inflammatory arthritis, affecting around 2.5% of the UK population. (1) The use of urate lowering therapy (ULT) to manage gout is suboptimal and adherence to treatment is poor. (1) One of the potential barriers to use of ULT is the lack of evidence around, and consensus on, who should be offered this treatment and at what point in the disease course. (2) There is need, therefore, to better understand the natural history of gout in order to better inform decision making

Aims:
The aim of this study is to identify characteristics that may predict, or predispose towards, the severity of gout (frequency of flares).

Methods/Approach:
This is primarily a descriptive study but with an exploratory component extending knowledge on the factors associated with gout flares. An incident gout cohort was identified using CPRD. Patients were followed until they were prescribed ULT or left due to death or removal from the database. Gout flares were identified using established criteria (3). The pattern of gout flares was described. The association between patient characteristics and the frequency of flares will be analysed using logistic regression. A time to event analysis considering multiple events will be performed using the Anderson-Gill Cox model.

Results/Evaluation:
The cohort comprises 51,784 individuals (73% male) with a mean duration of follow up of 4.1 years. Two thirds of patients had no flare recorded, but amongst the remaining third, 39,380 flares were identified, nearly 50% of them within the first year of diagnosis. 14,318 patients were commenced on ULT. Further analysis is underway.

Conclusions:
This cohort provides new insights into the epidemiology of gout in the UK and will identify important factors associated with gout flares which will inform decision making regarding ULT initiation

I-12

The role of Pharmacists in Cardiac Rehabilitation: A qualitative study of healthcare professionals' experiences and prospects for future pharmacy roles

Dr Zahraa Jalal[1], Miss Scarlett Kleiman[1], Miss Krystal Gaisie[1]
[1]University of Birmingham, Birmingham , United Kingdom

Biography:
Dr Jalal is a lecturer in Clinical Pharmacy at the university of Birmingham, her research is on adherence, cardiovascular diseases and pharmacy role developments.
The role of Pharmacists in Cardiac Rehabilitation: A qualitative study of healthcare professionals' experiences and prospects for future pharmacy roles

Background:
Cardiovascular disease is considered the largest global health burden of which cardiac rehabilitation is instrumental in managing. Pharmacists' role in this service through patient education has huge potential yet is not being utilised as comprehensively as possible.

Aims:
To examine the perceptions of pharmacists and other UK healthcare professionals on the role of pharmacists in cardiac rehabilitation and determine possible areas of role development.

Method:
Semi-structured interviews were conducted with experienced cardiovascular healthcare professionals. Interviews were conducted virtually, transcribed and coded. Thematic analysis employing Braun and Clarke's approach was followed to group interview responses into themes.

Results/Evaluation:
Eleven pharmacists and health care professionals took part in online interviews which lasted around 40 minutes. Six themes were determined 1) Pharmacist involvement in cardiac rehabilitation; 2) Overcoming barriers to patient care; 3) Lack of communication between primary and secondary care; 4) Patient education as the nucleus of care; 5) multidisciplinary team approach to care and 6) Cost and allocation of resources. Working as part of the multidisciplinary team across primary and secondary care, pharmacists' main role was found to be medicines education, reconciliation and monitoring adherence. This involved regular follow-up by primary care pharmacists. A need for increased pharmacy staffing in cardiac rehabilitation was identified by a large proportion of participants and input from employers and NHS funding were deemed necessary for service development and to help reduce healthcare inequalities.
Conclusion: Despite pharmacists currently being integrated in the multidisciplinary cardiac rehabilitation team by providing patient education a clear need for increased staffing was demonstrated to allow for greater focused follow-up and improved patient outcomes.

I-13

Peoples' experience of shared decision making in Musculoskeletal Physiotherapy: A systematic review and thematic synthesis

Mrs Jessica Grenfell[1]
[1]Cornwall Partnership NHS Foundation Trust , Bodmin Hospital , UK, [2]University of Exeter , Exeter , UK

Biography:
Jessica is a Clinical Specialist Physiotherapist and First Contact Practitioner working across primary and secondary care in Cornwall. She is an early career researcher currently affiliated with the University of Exeter, with a passion for identifying how we can better involve people in their healthcare decisions to improve equity, autonomy and empowerment.

Background:
Shared decision making (SDM) has been advocated as a way of improving prudency in healthcare Mulley et al., 2012) and has been linked to self-efficacy and empowerment of service users (Legare et al., 2011; Harter et al., 2017). The evaluation of its use in musculoskeletal (MSK) physiotherapy has been vague, but articles suggest that trust and communication are integral (Stenner et al., 2018).

Aims:
To synthesise peoples' experience of SDM in MSK physiotherapy, and identify the conditions needed for successful SDM.

Methods/Approach:
ENTREQ guidelines informed this systematic review and thematic synthesis. PRISMA recommendations steered a systematic literature search of AHMED, CINAHL, MEDLNE, EMBASE and Cochrane databases from inception to September 2021. COREQ was used for quality appraisal of articles alongside critical discussions. Analysis and synthesis included five stages: outlining study characteristics, coding of data, development of descriptive themes, development of analytical themes and integration and refinement.

Results/Evaluation:
Out of 1508 studies, 9 articles were included. Four main themes (trust, communication, decision preferences and decision ability) demonstrated that the majority of people want to participate in decision-making. As described in the capacity and capability model, three core conditions were needed to facilitate someone's' ability to participate.

Conclusions:
People want to be involved in SDM in MSK physiotherapy. For successful SDM, clinicians should look to develop mutual trust, utilise two-way communication and share power.

I-14

The cost of primary care consultations associated with long COVID in non-hospitalised adults: a retrospective cohort study using UK primary care data

Mr Jake Tufts[1], Dr Dawit T. Zemedikun[2,3], Dr Anuradhaa Subramanian[3], Dr Naijie Guan[3], Mr Krishna Gokhale[3], Dr Puja Myles[3], Professor Tom P Marshall[3], Prof Melanie Calvert[3,5,6,7,8], Ms Karen L Matthews[9], Prof Krishnarajah Nirantharakumar[3], Dr Louise Jackson[3], Dr Shamil Haroon[3]

[1]University Hospitals of Morecambe Bay NHS Foundation Trust, Lancashire, United Kingdom, [2]School of Population and Global Health (M431), The University of Western Australia, Perth, Australia , [3]Institute of Applied Health Research, University of Birmingham, Birmingham, United Kingdom, [4]Clinical Practice Research Datalink, Medicines and Healthcare Products Regulatory Agency, London, United Kingdom, [5]Birmingham Health Partners Centre for Regulatory Science and Innovation, University of Birmingham, Birmingham, United Kingdom, [6]National Institute for Health Research (NIHR), Applied Research Collaboration (ARC), Birmingham, United Kingdom, [7]NIHR Birmingham Biomedical Research Centre, University Hospital Birmingham and University of Birmingham, Birmingham, United Kingdom, [8]NIHR Birmingham-Oxford Blood and Transplant Research Unit (BTRU) in Precision Transplant and Cellular Therapeutics, University of Birmingham,, Birmingham, United Kingdom, [9]Long Covid SOS, Charity registered in England & Wales, Faringdon, Oxfordshire, United Kingdom

Biography:

Dr Shamil Haroon is an Associate Clinical Professor and Honorary Consultant in Public Health Medicine at the University of Birmingham. Shamil is a public health researcher and general practice trainee with a special interest in chronic obstructive pulmonary disease (COPD) and preventative medicine. He has experience working in clinical practice and public health, and in using different research

Methods/Approach:.

Dr Naijie Guan is a research fellow in the Health Economics Unit at the University of Birmingham. She has a special interest in household finances, COVID-19, mental health, health economics, determinants of health and mental health, and data analysis.

Background:

Over 2 million people in the UK self-reported long COVID (symptoms continuing >12 weeks after the first COVID-19 infection) as of December 2022. Long COVID can lead to significant patient burden; however, the economic impact of managing long COVID in primary care is unknown.

Aims:

To estimate incremental costs of primary care consultations associated with long COVID and the risk factors associated with increased costs.

Methods/Approach:

Data were obtained from the Clinical Practice Research Datalink Aurum primary care database from 31st January 2020 to 15th April 2021. We used a propensity score matched approach with an incremental cost method to estimate primary care consultation costs attributable to long COVID (i.e., additional consultation costs among patients with a diagnosis of COVID-19 compared to patients without a diagnosis of COVID-19, 12 weeks after index date) at an individual and national level. We applied multivariable regression models to estimate the impact of risk factors on the cost of consultations beyond 12 weeks from COVID-19 infection.

Results/Evaluation:

The annual incremental cost of primary care consultations potentially attributable to long COVID was £2.44 per patient with COVID-19. Extrapolating this to the UK population produced a cost estimate of 23,382,452. Among patients with COVID-19 infection, a long COVID diagnosis and longer-term reporting of symptoms were associated with a 43% and 44% increase in primary care consultation costs respectively, compared to patients without long COVID symptoms. Older age, female sex, obesity, being from a white ethnic group,

comorbidities and the number of prior consultations were all associated with an increased cost of primary care consultations.

Conclusions:
The costs of primary care consultations associated with long COVID in non-hospitalised adults are substantial. Costs are significantly higher among those diagnosed with long COVID, those with long COVID symptoms, older adults, females, and those with obesity and comorbidities.

I-15

Frailty trajectories in patients taking statins: A propensity score-matched cohort study using UK primary care data

Dr Eleanor Hathaway[1], Dr Aditya Acharya, Prof Krishnarajah Nirantharakumar
[1]University Of Birmingham, Birmingham, UK

Biography:
Dr Eleanor Hathaway is an academic clinical fellow at the University of Birmingham about to complete general practice training. She has previous training in geriatric medicine and has continued to be interested in frailty and multi-morbidity. She has recently completed a Master of Public Health degree and has been working on the Optimal study at the University of Birmingham which is developing an artificial intelligence tool to help in the management of those with complex multi-morbidity.

Background:
Frailty is common and will be an increasing problem as the population ages1. The NHS recommends the electronic frailty index (eFI) to identify and measure frailty2. Some medications have been shown to reduce or delay frailty. Statins, used to lower cholesterol, have been suggested as a potential frailty modifier3. Few studies have examined the association between statins and frailty, with inconsistent results4,5.

Aims:
We aimed to examine the association between statin exposure and frailty severity, using eFI score changes.

Methods/Approach:
This was a propensity score-matched open cohort study using UK primary care data in the CPRD GOLD database between 01/04/2005 and 31/01/2020. A cohort of patients ≥65 with incident statin exposure was matched 1:1 using propensity score-matching to an unexposed cohort. Primary outcome was frailty severity category change (eFI score increase ≥0.12). Cox proportional hazard regression models were used to compare statin-exposed and unexposed.

Results/Evaluation:
Two cohorts containing 210,643 participants were followed over 1,571,879 person-years. Baseline median eFI score was 0.14 (IQR 0.08-0.19) in both cohorts, representing mild frailty. A 7% increased hazard for a score change of ≥0.12 was seen in the statin-exposed group (HR 1.07;95% CI 1.05-1.09), after adjusting for sex, age, ethnicity, deprivation, BMI, smoking and alcohol consumption. Median eFI exit score was higher in the statin-exposed at 0.19 (IQR 0.11-0.25) compared with 0.17 (IQR 0.11-0.22). Fewer statin-exposed participants remained in the fit category (25.9%) compared to unexposed (33.0%), with the exposed cohort having larger proportions progressing to all other frailty categories ($p<0.001$).

Conclusion:
Exposure to statins increased the hazard for a change in frailty severity category (eFI score change ≥0.12). An increased mortality rate in the unexposed cohort may have affected these results.
This study has shown that it is possible to calculate frailty scores over time and determine trajectories using routinely collected primary care data.

I-16

Uptake of COVID-19 vaccination in people with haematological malignancy and other high-risk blood disorders

Dr Jennifer Hirst[1], Ms Emma Copland, Dr Emma Mi, Dr Martina Patone, Professor Carol Coupland, Professor Julia Hippisley-Cox
[1]University of Oxford, Oxford, United Kingdom

Biography:
Senior Research Fellow working with the Primary Care Epidemiology Team using the QResearch database

Background:
People with haematological malignancies have increased risk of severe outcomes from COVID-19(1) and were prioritised for vaccination.

Aims:
This study assesses the uptake of COVID-19 vaccines in people living with haematological malignancies and other high-risk blood disorders.

Methods/Approach:
Data from individuals aged ≥12 years in the QResearch UK primary care database were included.

Vaccine uptake was described by population demographics. Multivariable Cox regression was used to identify factors associated with vaccine uptake.

Results/Evaluation:
The analysis included 12,274,948 people, of whom 97,707 had blood cancer.

A higher proportion of those with blood cancer received at least one dose of vaccine compared to the general population (92% versus 74%). There was a trend towards lower uptake for each subsequent vaccine dose for people with blood cancer (92% for first dose and 31% for fourth dose) and vaccine uptake decreased with increasing social deprivation (Hazard ratio 0.72, 95%CI 0.70-0.74 in the most deprived quintile compared to the most affluent quintile for first vaccine uptake).

There were differences in uptake by ethnicity, with higher proportions of those of Pakistani, Bangladeshi, Black Caribbean and Black African ethnicities remaining unvaccinated compared with other ethnicities. Multivariable Cox regression showed that compared with white populations, uptake of all vaccine doses was significantly lower in people with Pakistani, Caribbean or Black ethnicity. Models also showed that uptake increased with increasing age and was lower in men compared to women.

Conclusions:
This study showed that there is a drop-off in COVID-19 vaccine uptake in people with blood cancer following the second dose of vaccine and that there are ethnic and social disparities in uptake.(2) This suggests improved communication of the benefits of COVID-19 vaccination to people living with haematological cancers is needed, which requires further work to understand the effectiveness and safety of vaccination in these groups.

I-17

Active Surveillance for Prostate Cancer is a shared journey: The dyadic perspective.

Mrs Stephanie Hughes[1]
[1]University of Southampton, Southampton, United Kingdom

Biography:
I am a Health Psychology Researcher working in the Primary Care department at The University of Southampton. I am nearing the end of my PhD about the impact of significant others on men undergoing active surveillance for prostate cancer.

Background:
Active surveillance (AS) for prostate cancer (PCa) is a monitoring programme for men with low grade, slow growing prostate cancer. The pathway **Aims:** to avoid or delay radical treatment such as surgery, and the associated unwanted side effects. However, living with an untreated cancer can have a negative psychological impact. Previous research suggests partners/significant others of men on AS are involved, important and influential in the men's experiences, acceptance and adherence to AS, and are a big influence in treatment decision making(1,2). Research encompassing both men on AS and their significant others is limited.

Objective:
To explore experiences of men undergoing AS for PCa and their significant others, and to explore how the significant other responses to the PCa diagnosis and AS treatment plan impact on the PCa patient.

Methods/Approach:
Semi-structured telephone interviews with 9 men on AS for PCa and their SOs (n=18). Data analysed using the Collaco et al. (2021) Framework Method for dyadic data analysis(3).

Results/Evaluation:
Main findings indicate the dyads function as an interconnected, interdependent unit with interlinked emotional responses. Both members of the dyad experience PCa related distress, and two-directional support was evident.

Differing feelings about AS and the decision not to pursue active treatment within the couple were common, with the men prioritising the avoidance of active treatment side effects, and SOs keen to minimise the chance of disease progression, feeling less concerned about potential treatment side effects. SO inclusion in all aspects of the PCa journey was of utmost importance. More emotional support is needed, and a reliable, professional point of contact between appointments would be beneficial.

Conclusion:
SOs of men on AS are involved, important, and potentially influential in patient acceptance, adherence and decision making. More research needs to be conducted to explore how SOs can be better included and supported.

I-18

Desperately Seeking Intersectionality in Digital Health Disparity Research: Narrative Review to Inform a Richer Theorization of Multiple Disadvantage

Ms Laiba Husain[1]
[1]University Of Oxford

Biography:
Laiba Husain is a second-year PhD student at the University of Oxford whose work focuses on digital health disparities. Her study is funded by THIS Institute and investigates how video consultations shape the experience of digital healthcare for disadvantaged patients in the UK. After graduating with a Bachelors in Biopsychology, Cognition and Neuroscience from the University of Michigan (USA), Laiba came to the UK as a Fulbright Scholar where she completed a Master's in Public Health at the University of Birmingham. Her wider interests include interdisciplinary and participatory approaches to research, social & health inequalities and empowerment of marginalised communities.

Background:
Digital consultations between patients and clinicians increased markedly during the COVID-19 pandemic, raising questions about equity.

Aims:
To review the literature on how multiple disadvantage-specifically, older age, lower socioeconomic status, and limited English proficiency-has been conceptualized, theorized, and studied empirically in relation to digital consultations.

Methods/Approach:
Using keyword and snowball searching, we identified relevant papers published between 2012 and 2022. Papers meeting the inclusion criteria were analyzed thematically and summarized, and their key findings were tabulated using GRADE-CERQual. Explanations for digital disparities were critically examined, and a subsequent search was undertaken to identify theoretical lenses on multiple disadvantage.

Results/Evaluation:
Empirical studies were mostly small, rapidly conducted, and briefly reported. Most studies identified marked digital disparities but lacked a strong theoretical lens. Proposed solutions focused on identifying and removing barriers, but the authors generally overlooked the pervasive impact of multiple layers of disadvantage. The data set included no theoretically informed studies that examined how different dimensions of disadvantage combined to affect digital health disparities. In our subsequent search, we identified 3 theoretical approaches that might help account for these digital disparities including Intersectionality Theory by Crenshaw which states that systems of oppression are inherently bound together, creating singular social experiences for people who bear the force of multiple adverse social structures.

Conclusions:
A limitation of our initial sample was the sparse and undertheorized nature of the primary literature. The lack of attention to how digital health disparities emerge and play out both within and across categories of disadvantage means that solutions proposed to date may be oversimplistic and insufficient. Theories of multiple disadvantage have bearing on digital health, and there may be others of relevance besides those discussed in this paper. We call for greater interdisciplinary dialogue between theoretical research on multiple disadvantage and empirical studies on digital health disparities.

I-19

Patient responses to opportunistic weight loss advice from their general practitioner, and their relationship to weight loss outcome

Ms Katharine Jarvis, Dr Paul Aveyard, Ms Madison Luick, Dr Madeline Tremblett
[1]University Of Oxford, Oxford, United Kingdom

Biography:
Katharine Jarvis is a medical student at the University of Oxford with an interest in public health and the management of obesity.

Background and Aims:
General practitioners (GPs) are told to opportunistically provide weight loss interventions to patients living with obesity but rarely do so. This is partly due to concerns that such discussions could be offensive or ineffective, but little is known about how patients respond to interventions. To understand what patients say in response to weight loss advice, we categorised the content of their responses during brief interventions with GPs.

Methods/Approach:
Qualitative content analysis was applied to 98 audio recordings of consultations from the BWeL trial (Aveyard et al., 2016), in which GPs gave brief weight-loss interventions to patients living with obesity. Using data on patient weight loss at 12 months, the association between the categories identified and effective weight loss action was analysed.

Results/Evaluation:
Four key categories in patient responses were identified: (1) perceived barriers to weight loss, (2) intended weight loss action, (3) frustration and hopelessness, and (4) acknowledgement and accountability. A key finding was that those who repeatedly mentioned an intention to lose weight went on to do so (4.8% more body weight lost, p=0.008, 95% CI 1.24-8.41).

Conclusions:
GPs should focus on providing further support to patients who do not repeatedly state their intention to lose weight. Improved guidelines for GPs should also consider the moral and emotional aspects of weight management as these may contribute to patients feeling judged during interventions.

I-20

Researching together: putting PPIE co-researchers at the heart of research

Dr Jack Joyce[1], Carolyn Newbert[1], Dr Nicola Guess[1], Dr Caroline Mitchell[2], Dr Charlotte Albury[1]
[1]University Of Oxford, [2]University of Sheffield

Biography:
Jack B. Joyce is a Qualitative Researcher in Health Behaviours at the Nuffield Department of Primary Care Health Sciences at the University of Oxford. He is currently working on the NIHR-funded 'NewDAWN' project which **Aims:** to help more people achieve remission from type 2 diabetes. He previously worked on the 'Real Complaints' project at Ulster University.

Background:
The "NewDAWN" trial aims to develop a new treatment pathway for people with type 2 diabetes (T2D) to support remission. To be successful the pathway must reflect the actual experience of living with diabetes to work for as many different people as possible. To achieve this we incorporated patient public involvement and engagement (PPIE) and public co-researcher at the heart of the research to ensure that our work is person centred and grounded in the lived experience of diabetes. Here we build on participatory research reflections (e.g. Mikulak et al., 2021) to discuss the value, strengths and challenges of our collaboration between researchers and PPIE co-researchers.

Approach:
The development of the NewDAWN pathway involved detailed narrative interviews with people with type 2 diabetes. Interviews were led by an experienced qualitative researcher and a public co-researcher. The co-researcher was directly involved in sampling, designing interview questions, conducting interviews, iterating the interview design and supporting analysis.

Evaluation:
The researcher and co-researcher reflected on their roles and believe the overall quality of the research and its implementation were improved but is not without its challenges. The co-researcher offered strengths such as being able to ground interview questions in the actual experience of diabetes, and increased trustworthiness for participants. It was difficult to balance meaningful participation and access without unduly burdening them with work and training, and the extent of their involvement in co-producing analysis.

Conclusions and implications:
Including a co-researcher cemented the patient view at the heart of the NewDAWN pathway development. We firmly believe that challenges can be overcome through open communication and respecting the other's experience, knowledge and skills, and that public co-researchers can play a vitally important role in the quality and implementation of research. Democratising research is gold standard practice and co-research is one step in that direction.

I-21

Developing supportive conversations about type 2 diabetes: combining narrative interviews with patients and coaches using thematic analysis

Dr Jack Joyce[1], Carolyn Newbert[1], Dr Caroline Mitchell[2], Dr Charlotte Albury[1]
[1]University Of Oxford, , , [2]University of Sheffield

Biography:
Jack B. Joyce is a Qualitative Researcher in Health Behaviours at the Nuffield Department of Primary Care Health Sciences at the University of Oxford. He is currently working on the NIHR-funded 'NewDAWN' project which **Aims:** to help more people achieve remission from type 2 diabetes. He previously worked on the 'Real Complaints' project at Ulster University.

Background:
The "NewDAWN" trial **Aims:** to create a treatment pathway for people living with type two diabetes (T2D) to support remission. The pathway will be delivered by trained coaches who currently deliver NHS total diet replacement interventions. To understand how coaches can best support people on the pathway, we aimed to (a) understand the emotional impact of interventions, notions of success and failure, contextual factors that facilitate or hinder acceptance and perseverance, and (b) understand the capacity and desire to deliver the intervention. Results were used to create a 'script' for hub coaches to support patients.

Methods/Approach:
We conducted narrative interviews with people with T2D and semi-structured interviews with coaches at UK diabetes hubs. We recruited a maximum variation sample until we reached information power (Malterud et al., 2016). We used Thematic Analysis to identify patterns and learnings in each group (T2D and coaches) and iterated throughout to address gaps in the sample. Findings were compared to determine similarities and contradictions between the datasets.

Results/Evaluation:
Preliminary analysis of the patient data revealed a strong preference for being 'asked' rather than 'told'; for having diabetes explained; that "remission" is not commonly known or understood; that cultivating family/friend support is critical but patients lack knowledge on talking about diabetes; and experience feelings of failure despite successes. Coach data revealed similar feelings on cultivating support; explaining diabetes; and understanding the patient. Coaches also highlighted the significance of first meetings to establish a basis for future success.

Conclusions and implications:
Our coach script encourages patients' self-discovery, cultivating of support, and foregrounds their perspective. We emphasised 'soft landings' being key to success; that coaches can couch advice in personally relevant ways; and not to undermine the patient's self-learning. Combining two datasets from patient and provider assisted development of a more holistic and implementable intervention.

I-22

Using High-Fidelity Immersive Simulation in General Practice Education

Dr Kate King[1], Professor Mike Smith
[1]Academic Dept. Of Military General Practice, Birmingham, UK

Biography:
Kate King is a Royal Navy GP, trainer and academic, currently leading the Academic Department of Military General Practice. A longstanding educator, she has been the training programme director for Defence GP speciality training and helped develop a programme which bridged the gap between the RCGP curriculum and the extended role of a military GP. Current research is focused on alcohol behaviour change in military personnel.

Using immersive simulation has become a popular key educational approach throughout secondary healthcare education. Its use within general practice education is more limited and often confined to simulated patients and communication skills learning. Following the successful completion of the RCGP licensing exams, Defence GPs reported difficulties transitioning back to delivering general practice in a military environment, which demands knowledge and skills beyond that covered by the RCGP curriculum. The Academic Department of Military General Practice has used co-creative curriculum development to devise a residential training week to address the lack of preparedness Defence GPs felt; this culminates in a large scale high-fidelity immersive simulation exercise.

This poster describes an educational design and implementation process based on the "10 goal conditions" described by Issenberg (1) which focuses on the use of high-fidelity medical simulations to enhance effective learning and build resilience. The successes and failures of the approach are discussed from the perspective of the learners' and facilitators' feedback.

I-23

Implementation of emergency admission risk stratification: a multi-Methods/Approach: study of user experience

Mr Mark Kingston[1], Professor Helen Snooks[1], Dr Alison Porter[1], Professor Hayley Hutchings[1]
[1]Swansea University Medical School, Swansea, Wales

Biography:
Health services researcher with an interest in the primary and emergency care interface.

Background:
User experience (UX) studies are concerned with how end-users experience an innovation, which in turn is critical to adoption and effectiveness. Emergency admission risk stratification (EARS) tools have been developed and widely introduced into primary care (Kingston et al 2020) but no UX study has been reported. We aimed to address the gap by investigating the UX of an EARS tool (PRISM) following implementation in Wales. The study coincided with general practice contractual incentives (QOF) for proactive management of patients at risk of emergency admission.

Methods/Approach:
Multi-method UX study featuring interviews, questionnaire incorporating the System Usability Scale (SUS), and login data. Participants (n=30 GPs) had access to PRISM for ≥ nine months. I explored PRISM usability, how use affected practice and patient care, and future use intentions. Interviews were recorded, transcribed and analysed thematically. I analysed survey and SUS data using descriptive statistics.

Results/Evaluation:
Users reported that decisions to use PRISM were based mainly on fulfilling QOF requirements. Most applied it to a small number of patients for a short period. Despite requirements for patient/carer feedback to be incorporated into care management, there was little suggestion that this routinely occurred. Sharing or discussion of risk with patients was rare. The mean SUS score was 65.8 (n=27, 95% CI [59.13, 72.47]), below benchmark average. Barriers to use included usability associated with registration and login; server issues; time and resource constraints and doubts over the role of EARS (fit to practice). Logins diminished following the QOF period.

Conclusions:
I found that the experience of EARS users was heavily influenced by its usability, purpose, and related context. PRISM use was strongly associated with contractual work but not embedded into routine practice. The introduction of future clinical risk tools requires greater attention to user experience, and overcoming barriers to use.

I-24

Hypnotherapy for people living with IBS; what influences perceptions and effectiveness

Dr Matthew Krouwel[1]
[1]Univeristy of Birmingham, Birmingham , West Midlands

Biography:
Matthew Krouwel is a postdoc researcher with over twenty years' experience as a clinical hypnotherapist specialising in anxiety and functional disorders. His interests are primarily related to the use and development of clinical hypnotherapy for functional disorders.

Background:
Hypnotherapy is demonstrably effective in treating irritable bowel syndrome (IBS),(1, 2) a chronic functional condition, characterized by gastric pain.(3) However, hypnotherapy for IBS appears to be relatively little used by people living with the condition. Further, it is not known what combination of delivery factors best contribute to effectiveness.

Aims:
To identify the perceptions of people with IBS regarding hypnotherapy for their condition and to understand what factors in the delivery of hypnotherapy for IBS affect outcomes.

Methods/ Approach:
A mixed methods investigation was undertaken, consisting of a narrative review of the public's opinions of hypnosis and hypnotherapy, a thematic analysis of people with IBS's opinions of hypnotherapy, and a subgroup analysis of trials of hypnotherapy for IBS which explored factors determining effectiveness in hypnotherapy for IBS. The latter two pieces provided the basis of a subsequent survey of people with IBS to identify knowledge and acceptability of hypnotherapy for IBS.

Results/ Evaluation:
The narrative review found that the public were broadly positive towards hypnotherapy, conditional upon associations with conventional medicine or psychology. However, both the thematic analysis and the survey found that people with IBS were unaware of hypnotherapy for their condition, but they were open to it once introduced. The subgroup analysis of trials of hypnotherapy for IBS identified three delivery characteristics of a hypnotherapy for IBS intervention which were associated with effective outcomes: delivery to groups, weekly sessions and high-volume delivery.

Conclusion:
The findings show poor awareness of hypnotherapy for IBS and provide guidance for intervention delivery. A feasibility trial of recorded hypnotherapy for IBS developed from these findings is planned but the perspective of general practitioners on hypnotherapy is poorly understood. As they have a major role in advising patients about IBS management more research into this is needed first.

I-25

The experiences of remote consulting for people with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) and fibromyalgia in primary care

Dr Helen Leach[1], Dr Helen Atherton[1], Dr Abi Eccles[1], Prof Carolyn Chew-Graham[2]
[1]University of Warwick, Coventry, UK, [2]University of Keele, Keele, UK

Biography:
Dr Helen Leach is an Academic Clinical Fellow in General Practice. She works clinically in Herefordshire and undertakes her academic work at the University of Warwick. Helen's research interests include the relationships between clinicians and patients, the impact of digital and remote consulting, and the history of medicine.

Background:
Restrictions due to the Covid-19 pandemic resulted in a sudden shift to a predominantly remote consulting model in primary care from March 2020. Little evidence exists examining the experience of remote consulting for people living with chronic fatigue syndrome / myalgic encephalomyelitis (CFS/ME) or fibromyalgia (1,2), with the current literature focusing on the challenges faced by clinicians and people living with these conditions (3,4). Clinical guidance highlights the importance of building therapeutic relationships and personalising care, but it is unclear how this translates into a remote or virtual consulting space.

Aims:
This project will explore how people living with CFS/ME and fibromyalgia experience consulting remotely with a primary care clinician. Remote consulting includes synchronous and asynchronous methods such as e-consultation platforms, telephone, video, and email.

Method:
Qualitative study using semi-structured interviews. Data is analysed thematically using a Foucauldian theoretical framework. Participants have been recruited across the West Midlands from a range of backgrounds.

Results/Evaluation:
Final results are awaited. This poster presents some of the early data from the interviews for discussion. Preliminary themes that have arisen, including those from a PPI group assisting us in developing the topic guide, include a discourse in remote consulting being optimal for energy conservation versus building a therapeutic relationship with a known clinician.

Conclusion:
Remote consulting has presented new challenges for primary care, and it is important to identify which groups of patients are most suited. This study explores the views from a group of patients that are associated with some complexity, and complements the literature that explores the ability to deliver relationship-based care when consulting digitally or remotely. Recommendations from the findings will be created for use by patients and clinicians alike.

I-26

Identifying barriers and facilitators to the inclusion of UK care home residents in research: a scoping review

Ms Brittany Nocivelli[1], Dr Victoria Shepherd[1], Professor Kerry Hood[1], Professor Carolyn Wallace[2], Prof Fiona Wood[1]
[1]Cardiff University, [2]University of South Wales

Biography:
Research inclusivity is a specific interest of mine, focusing on the development of interventions which can support the inclusion of under-served populations in research. The inclusion of populations who are often excluded from research is extremely important so that these populations can benefit from research findings and outcomes.

My current research project focuses on engaging care home residents in research by identifying the barriers and facilitators to their inclusion and developing an intervention to support residents' decision-making and advance planning for research.

Background:
As populations are expected to live long, older adults will have more complex health and social care needs with many living in care homes. Despite the growth in care home populations, care home residents are often excluded from research that could potentially benefit their care.

Aims: The aims of this scoping review were to explore resident-related barriers and facilitators to including older people living in UK care homes in research and to identify potential interventions which could modify such barriers.

Method:
The 6-stage scoping review methodology framework proposed by Arksey and O'Malley guided this review. Five electronic databases (MedLine, PsychINFO, Scopus, Web of Science, CINAHL) and grey literature were searched, using search strategies developed for this review. Identified articles were screened, and those deemed relevant were collated, summarised, and reported using a thematic analysis approach.

Results/Evaluation:
90 reports were eligible for inclusion and were synthesised into 7 themes and related subthemes: (1) research design; (2) eligibility criteria; (3) communication; (4) care home staff and environment; (5) preference-based decisions; (6) relationships; and (7) understanding and beliefs about research. Conclusions. A number of recurring barriers and facilitators to the inclusion of care home residents in research are reported. However, isolating resident-related barriers was complex as both direct and indirect factors must be considered as influential. Further research is required to explore the interaction between the direct and indirect barriers and facilitators to the inclusion of UK care home residents in research.

I-27

The “embedded researcher” model: facilitating research in primary care

Dr Tomasina M Oh[1], Professor Richard Byng[1]
[1]University Of Plymouth, Plymouth, England

Biography:
Tomasina Oh is Associate Professor and Dementia Care Programme Lead at the University of Plymouth and NIHR PenARC Dementia Fellow. She is interested in how to (i) support people with dementia and their carers in a range of settings and (ii) improve the experience of death particularly for those with reduced agency. Her work also includes exploring person-centred ways to recruit people with dementia who may lack capacity to consent (in-person or remotely) as well as research designs in circumstances where the randomised control trial is not appropriate.

Background:
One advantage of primary care engaging in research is enhanced patient care1,2,3. However in 2019/20 only 35% of all GP practices in the UK were research active4.

Aims:
D-PACT (Dementia PersonAlised Care Team) is an NIHR-funded programme examining the potential value and impact of a specially trained Dementia Support Worker based in primary care. Here we share how we addressed some of the barriers to research identified in the National Institute for Health and Care Research (NIHR) Clinical Research Network (CRN)’s Primary Care Strategy (2021) like workload, lack of time and clear structure around research governance4.

Approach:
We applied an adapted “embedded researcher” model in our recruitment, aimed at increasing recruitment in under-served areas (e.g. low income) in a trial setting and improving research coverage. Our adapted model incorporated mechanisms to reduce the administrative burden for practices and legally navigating governance “rules” which discourage GP participation.

Results/Evaluation:
59% of practices approached (and who responded) were recruited. Participant recruitment is ongoing and currently at 76 people with dementia and 69 carers (85.3% of our target), with 41.3% falling in the 1-4 range of the Index of Multiple Deprivation (1 = most deprived; 10 = least deprived).

Conclusion:
Flexibility, reassurance about data flow, using tools like MS Teams, presenting clear information little and often, and having a mix of experienced and research-naïve practices (recruiting at the PCN level if possible) were key. Learning points include allowing time for delays, and ensuring that everyone in the practice – especially receptionists – were aware of the study.

I-28

Patient facing online triage tools and clinician decision making: a systematic review.

Ms Armina Paule[1]
[1]University Of Warwick, Warwick, United Kingdom

Biography:
PhD candidate at Primary Care Research Unit in Warwick Medical School. I have 6 years of experience working in healthcare roles in different roles including clinical roles, and working in national guideline development in RCOG and NICE. I have a masters degree in Health Informatics from the University of Leeds

Background:
Triage tools in primary care involves gathering information about patients' clinical needs to decide on the appropriate next step in their treatment pathway. There is a growing interest from policy makers in the UK in patient facing online triage tools. It is envisaged that digital triage output supports the primary care clinicians in prioritising clinical decisions for patients where delays in care would be critical.

Aims:
To conduct a systematic review on how primary care clinicians make clinical decisions when using the output from online triage tools.

Methods/Approach:
Medline (Ovid SP), Embase (Ovid SP), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Web of Science and SCOPUS search databases were searched for publications between 2002 and 2022, where at least the abstract is in English. Quality assessment of studies that meet the inclusion criteria will be carried out using the Mixed Methods Appraisal Tool version 2018 [1], to suit the inclusion of studies with different designs (qualitative, quantitative and mixed methods). The results of data extraction and critical appraisal will be summarised and analysed using narrative synthesis approach. This will cover four main components for data synthesis: (1) theoretical model development, (2) preliminary synthesis development by organising data from included studies, (3) exploring the correlation between the results of included studies, (4) robustness of synthesis assessment [2].

Results/Evaluation:
Current progress of the systematic review will be presented

Conclusion:
This review will provide assessment and comparison of the use of the output from patient facing online tirage tool to support clinical decision making across different countries. Additionally, the inclusion of different study designs will allow for covering various perspectives of the research area. Finally, this review will be able to identify areas for further research and propose further development to the tools and of policies needed.

I-29

Does dietary advice based on food allergy tests improve disease control in children with eczema? Trial of food allergy IgE tests for Eczema Relief (TIGER) study protocol

Prof Matthew Ridd[1], Dr Stephanie MacNeill[1], Miss Yumeng Liu[1], Professor Miriam Santer[2], Dr Tom Blakeman[3], Dr Hannah Wardman[3], Dr Ingrid Muller[2], Professor Joanna Coast[1], Dr Kirsty Garfield[1], Dr Robert Boyle[4], Dr Rosan Meyer[4], Dr Isabel Skypala[5], Dr Shoba Dawson[1], Ms Hannah Morgans[6], Dr Julie Clayton[1], Prof Sara Brown, Prof Hywel Williams
[1]University of Bristol, Bristol, United Kingdom, [2]University of Southampton, Southampton, United Kingdom, [3]University of Manchester, Manchester, United Kingdom, [4]Imperial College London, London, United Kingdom, [5]Royal Brompton & Harefield Hospitals, London, United Kingdom, [6]Patient and public representative, , , [7]University of Nottingham, Nottingham, United Kingdom, [8]University of Edinburgh, Edinburgh, United Kingdom

Biography:
Matthew Ridd (@riddmj) is a GP in Portishead, North Somerset; and Professor of Primary Health Care at the University of Bristol, UK. His research interests include skin and allergy problems diagnosed and managed in primary care, with a focus on childhood eczema.

Background: Many parents worry that a food allergy is the underlying cause for their child's eczema and ask doctors about allergy tests.(1) Most GPs refer to a specialist for these but wait times are long and use of allergy tests varies.(2) A previous trial suggested that infants with eczema who have a positive allergy test for egg may benefit from an egg-free diet, but a larger, better-designed study is needed.(3)

Aims: To determine the clinical and cost effectiveness of test-guided dietary advice versus standard care, for eczema management.

Methods/Approach: Pragmatic, multi-centre, parallel group, individually randomised controlled trial, with internal pilot and nested economic and process evaluation. Children (<2 years) with mild or worse eczema will be recruited from ~84 GP surgeries and randomised 1:1 to comparator or intervention groups. All participants will receive our "Good eczema care" leaflet. Those in the intervention group will also undergo skin prick tests to milk, wheat, egg and soy, and advised to eliminate any foods which test positive for a trial period.

Results/Evaluation: 493 participants will be followed up over 36 weeks. The primary outcome is eczema control, measured by the parent completed RECAP, collected four-weekly over 24 weeks. Secondary outcomes include: eczema symptoms; quality of life; adverse events; breastfeeding status and diet; growth; parental anxiety.

The primary analysis will be a multilevel mixed model framework with observations over time nested within participants. A cost-utility analysis will compare quality-adjusted life years (QALYs) gained for the child and main carer to costs incurred by the NHS. A nested process evaluation will employ qualitative and quantitative methods to assess intervention fidelity, clarify causal mechanisms, and identify contextual factors associated with variation in outcomes.

Conclusions:
This study will fill an evidence gap of importance to patients and carers, and reduce variation in practice and associated harms.

I-30

Exploring patient, informal carer and care professional perspectives to understand the key clinical and non-clinical needs for optimal care in people with multiple long term conditions (MLTC)

Dr Glenn Simpson[1]
[1]University of Southampton, Southampton, United Kingdom

Biography:
I am an experienced qualitative researcher with a growing involvement in mixed methods studies. Research interests include social and environmental determinants of health, integrated care and multiple long term conditions. Over my career I have worked in a number of UK academic institutions. I am currently working on the NIHR funded study 'The Development and Validation of Population Clusters for Integrating Health and Social Care', at the University of Southampton. This work is using machine learning to identify clusters of diseases on the basis of social factors, such as mobility and finances, as well as health and biological markers.

Background:
Multiple long term conditions (MLTC) are the co-occurrence of two or more chronic long-term conditions. Whilst numerous studies have examined specific aspects of healthcare and social care needs associated with MLTC, there has been limited research exploring the diverse range of clinical and non-clinical care needs of this patient cohort from the varied standpoints of patients, informal carers and health and care professionals of professionals. By understanding the experiences of patients, informal carers and professional care providers and analysing together these perspectives, it is possible to gain a fuller and more comprehensive picture of the wide-ranging and complex care needs of this patient cohort.

Aims:
To elicit and explore patient, informal carer and care professional perspectives, to identify what are the key clinical and non-clinical needs for optimal care in people with MLTC.

Methods/ Approach:
A qualitative method was used. Specifically, this involved semi-structured interviews were conducted with a representative sample of 29 patients, informal carers and care professionals, using video-link or telephone. Inductive reflexive thematic analysis was used to analyse and interpret the data.

Results/Evaluation:
A range of clinical and non-clinical care needs were identified including: supporting patient self-management of conditions; support informal carer involvement in care decisions; limited knowledge of MLTC among care professionals; and addressing the mental health and socioeconomic needs of individuals. Improvements to optimise care included: a need for a person-centred care approach; improved care professional understanding of MLTC care needs; involvement of informal carers in care decisions; promoting patient self-management of conditions; and increased consideration given to non-clinical care needs.

Conclusions:
Typically, individuals with MLTC have a complex and diverse range of clinical and non-clinical care needs. This requires a holistic and coordinated care approach, enabling care to be tailored to the personal care needs of individuals with MLTC.

I-31

Title- Association of autoimmune diseases and adverse pregnancy outcomes: an umbrella review

Dr Megha Singh1, Mr Steven Wambua1, Dr. Siang Ing Lee1, Dr. Kelvin Okoth1, Zhaonan Wang1 Professor Krishnarajah Nirantharakumar1 Dr Francesca Crowe1
1-Institute of Applied Health Research, University of Birmingham, Birmingham, UK

Biography:
Dr.Megha Singh is a researcher with a particular interest in maternal multimorbidity with a particular focus on autoimmune conditions and bidirectional association with pregnancy.

Background:
The prevalence of autoimmune conditions(AI) like systemic lupus erythematosus(SLE) is twofold higher in women, especially in the reproductive age group. Hence it becomes important to know the effects on pregnancy outcomes.

Aims:
To consolidates the findings of systematic reviews in a comprehensive document stating the association of 15 AI conditions and 16 adverse pregnancy outcomes.

Methods/Approach:
Medline, Embase, and Cochrane databases searched from inception to May 2022. Screening, data extraction, and quality appraisal were done by two independent reviewers. Data was synthesised with both narrative and quantitative methods.

Results/Evaluation:
33 reviews were include. Maternal outcomes-It was observed is a high odds of miscarriage in women with Sjögren's syndrome; RR 8.85(3.10-25.26), SLE; OR 4.90 (3.10-25.26), Thyroid autoimmunity; OR 2.70(1.00-3.65), or systemic sclerosis; OR1.60(1.22-2.22). Pre-eclampsia in women with T1DM; OR 4.19(3.08-5.71), SLE; OR 3.20(2.54-4.20), or systemic sclerosis; OR 2.20(2.10-4.53). Significant association of Gestational diabetes mellitus in women with Inflammatory bowel disease (IBD); OR2.96(1.47-5.98) or thyroid autoimmunity; OR 1.49(1.07-2.07) when compared with women without these conditions. Neonatal outcomes-Significant association of intra-uterine growth restriction in women with systemic sclerosis; OR 3.20(2.21-4.54) or coeliac disease; OR1.71(1.36-2.14). Small for gestational age babies in women with SLE; OR2.49(1.88-3.31) or rheumatoid arthritis; OR1.49(1.22-1.82). Stillbirth and preterm birth were seen to be significantly associated with T1DM or SLE with OR 3.97(3.44-4.58), OR 4.36(3.72-5.12) and OR 16.90(3.02-94.40), OR 2.79(2.07-3.77) respectively. Significant association of stillbirth was also observed in women with Sjögren's syndrome; RR 2.27(1.46-3.52), systemic sclerosis; OR 2.40(1.14-4.86). Low birth weight babies may be born to mothers with SLE; (OR 5.95 (4.54-7.80), T1DM; OR 3.80(2.2.16-6.56) or IBD; OR 2.25(1.37-3.69). T1DM in women was seen to have protective significance with small for gestational age outcome OR 0.68(0.56-0.83).

Conclusion:
Pregnancy with Autoimmune conditions is high risk pregnancy and further research is required to establish pre-pregnancy protocols for counseling and screening to manage them.

I-32

The risk of immune-mediated inflammatory diseases following exposure to childhood maltreatment: a retrospective cohort study using UK primary care data

Mr Liam Snook[1], Ms Sonica Minhas[1], Ms Vrinda Nadda[2], Mr Ben Hammond[1], Mr Krishna Gokhale[1], Prof Julie Taylor[3], Prof Caroline Bradbury-Jones[3], Prof Siddhartha Bandyopadhyay[4], Prof Krishnarajah Nirantharakumar[1], Dr Nicola Adderley[1], Dr Joht Singh Chandan[1]
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Biography:
Liam Snook is a 4th-Year Medical Student at the University of Birmingham with an interest in Public Health and Medical Education. Liam recently completed an intercalated degree in Public Health and Population Sciences, conducting a research project investigating the risk of developing autoimmune conditions following exposure to childhood maltreatment.

Background:
Childhood maltreatment is a public health issue that is associated with immune dysregulation (1). This can predispose individuals to the development of immune-mediated inflammatory disease (IMIDs), which is associated with significant morbidity and mortality (2,3).

Aims:
We aimed to investigate the association between childhood maltreatment and immune-mediated inflammatory disorders.

Methods/Approach:
We conducted a population-based retrospective matched open cohort study using a UK primary care database between 1st January 1995 and 31st January 2021. Clinical codes were used to identify patients exposed to childhood maltreatment who were matched by general practice (GP), age, and sex to up to four unexposed patients. Cox regression analysis was used to evaluate the risk of developing IMIDs (inflammatory bowel disease, coeliac disease, rheumatoid arthritis, psoriasis, multiple sclerosis, systemic lupus erythematosus) during follow-up in the exposed versus unexposed groups.

Results/Evaluation:
256,130 exposed patients were matched to 712,478 unexposed patients. Those exposed to childhood maltreatment were 1) at an increased risk of developing Rheumatoid arthritis (aHR 1·39; 95% CI 1·12-1·74) and Psoriasis (aHR 1·16; 95% CI 1·10-1·23), 2) not statistically significantly at risk of developing inflammatory bowel disease (aHR 0·87; 95% CI 0·75-1·00), multiple sclerosis (aHR 1·07; 95% CI 0·77-1·49) and systemic lupus erythematosus (aHR 1·28; 95% CI 0·89-1·85) and 3) at a reduced risk of coeliac disease (aHR 0·74; 95% CI 0·62-0·88) compared to the unexposed group.

Interpretations:
Childhood maltreatment is estimated to affect one in five children in the UK (4); therefore, an increased risk of developing rheumatoid arthritis and psoriasis represents a substantial contribution to the burden of IMIDs. Implementation of broad public health approaches to prevent and detect childhood maltreatment and its negative downstream consequences, such as, IMID development, is essential.

I-33

Patients with low socio-economic status (SES): what are their perceptions and experiences of mental health provision within primary care? A critical review of the literature

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Biography:
Katy is a GP Trainee (ST2) and Academic Clinical Fellow with the Community and Primary Care Research Group in Plymouth, England.

She has previously worked as a Lecturer at the University of Plymouth but is now an Early Career Researcher in Primary Care in her role as an Academic Clinical Fellow.

Background:
Low socio-economic status (SES) can be defined as having lower income and reduced cultural capital in relation to others' social positioning[1]. People from low SES backgrounds are three times more likely to be affected by mental illness[2]. Community settings tend to be the first place for patients to access mental healthcare.

Aims:
To establish how patients from lower SES backgrounds understand mental illness and experience community mental health provision.

Methods/Approach:
A critical review of the literature was undertaken, eleven databases were searched, and four studies were deemed suitable for inclusion.

Results/Evaluation:
The studies originated from Canada, France, Ireland, and USA. Two were mixed-methods and two were qualitative.

Two highlighted how participants specifically linked their low SES to their mental illness[3,4]. Participants displayed beliefs around the inevitability of mental illness due to past trauma, negative coping strategies and ongoing social and economic stressors. Some participants viewed mental illness as their norm which further meant they felt untreatable[3,5].

Across all the studies, participants felt isolated and stigmatised because of their mental illness and low SES, resulting in reduced willingness to seek mental health support. When they did, some felt as if clinicians could not relate to their social situation, and that there was a lack of empathy and understanding towards them, resulting in negative experiences of mental health provision.

Specifically, some participants felt as if medication was overprescribed, and that they received a worse quality of care because of their low SES. However, participants felt more able to talk to clinicians who were community-focused and had a good understanding of the community's needs[3].

Conclusions:
Patients from lower SES backgrounds with mental illness perceive and experience a discernible substandard quality of community mental health provision. More research is required from a UK-specific setting to enhance transferability to our own communities.

I-34

A scoping systematic review of the literature relating to the role and educational requirements of paramedics working within primary care.

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Biography:
Marc Gildas Thomas is a Senior Lecturer within the Paramedic Science academic team and is Deputy Programme Director for the BSc (Hons) Paramedic Science at Swansea University. He is an Advanced Paramedic Practitioner (APP) with extensive experience working as part of multidisciplinary teams within emergency, pre-hospital, unscheduled and primary care environments.

Marc has worked within primary care for several years and is currently working towards a professional doctorate within Swansea University Medical School researching the role and educational requirements of paramedics within primary care worldwide.

Background:
Currently health services are under increased strain with a shortage of doctors and an aging population who are in poorer health. In the UK and internationally, there is an increasing trend for allied health professionals, including paramedics, to take on new roles within primary care settings. In 2019, the Department of Health allocated £720m to introduce 20,000 new primary care workers in England by 2023/24 and recognised the critical role of the paramedic in this 'new system' to move beyond traditional pre-hospital emergency care and conveyance. This approach is not unique to England, with many countries looking towards this model of care, including Wales.

Aims:
• Provide a synopsis of worldwide peer reviewed published research including identified UK government published documents and guidelines (grey literature)
• Explore the role of the paramedic working within primary care worldwide, via a scoping systematic literature review
• Explore current educational training/requirements for paramedics to enter the primary care sector of healthcare worldwide

Methods/Approach:
• 31 worldwide peer reviewed published research papers reviewed
• 12 key UK reports/documents/grey literature reviewed
• Data extraction and critical appraisal tools were used

Results/Evaluation:
• Multiple roles of paramedics working within primary care, heterogeneous level of educational standard and experience
• No specific scope of practice of primary care paramedics, lack of standardisation of this role
• Gap in the literature relating to paramedics' involvement in primary care within the UK between 2007 - 2013
• Collaborative Multi-Disciplinary Team working recommended

Conclusions:
• Lack of clarity or standardisation of the primary care paramedic role
• No clearly defined scope of practice for primary care paramedics
• Many different routes for entry into primary care for paramedics, with varied levels of education and experience
• Future planned study to follow on from this scoping systematic literature review

I-35

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

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Biography:
Julian Treadwell is a GP and NIHR Doctoral Research Fellow.
His interests include evidence-based practice, polypharmacy and multimorbidity, overdiagnosis and overtreatment and the role of clincial guidelines in practice. This work represents the main output of his doctoral research with Prof. Trish Greenhalgh as lead supervisor.

Background:
GPs regularly prescribe lifelong treatments for long-term conditions, supported by clinical guidelines and encouraged by performance measures. However, GPs have a poor understanding of the absolute benefits and harms of these treatments, impairing their ability to engage in genuine shared decision making or optimally manage polypharmacy1,2. There are few easily accessible and understandable sources of this kind of quantitative information.

Aims:
To produce a novel website to communicate understandable, usable information to GPs on the benefits and harms of treatments for long-term conditions, in a way which will be usable and useful in everyday clinical practice.

Methods/ Approach:
Patient and Public Involvement with an Expert and Patient Steering Committee.
Qualitative Interview study with GPs2.

Participatory co-design / Research-by-design methods. Included a joint application design workshop, multiple cycles of iterative user-testing, focus groups and pair-writing.
User-centred Content Design methods

A pragmatic evidence searching, review, collation and curation process, drawing principally on NICE and Cochrane evidence reviews.

Evaluation study using online GP focus groups including clinical vignette-based questionnaires and open discussion.

Results/Evaluation:
A new website, gpevidence.org (launch 01/02/2022) has been developed providing evidence on treatments for 12 common long-term conditions.
It employs graphic design and "content-designed" textual information within an information architecture mapping to GPs' practice and mental models.
User-testing and preliminary evaluation have shown it successfully communicates complex evidence about the benefits and harms of treatments to GPs in a way that is understood and which will be usable and useful in practice.

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

I-36

Evidence on the sustainability of telemedicine in outpatient and primary care during the first two years of the COVID-19 pandemic: a global scoping review.

Ms Daniela Valdes[1], Prof Jeremy Dale[2], Prof Rob Procter[1], Dr Rachel Spencer[2], Shanker, Mensah, Bockaire, Ibrahim[2], Ms Ioana Lazar[3], Ms Ghofran Hijazi[1], Hamid ZOLFAGHARINIA,[4]
[1]Warwick Computer Science Department, , UK, [2]Warwick Medical School, , UK, [3]Warwick Manufacturing Group, , , [4]NHS Birmingham Community Healthcare Trust

Biography:
Daniela has a portfolio carer as PhD student in Warwick University, Department of Computer Science and as Director of Digital Transformation in an NHS Trust. Between 2017-2022 Daniela worked in Primary Care with NHS England and as CEO of at scale Primary Care providers in London and nation-wide. During the pandemic she experienced an epiphany brought by the accelerated transformation and move towards telemedicine and shortly after losing her job, which led her to her portfolio career. She is passionate about digital transformation, its risks and benefits and that transpires in her research, professional and entrepreneurial efforts.

Background:
The rapid implementation of telemedicine during the early stages of the COVID-19 pandemic raises questions about impacts and sustainability of this intervention.

Objective:
Identify immediate experiences and impacts on patients and clinicians across the globe of this transformation, focusing on: Patient Experience, Clinician-Patient relationship, and Health Inequalities. Verify whether initial drivers of implementation support sustainability.

Methods/Approach:
Followed a published protocol. Abstracts and grey literature extracts were mapped against a healthcare technology adoption framework. We undertook qualitative content analysis against sociotechnical grounded theory.

Results/Evaluation:
134 texts met our criteria, of which 27.6% were grey literature. The texts identified had a global scope. We found 49% reported no specific population group, with population groups split by age and sex in 29% and 14% of texts respectively. Concept-wise, 42% combined two of the concepts studied, while 21% touch upon Clinician-Patient relationship only, 19% on patient experience only, and 8% on health inequalities only, with the remainder combining all three. Patient experience reflected positive patient satisfaction and sustained access at the time of lockdowns. Clinician-Patient Relationship was more nuanced and reflected impacts on the interaction and quality of the encounter. We found gaps in evidence which made it difficult to pinpoint impacts on health inequalities on specific groups, with some evidence on negative impacts on those at the fringe of social and health systems. Mapping to the NASSS framework identified 93% of texts had a reference to the sustainability of the innovation with moderately positive comments.

Conclusions: The sustainability of telemedicine is less clear once restrictions ease. Overwhelmingly positive patient satisfaction (from those who completed a digital encounter) and cautious optimism from clinicians in terms of quality are markers of sustainability. Of concern is the limited evidence on the healthcare experience of those who were disenfranchised by the move to telemedicine.

I-37

Protocol of systematic review and meta-analyses of the predictive performance of the Seattle Heart Failure Model and the Meta-analysis Global Group in Chronic Heart Failure Risk Score

Dr Kathryn Taylor, Dr Clare Taylor, Dr Nicholas Jones, Ms Nia Roberts, Dr Dominik Roth, Mr Philip Heesen, Dr Hugo Mari-Aguilar, Mr Nicolas Nyaba, Mr Jacob Taylor, Ms Bettina Wandl, John Burden, Robert McNabb, Rachel Garrard, Professor Rafael Perera, Professor Richard Hobbs, Dr Maria Vazquez Montes
[1]University Of Oxford, Oxford, UK

Biography:
Medical Statistician. Experienced in systematic reviews and meta-analysis, methods, practice and teaching, of interventional, diagnostic accuracy and predictive model studies of populations with chronic diseases.

Background:
Heart failure (HF) is currently a major public health problem with rising prevalence [1,2]. The outlook for patients is uncertain with an overall 50% mortality rate at five years following a HF diagnosis [3]. Survival risk scores can help clinicians to have patient-centred discussions around prognosis, medicine optimisation and end of life care. However, these models have not been widely accepted into clinical practice. It is not clear which model is best and external validation studies can produce conflicting evidence. The Seattle Heart Failure Model (SHFM) [4] and the Meta-analysis Global Group in Chronic Heart Failure (MAGGIC) Risk Score [5] have been externally validated in multiple populations, but their overall performance has not been evaluated.

Aims:
We aim to review, compare and summarise, with meta-analysis, the accuracy of the SHFM and MAGGIC models in predicting survival.

Methods/Approach:
We will search Medline, EMBASE, Science Citation Index and Scopus for external validations of adult populations of all types of HF, in all settings, and predictions of mortality at one year or over. We will then screen and extract data in duplicate, using piloted extraction forms incorporating the Critical Appraisal and Data Extraction for Systematic Reviews of Prediction Modelling studies (CHARMS) checklist. Predictive performance data will be discrimination (correct classification of those with and without the outcome) and calibration (generating predicted probabilities similar to observed probabilities). We aim to use random effects meta-analysis, restricted maximum likelihood estimation, and the Hartung-Knapp-Sidik-Jonkman method to calculate 95% confidence intervals. We will perform pre-defined subgroup analyses using meta-regression and evaluate risk of bias by the Prediction model Risk Of Bias ASsessment (PROBAST) Tool.

Conclusions:
We hope that this evidence will help inform the debate on whether these models are reliable for use in clinical practice to improve the management of people with HF.

I-38

Predictive RIsk Stratification Models: AssessmenT of Implementation Consequences (PRISMATIC2) Protocol

Dr Victoria Williams[1], Professor Helen Snooks[1], Professor Alan Watkins[1], Professor Christopher Burton[2], Prof Jeremy Dale[4], Jan Davies[1], Dr Bridie Evans[1], Dr Jenna Jones[1], Mr Mark Kingston[1], Rashmi Kumar[1], Dr Bernadette Sewell[1], Professor Emma Wallace[4]
[1]Swansea University Medical School, Swansea, UK, [2]Canterbury Christ Church University, Canterbury, UK, [3]University of Warwick, Coventry, UK, [4]University College Cork, Cork, Ireland

Biography:
Victoria is the study manager for PRISMATIC 2 and an experienced qualitative researcher. She is a research officer in the Health Services Research Team, at Swansea University Medical School and worked on the qualitative arm of the original PRISMATIC study. More recently, she has worked on a number of studies, most recently an evaluation of shielding in Wales and a study of the emergency triage protocols for suspected COVID-19.

Numbers of emergency hospital admissions have risen over the past decade. Emergency admissions can be associated with adverse outcomes, including functional decline and hospital acquired infections. Software that produces scores for patients' risk of emergency hospital admission has been introduced, supported by National Health Service (NHS) policy. It was hoped that this would lead to reduced admissions as GPs arrange community support to those at risk of hospitalisation. Our PRISMATIC evaluation in South Wales found that emergency admissions to hospital, emergency department (ED) attendances and days spent in hospital increased following implementation of risk prediction software. It is unclear if this occurred elsewhere, or what the mechanisms for change were.

Aims:
1. Assess the effects and costs of introducing emergency admission predictive risk stratification tools across England
2. Investigate how GPs change their practice in relation to managing risk when the software is introduced
3. Understand patients' views on communication of risk scores by GPs.

We will perform interrupted time series analysis of data on emergency admissions, ED attendances and days spent in hospital between 2010 and 2021, and link in the dates when predictive risk stratification was introduced in each area.

We will investigate GP decision-making in detail at a small number (n=16) of practices, in eight contrasting former CCG areas. We will interview GPs and other primary care staff (n=48) to explore whether they changed their decision making when the risk prediction software became available. We will also conduct two focus groups with patients (n=~16) and patient interviews (n=16) to explore their experiences and discuss how hearing about their own risk may affect their views and health behaviours, including self-care.

PRISMATIC2 will give policymakers a better understanding of the effects of predictive risk software on costs, processes and outcomes of care across a range of settings.

V-01

Wessex REACH: Improving primary care services through research capacity building and access to training support across Wessex.

Dr Eunice Aroyewun[1], Dr Emma King[2], Professor Issy Reading[3], Professor Catherine Bowen[4], Kelly Adams[5], Dr Kinda Ibrahim[6], Dr Emily Lyness[1], Professor Hazel Everitt[1]
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Biography:
Dr Eunice Aroyewun is a Senior Research Assistant at the University of Southampton. She is the lead for the Wessex REACH Initiative, a National Institute of Health Research (NIHR) supported research capacity building programme. As an early career researcher, she has managed several health-related research involving collaboration with a wide range of stakeholders, including a multi-country study in Africa investigating severe typhoid in collaboration with the International Vaccine Institute, South-Korea. Her research interests include child protection and adolescent mental health. She has special interest in improving the health and well-being of orphans and vulnerable children in LMICs.

Background:
High quality research is needed to improve clinical practice. Novel local and regional initiatives are required to complement the work of R&D departments to train/support early career researchers (ECRs) including those in academic primary care.

The Wessex REACH initiative funded by NIHR launched in June 2021 as a pioneer geographical Incubator to support and develop ECRs across the region.

Aims:
To facilitate the development of health and care-related researchers across the Wessex region.

Objectives:
• To scope current provision of training and support across the region.
• To develop better provision and signposting for career support/training activities.
• To build a Wessex-wide local research community through networking/mentorship to offer support and share best practice.

Approach:
Current Wessex training opportunities were identified through a survey with 23 organisations and nine organisations participated in interviews to identify gaps. Data was analysed using SPSS V-28 and thematic analysis.

An accessible single hub of resources – the Wessex REACH website was developed with stakeholders to highlight training, mentoring, networking and funding opportunities.

A regular newsletter is distributed to spotlight Wessex organisations and celebrate their achievements.

An informal mentoring scheme has been developed to be accessible to anyone who is interested in research within the region.

Opportunities for collaboration are facilitated between research focussed organisations through locally organised lunch meetings.

Evaluation:
Wessex REACH has been well received and is building emerging and established links with stakeholders such as RDS SC, CRN, CTU, HEI, NHS Trusts and Local Council for wider dissemination of resources and sharing best practice. An evaluation survey for feedback is underway.

Conclusion:
The Wessex REACH initiative is a successful example of increased regional collaboration and visibility of research training and development opportunities. This improved access and support will help develop a future generation of researchers in health and social care.

V-02

Associations of inter-arm blood pressure difference with treatment response in newly treated hypertension

Dr Christopher Clark[1], Dr Andrew Jordan[2,3,4], Ms Christine Anning[3], Ms Lindsay Wilkes[3], Ms Claire Ball[3], Ms Nicola Pamphilon[3], Prof Nicholas Bellenger[3,4,5], Prof Angela Shore[3,4], Prof Andrew Sharp[3,5,6]
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Biography:
Chris has longstanding research interests in primary care cardiovascular disease, especially hypertension. He has a range of advisory roles including NICE cardiovascular guideline committees. He is a rural GP and chairs the RCGP Rural Forum Steering Group.

Background:
Inter-arm differences (IAD) in systolic blood pressure (SBP) predict future cardiovascular mortality and morbidity.[1] IAD varies between measures and gets smaller with repeated measures.[2] The relationship of IAD to response to antihypertensive treatment is unknown.

Aims:
To examine associations of IAD with BP treatment response over 18 weeks in treatment-naïve adults with moderate to severe hypertension.

Methods/ Approach:
We previously reported that nurse-led accelerated stepwise management of treatment-naïve grade II/III hypertension is feasible, safe and effective, achieving control of SBP to < 140 mmHg for 76% after 18 weeks.[3] Using this cohort, univariable associations of IAD (mean of 8 simultaneous BP measurements) with vascular and clinical indices, and with BP change on treatment, were examined with mixed-effects linear regression models. Candidate univariable indices ($p<0.2$) entered multivariable modelling. Regression modelling of change in IAD was undertaken. All analyses adjusted for age, sex and entry SBP.

Results/ Evaluation:
For 52 participants (mean age 59; 42% female), mean (standard deviation: SD) entry SBP was 171 (13.9) mmHg falling, after protocol-led treatment intensification,[3] to 131 (10.7) mmHg at 18 weeks; mean systolic IAD was 4.5 (4.2) mmHg at entry and 3.9 (4.3) mmHg at 18 weeks ($p=0.28$). In final adjusted models, IAD at entry was associated with handedness, height, body mass index, smoking and absence of pedal pulses. Greater reduction of SBP from entry to 18 weeks was associated with lower entry IAD, greater SD of daytime ambulatory BP, smoking history and handedness. Adjusted change in IAD over 18 weeks was correlated with falls in SBP (Adjusted $R2 = 0.56$).

Conclusions:
These data associate greater systolic IAD with reduced response to intensive BP lowering, and correlate reduction in IAD with change in BP. Slower BP target achievement can carry prognostic implications,[4] suggesting one possible mechanism whereby IAD might predict future mortality.

V-03

The development of a core outcome set for studies of pregnant women with multimorbidity

Dr Siang Ing Lee[1], Dr Stephanie Hanley[1], Ms Zoe Vowles[2], Ms Rachel Plachcinski[3], Ms Ngawai Moss[3], Dr Megha Singh[1], Dr Chris Gale[4], Prof Shakila Thangaratinam[1], Prof Krishnarajah Nirantharakumar[1], Dr Mairead Black[5]
[1]University Of Birmingham, , , [2]Guy's and St. Thomas' NHS Foundation Trust, , , [3]Patient and public representative, , , [4]Imperial College London, , , [5]University of Aberdeen, ,
Biography:
Clinical research fellow with MuM-PreDiCT, Public Health Registrar, CCT-ed in General Practice.

Background:
Heterogeneity in reported outcomes can limit the synthesis of research evidence. A core outcome set informs what outcomes are important and should be measured as minimum in all future studies.

Aims:
We report the development of a core outcome set applicable to observational and interventional studies of pregnant women with multimorbidity.

Methods/Approach:
We developed the core outcome set in four stages: (i) a systematic literature search, (ii) three focus groups with UK stakeholders, (iii) two rounds of Delphi surveys with international stakeholders, and (iv) an international virtual consensus meeting conducted with nominal group technique to discuss equivocal outcomes [1]. Stakeholders included women with multimorbidity and experience of pregnancy in the last five years, or are planning a pregnancy, their partners, health or social care professionals and researchers.

Results/Evaluation:
Twenty-six studies were included in the systematic literature search (2017 to 2021) reporting 185 outcomes. Thematic analysis of the focus groups added a further 28 outcomes. Two hundred and nine stakeholders completed the first Delphi survey; 116 stakeholders completed the second Delphi survey where 45 outcomes reached Consensus In (≥70% of all participants rating an outcome as Critically Important). Thirteen stakeholders joined the virtual consensus meeting and agreed on adding seven more outcomes. The final core outcome set included 52 outcomes: 25 maternal and 27 children's outcomes. It included outcomes from all stages of pregnancy (antenatal, peripartum, postpartum and longer-term) and children's life course (fetal, neonatal, infant, longer-term).

Conclusions:
Multimorbidity in pregnancy is a new and complex clinical research area. Following a rigorous process this complexity was meaningfully reduced to a core outcome set that balances the views of a diverse stakeholder group. Despite overlap with existing core outcome sets for pregnancy [2,3], there were outcomes that were specific to pregnant women with multimorbidity, mostly in relation to their long-term conditions.

V-04

Prescribing selective serotonin reuptake inhibitors (SSRIs) for women of reproductive age, during pregnancy or breastfeeding: a systematic review of local formulary guidance in England and Wales.

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[1]Primary Care Research Centre, University of Southampton, Southampton, United Kingdom, [2]Hampshire Hospitals NHS Foundation Trust , , United Kingdom, [3]Wolfson Institute of Poulation Health, Queen Mary University of London, London, United Kingdom

Biography:
Dr Lovegrove is an Academic Clinical Fellow in Primary Care at the University of Southampton. Her areas of interest include women's health, prescribing safety, chronic pain and multimorbidity.

Background:
Depression is the second most common chronic condition affecting women of reproductive age and this population are frequently prescribed selective serotonin reuptake inhibitors (SSRIs).(1-3) When SSRIs are used during pregnancy, they can potentially cause congenital malformations, post-partum haemorrhage (PPH) and persistent pulmonary hypertension in the newborn (PPHN).(4,5) Local guidance for prescribers should reflect these risks so they can be conveyed to women of reproductive age if they are prescribed SSRIs. In UK primary care, prescribing formularies are the main mechanism by which prescribers are provided with local medicines advice.

Aims:
To compare all prescribing formularies in England and Wales, with respect to prescribing SSRIs in women of reproductive age and/or during pregnancy and breastfeeding.

Methods/ Approach:
A systematic keyword search of all Clinical Commissioning Group (CCG) websites in England (later termed Integrated Care Boards (ICBs)) and Local Health Board (LHB) websites in Wales was undertaken over one year from December 2021 to identify local prescribing formularies. Data was extracted on formulary structure and prescribing guidance for SSRIs in women of reproductive age, during pregnancy and breastfeeding.

Results / Evaluation:
74 individual prescribing formularies were reviewed. 14.9% (11/74) provided links to the Medicines and Healthcare Regulatory products Agency (MHRA) guidance on congenital abnormalities associated with the SSRIs fluoxetine or paroxetine, 28.4% (21/74) to guidance on PPH risk and 1.4% (1/74) to guidance on PPHN. 12.2% (9/74), 23% (17/74) and 21.6% (16/74) of formularies provided their own local guidance for women of reproductive age, during pregnancy and breastfeeding respectively, which often contradicted national prescribing recommendations.

Conclusions:
A minority of local prescribing formularies provided guidance on prescribing SSRIs in women of reproductive age. Guidance was often conflicting, haphazardly located or outdated. This may result in poorly informed prescribers and therefore women, and increased risk of unintentional SSRI exposure during pregnancy.

V-05

Patient engagement with and experiences of virtual group interventions for prevention and management of common chronic physical conditions: a mixed-methods systematic review

Ms Charlotte Reburn[1], Dr Emma Cockcroft[1], Dr Sinéad McDonagh[1], Ms Laura Hollands[1], Dr Jane R Smith[1]
[1]University Of Exeter

Biography:
Dr Jane Smith joined the University of Exeter's Primary Care Research Group as a Senior Lecturer (Education & Research) in June 2017. Prior to that she worked as a Research Fellow and then Senior Research Fellow in Psychology Applied to Health, and since joining the University of Exeter Medical School in November 2012 has contributed to teaching and led and supported research focussed on the development and evaluation of evidence-based behaviour change interventions to prevent and manage chronic illness.

Background:
In recent years, virtual group-based interventions have been increasingly adopted in primary care for supporting prevention or management of chronic physical conditions such as type 1 and 2 diabetes mellitus, due to adaptations to support access to care (1-3). Participants may engage with and experience these novel interventions in distinctive ways. Exploring how participants have received these interventions in the past is important for understanding how they can be improved.

This review aims to explore participant engagement with, and experiences of, virtual group interventions, to optimise their potential future use in primary care.

Methods/Approach:
We searched MEDLINE, Embase, APA PsycINFO, and CINAHL from database conception until April 2022, for virtual group interventions supporting prevention or management for common chronic physical conditions, according to a pre-defined protocol. Studies were screened independently by two reviewers and arbitrated by a third if required. Data on study types, settings, participant characteristics, and disease focus, as well as outcomes capturing engagement, experiences and impacts are being extracted. Full findings will be synthesised using the convergent integrated approach to mixed-Methods/Approach: synthesis (4).

Results/Evaluation:
19 studies reporting on 17 interventions were included, with over 50% based in the USA. The most common chronic physical conditions targeted were overweight or obesity (7 studies), type 1 diabetes (3 studies), and cardiovascular-related conditions (2 studies). Interventions were all group videoconferencing-based. Common markers of engagement included attendance and attrition rates, sometimes broken down by population group. Common descriptions of experience drew on interview transcripts and questionnaire responses.

Conclusions and implications:
This systematic review explores the engagement and experiences of individuals participating in virtual group interventions for preventing or managing common chronic physical conditions. With increased understanding of participants' experiences of such interventions, we can help to shape how these interventions are delivered, to maximise benefits for participants.

V-06

Exploring the impact of comorbidities on cancer outcomes and routes to diagnosis; a retrospective cohort study

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Biography:
Dr Mounce is a health services researcher, statistician and data scientist. He is based in the Department of Health and Community Sciences at Exeter, a member of the NIHR School for Primary Care Research. His work has focussed on the impacts of multimorbidity, and the facilitation of earlier cancer diagnoses. He co-leads an investigation of how pre-existing conditions may lead to disadvantage in the cancer diagnostic process, as part of the Spotting Cancer Among Comorbidities NIHR programme grant (SPOCC).

Background:
NHS England has prioritised increasing the proportion of patients diagnosed early with cancer as part of the NHS Long Term Plan. The rising prevalence of chronic conditions, however, may complicate the cancer diagnostic process.

Aims:
We investigated whether patients with pre-existing conditions were more likely to experience disadvantage in outcomes of the cancer diagnostic process.

Methods/Approach:
We used linked primary care (Clinical Practice Research Datalink), and cancer registration (NCRAS) data. Patients aged 40+ diagnosed with any incident cancer during 2012-2018 were included. The Cambridge Multimorbidity score was used to calculate multimorbidity burden. We used logistic regression to investigate which patient groups (comorbidities, age, gender, smoking history, and deprivation level) were more likely to be diagnosed with advanced-stage cancer, die within 30 days of cancer diagnosis, be diagnosed after an emergency presentation or after receiving a two-week-wait referral.

Results/Evaluation:
288,297 patients were included. There was evidence that all outcomes were independently associated with age, deprivation, and comorbidity burden ($p<0.001$), with older, more deprived patients more likely to die within 30 days of diagnosis, have an emergency presentation or be diagnosed at late-stage. Patients with higher multimorbidity burden were more likely to die within 30 days, or have emergency presentations, but less likely to be diagnosed at advanced-stage or after two-week-wait referrals. Associations between multimorbidity burden and outcomes varied for individual cancers, but no evidence was found that increasing multimorbidity burden was associated with advanced-stage for any individual cancer site.

Conclusions:
Although some patient groups were more likely to have worse outcomes, patients with multi-morbidity were more likely to be diagnosed early and less likely to be diagnosed after emergency presentation or die within 30 days of diagnosis. Potentially, regular monitoring of a chronic condition may provide opportunities to detect cancer earlier through increased surveillance.

V-07

Planning a mixed-Methods/Approach: study of attendance for suspected cancer investigations in people with anxiety and/or depression

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Biography:
Sarah Price is a health services researcher based at University of Exeter with a focus on early diagnosis of cancer.

Background:
Each year, 5%-7% of urgent suspected-cancer referrals are not attended, with anxiety/depression a possible cause. The 1-year mortality risk is 31.1% for non-attenders, versus 19.2% otherwise.[1] There are >2.2 million suspected-cancer referrals annually,[2] and 14% of adults in England have anxiety and/or depression.[3]

Aims:
In research starting in September 2023, we will:
• Quantify associations between anxiety and/or depression and suspected-cancer referral appointment non-attendance
• Test if any differences in cancer stage and 1-year survival between attenders and non-attenders are explained by anxiety and/or depression
• Explore the experiences, perspectives, needs, and priorities ("attributes") of people with anxiety and/or depression when deciding to attend their appointment
• Collate a prioritised list attributes and their characteristics for later development and validation of a survey instrument for use in discrete-choice experiments.[4]

Methods/Approach:
Quantitative analyses of linked observational data (Clinical Practice Research Datalink, cancer registry and Hospital Episode Statistics data) of adults aged ≥40 invited to an urgent suspected-cancer appointment before their cancer diagnosis in 2012–2018. Analyses will test associations between anxiety and/or depression and referral attendance. Mediation analysis will test for differences in stage and 1-year survival between attenders and non-attenders attributable to anxiety and/or depression. Analyses will adjust for deprivation, age, sex, cancer site, referral year and other co-variates following triangulation with the qualitative work. The qualitative study will recruit a purposeful sample from five geographically varied general practices via The Southwest Clinical Research Network. In-depth and semi-structured interviews will identify attributes that affect people's appointment attendance. Attributes will be grouped into distinct categories, and selected for incorporation into a future discrete-choice survey instrument. The qualitative work will be informed by the quantitative study and ongoing PPI input.

Evaluation/ Conclusions:
These results will underpin future development of a survey instrument that will be validated before use in future discrete choice work.

V-08

Derivation and internal validation of a HIV risk score for primary care in the United Kingdom: a retrospective cohort study using IQVIA Medical Research Data (IMRD) database

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Biography:
Benhildah N Rumbwere Dube is a part time PhD student at University of Birmingham. She is undertaking a research aimed at increasing identification of eligible patients for HIV testing in primary care setting through derivation and internal validation of HIV risk score using a electronic primary care records.

Benhildah completed a Master of Public Health (Epidemiology and statistics) from the University of Liverpool in 2013. She is currently working as a Senior Public Health Intelligence Specialist in South East England.

Background:
Early diagnosis of HIV is important because ARTs are more effective if initiated early, late HIV diagnosis is linked to high morbidity and mortality, onward transmission and increased health and social care costs. One setting for earlier diagnosis is primary care.

Aims:
To develop and validate a prediction model in primary care to identify patients likely to be HIV positive.

Methods/Approach:
A retrospective cohort study was undertaken of the adult population aged ≥18 years, registered in IMRD (January 2004 to December 2017). The predictor variables were demographic/socio-economic characteristics, lifestyle and clinical conditions. The outcome was confirmed diagnosis of HIV. A backward-stepwise multivariable Cox regression model was used to develop a prediction model and bootstrapping method was used in internal validation.

Results/Evaluation:
This study included 8,744,618 patients. Demographic/socio-economic characteristics strongly associated with HIV infection were female gender (HR, 1.19 (CI: 1.13-1.25)), being aged 25-34 (HR, 1.29 (CI: 1.21-1.39)), Black ethnicity, (HR 10.95 (CI: 10.08-11.89)) and mixed/other ethnicity (HR 2.55 (CI: 2.16 - 3.00)). Lifestyle factors most strongly associated with HIV were drug misuse (HR, 2.25 (CI: 2.01-2.52)) and sexual contact abroad (HR, 2.04 (CI: 1.76-2.36)). Clinical conditions included Kaposi's sarcoma (HR, 171.01 (CI: 89.06-328.37)), pneumocystis carinii (HR, 71.15 (CI: 10.09-501.98)), progressive multifocal leukoencephalopathy (HR, 55.89 (CI: 14.16-220.66)) and a range of other clinical predictors. The C-statistic from the prediction model was 0.74, higher than a previous case-control study [1]. The sensitivity at 0.25% cut-off was 37%, specificity was 84%, PPV of 0.16% and NPV of 99.95%.

Conclusion:
The model shows the possibility of increasing identification of HIV positive patients, given the low prevalence of HIV and the results from the sensitivity analysis. Hence, the prediction model could be useful in identifying patients at high risk of HIV infection in primary care so they can be offered earlier HIV diagnostic testing.

V-09

Point of care testing using FebriDx to improve antibiotic use for respiratory tract infections in primary care (PREFIX): a mixed Methods/Approach: feasibility study protocol

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[1]University Of Southampton

Biography:
NIHR Academic Clinical Fellow in General practice

Background:
Safely reducing unnecessary antibiotic prescriptions for lower respiratory tract infections (LRTIs) in primary care is key to tackling antibiotic resistance, however it can be challenging to clinically differentiate between viral and bacterial infections. FebriDx ® is a single-use, hand-held, point-of-care test that provides an indication of both viral (myxovirus resistance protein A) and bacterial (CRP) infection within 10 minutes. Secondary care data suggests FebriDx could be a clinically- and cost-effective method of reducing antibiotic prescribing, and data from primary care is urgently needed. In order to inform a funding application for a fully-powered randomised trial, we are performing a mixed-methods feasibility study to explore its potential clinical impact and facilitators/barriers to its use.

Aims:
To (1) explore the feasibility of using FebriDx to safely reduce antibiotics use for LRTI in primary care, and (2) explore the feasibility of conducting a future trial assessing the clinical impact, safety, and cost-effectiveness of FebriDx in UK primary care,

Methods/Approach:
Up to 300 patients will undergo FebriDx testing across 5-10 GP practices. In stage one, patients presenting with a LRTI (and very likely to receive antibiotics) will be invited to participate. Data will be collected before and after FebriDx testing, to asses for impact on clinical impression and antibiotic prescribing decisions, as well as test success rate, time-to-result and ease-of-use scores. Nasopharyngeal swabs will be taken for external validation (via viral PCR). In stage two, clinicians and patients (15-20 of each) will undertake semi-structured interviews to explore their views on the acceptability and clinical impact of FebriDx, and future trial design.

Results/Evaluation:
These results will provide valuable insight into the use of FebriDx in primary care, and to optimise design of a future fully-powered trial.

Conclusions:
We will present this protocol, as well as our preliminary results, at SWSAPC 2023.