School for Primary Care Research

Increasing the evidence base for primary care practice

ANNUAL TRAINEES EVENT
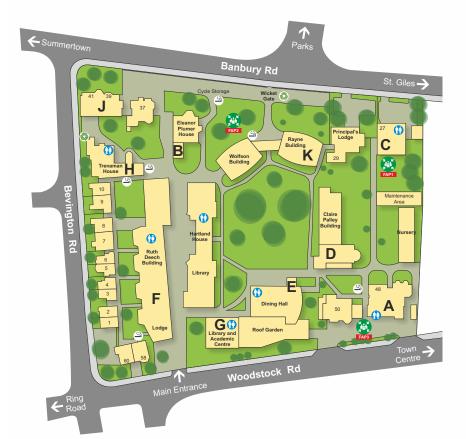
NHS
National Institute for Health Research

2018
St Anne's College
Oxford

St Anne's College
University of Oxford

KEY

A - Seminar Rooms 1, 2, 3, 4 & 5
B - Conference & Events Office
C - Seminar Room 6
D - Mary Ogilvie Lecture Theatre
E - Lower & Upper Common Rooms
F - Seminar Rooms 7, 8 & 9, & Tsuzuki Lecture Theatre
G - Seminar Rooms 10 & 11
H - STACS
J - College Bar
K - Accommodation Office & Domestic Bursar

- WC
- Fire Assembly Point
- Recycling Point
- Smoking Area

On arrival: Please leave luggage in the Porters' Lodge before making your way downstairs to the event in the Ruth Deech building. Check in time is lunchtime.

Checking out: Please bring luggage to leave in one of the seminar rooms.

Internet access: Eduroam

Social media: When tweeting, please use @NIHRSPCR and #spcrtrain18

WELCOME

Welcome to the 2018 SPCR Annual Trainees' Event and to St Anne's College, Oxford. One of the main aims of the School's capacity programme is to provide a strong foundation for future leaders in primary care research. We hope our two day event contributes to this by allowing the space to network and exchange ideas in a supportive and nurturing environment.

St Anne's College is one of the largest colleges at the University of Oxford and dates back to 1878. Read about the history: http://www.st-annes.ox.ac.uk/about/history

PROGRAMME

24 September   **DAY ONE**

10.00 – 11.00	Coffee, registration and elevator pitch checking (for day one and two)	Ruth Deech foyer (downstairs)
11.00 – 11.30	Welcome and introduction, explanation of elevator pitch timings and ice-breaker	Tsuzuki lecture theatre
11.30 - 12.15	Parallel session (45mins) • Writing for The Conversation. Clint Witchalls – Health and Medicine Editor • Using social media for dissemination and networking. Dan Richards-Doran and Charlotte Albury	Seminar Room 7 Seminar Room 8
12.15 - 1.30	Lunch, group photograph and check into rooms	
1.30 – 2.30	Elevator pitch session 1	Seminar Room 7 Seminar Room 8 Seminar Room 9
2.30 – 3.15	Parallel session (45mins) • Sue Ziebland (RfPB) • NIHR Academy 'Applying for NIHR fellowships' Nicola Melody	Seminar Room 7 Seminar Room 8
3.15 - 3.45	Refreshments and networking	
3.45 – 4.15	Developing research skills: How to make the most of your SPCR award. Stephen Weng	Tsuzuki lecture theatre
4.15 - 5.00	Maximising your research outputs. Carl Heneghan	Tsuzuki lecture theatre
5.00 - 6.30	Free time to explore Oxford	
7.00 – 9.00	Dinner	St Anne's Dining Hall Dress: Smart-casual

3.30 - 4.00   Training leads meeting. Radcliffe Primary Care (SPCR training leads only)

4.00 - 5.00   Board meeting. Radcliffe Primary Care (SPCR board members only)

25 September   **DAY TWO**

7.45 – 8.45	Breakfast and luggage to porter's lodge	St Anne's Dining Hall
9.00 – 9.45	Parallel session • ESWG: 'Involving public contributors in evidence synthesis' Ann-Marie Boylan • ESWG workshop 'realist approaches to health services research ' Geoff Wong	Seminar Room 7 Seminar Room 8
9.45 – 10.45	Elevator pitch session 2	Seminar Room 7 Seminar Room 8 Seminar Room 9
10.45 – 11.30	Refreshments and networking	
11.30 – 12.15	My personal career journey. Ashley Adamson	Tsuzuki lecture theatre
12.15 - 1.15	Lunch	
1.15 - 2.00	National Standards for Public Involvement. Paula Wray	Tsuzuki lecture theatre
1.15 – 1.30	Closing comments and prize presentation	Tsuzuki lecture theatre

Evidence Synthesis Working Group annual meeting, Seminar Room 5 (St Anne's).

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THANK YOU

Drs Sarah Knowles and Nathan Davies for judging the 'best blog' competition and Drs Paula Wray and Susan Hrisos for judging the 'best implentation of PPIE' competition.

Our programme committee Drs James Sheppard, Salman Waqar, Cini Bhanu, Buddhika Fernando, Georgina Fletcher, and Georgia Richards.

SPCR TRAINING LEADS

University of Bristol	Deborah Sharp, Rebecca Barnes and Alice Malpass
University of Cambridge	Fiona Walter
Keele University	Christian Mallen and Jo Protheroe
University of Manchester	Aneez Esmail
University of Newcastle	Barbara Hanratty
University of Nottingham	Nadeem Qureshi
University of Oxford	Paul Aveyard, Katherine Tucker and Gail Hayward
University of Southampton	Hazel Everitt
University College London	Kate Walters

SPCR DEPARTMENT LEADS

University of Bristol	Katrina Turner and John Macloed
University of Cambridge	Jonathan Mant
Keele University	Danielle van der Windt
University of Manchester	Peter Bower
University of Newcastle	Louise Robinson
University of Nottingham	Joe Kai
University of Oxford	Richard McManus
University of Southampton	Paul Little
University College London	Elizabeth Murray

Elevator pitch presentation schedule

	GROUP 1 SEMINAR 7	GROUP 2 SEMINAR 8	GROUP 3 SEMINAR 9
DAY 1 1.30 - 2.30	Rachel Dewar-Haggart Lucy Pocock Ben Fletcher Joanne Jordan Arnoupe Jhass Andrew Kingston Facilitators: Paul Aveyard, Barbara Hanratty	Charlotte Albury Ben Ainsworth Gemma Claire Ali Charlotte Archer Kelly Birtwell Bethany Bareham Facilitators: Nadeem Qureshi, Rebecca Barnes	Kate Ellis Buddhika Fernando Doug Hardman Helen Jarvis Fabian Sailer Yumna Masood Facilitators: Fiona Walter, Jo Protheroe
DAY 2 9.45 - 10.45	Chris Morton Bethan Treadgold Daniel Stow Georgia Richards Cini Bhanu Facilitators: Kate Walters, Hazel Everitt	Emma Parry Christos Grigoroglou Laurie Davies Barry Coughlan Kome Gbinigie Facilitators: Deborah Sharp, Gail Hayward	Athena Ip Becky Dennison Jamie Ross Gemma Spiers Facilitators: Katherine Tucker, Christian Mallen

Abstracts

Ben Ainsworth

EVALUATING A DIGITAL MINDFULNESS-BASED INTERVENTION IN A RANDOMISED-CONTROLLED FEASIBILITY TRIAL FOR PEOPLE WITH ASTHMA

Background

Mindfulness (meditation-based therapy facilitating adaptive mental/emotional responses) can improve quality of life for asthma patients although challenges remain about uptake and engagement. Digital interventions (DIs) may improve treatment access as an effective alternative to face-to-face psychotherapy.

Aim

We conducted a randomised controlled feasibility trial of 'Headspace', a digital mindfulness intervention.

Method

158 patients (36% male, age M 51.4, SD 14.9) were recruited from 16 local GP practices. 102 patients were randomised to Headspace and 58 to control. Participants completed online/postal questionnaires of quality of life (AQLQ), asthma control (ACQ), anxiety (HADS), enablement (PEI) and medication adherence (MARSA) at baseline, 6-week and 3-month follow-up. Intervention engagement was monitored and 20 patients were purposively sampled for an in-depth interview.

Results

Intervention engagement was very high (Logins M 24.2, range 0-192) 69% of patients in the intervention group logged in at least once, and 50% logged in 8+ times. 74% of patients completed the main outcome (AQLQ) at 3-months (6-week: 73%). Follow AQLQ scores were increased in the intervention group at 6-week (M AQLQ improvement = 0.35, 95% CIs 0.17-0.52) and 3-month (M AQLQ improvement = 0.39, 95% CIs 0.18-0.59) but not in the control group (M6wk=0.03, M¬3m¬=0.11). 13 patients withdrew from the study. Thematic interview analysis highlighted the accessibility of DIs and the importance of a focus on quality of life.

Conclusions

Our study findings shows that Headspace is an acceptable, feasible intervention that could improve quality of life for people with asthma, although a definitive randomized controlled trial is required.

Charlotte Albury

TELLING THE NEWS IN THE BWEL TRIAL: PRESENTING THE REFERRAL AS GOOD NEWS OR BAD NEWS AND IMPLICATIONS FOR PATIENT ACTION

Introduction

Brief interventions for weight loss in primary care have been shown to be effective. Audio recordings from the BWeL trial, where patients were offered a free referral to commercial weight management services (CWMS), show that there were vast differences in the way these interventions were delivered. We aimed to identify patterns of in-consultation communication associated with patient attendance at CWMS.

Methods

Conversation analysis (CA) was applied to audio recordings to explore how interventions were delivered. Relationships between lexical and non-lexical features of intervention delivery and patient CWMS attendance were then explored.

Results

GPs framed the referral as new, previously unknown, information, or 'news'. Conversation analysis showed that there were three news delivery formats used by GPs: (1)good (2)bad and (3)neutral. In bad news delivery GPs asserted the 'problems' of being overweight through word choice; non-lexical features; and turn design. Conversely in good news deliveries GPs used these same interactional resources to assert the 'benefits' of weight loss, whilst neutral news was neither positively or negatively valanced in its production. Statistical analyses showed that a good news delivery format was associated with patient attendance at their referral (OR 5.5, 95%CI= 2.59-12.5, p=<0.01).

Conclusion

When engaging in brief intervention referrals GPs should emphasise that they are 'good news'.

Gemma-Claire Ali

Introduction

Chronic physical conditions can negatively affect the mental wellbeing of both patients and the family and friends supporting them. Studies of unmet needs in these populations have identified a thirst for strategies to help patients and supporters to look after each other's mental wellbeing. We have conducted research to inform development of an evidence-based intervention facilitating mutual support for mental wellbeing in patients with chronic physical conditions and their supporters.

Method

Understanding of how to facilitate mutual support has been accumulated through: i) systematic review of dyadic interventions for patients and supporters; ii) review of systematic reviews of individual intervention RCTs for patients or supporters; and iii) individual and dyadic interviews with patients and supporters. Literature review findings are summarised through narrative synthesis. Interview transcripts are analysed using a combination of interpretative phenomenological analysis and the framework method. Findings are being synthesised to inform intervention development.

Results

The systematic review identified 34 eligible randomised trials and an additional 14 eligible studies. The review of reviews identified 39 systematic reviews. Findings highlight large discrepancies in the degree of research interest afforded to different conditions, but strong similarities in the types of interventions found to be effective across conditions. Interview findings highlight unmet mental wellbeing needs and intervention preferences.

Discussion

This work has enabled us to develop a relevant, acceptable and evidence-based intervention framework facilitating mutual support for mental wellbeing between patients with chronic physical conditions and their supporters. The proposed framework will be available for presentation at the trainees' event.

Charlotte Archer

PATIENTS' AND PRACTITIONERS' VIEWS ON DETECTING, DIAGNOSING AND MANAGING ANXIETY DISORDERS IN PRIMARY CARE.

Anxiety disorders are a common mental disorder seen in primary care, with a 40% increase in generalised anxiety disorder reported in the general population between 2007 and 2014. Whilst GP recording of anxiety symptoms has also increased, GP recording of anxiety diagnoses decreased between 1998 and 2008. It is not clear why there is a disparity between the increase seen in the general population and estimates based on GP recordings of anxiety disorders. It may be that GPs are reluctant to label patients with an anxiety disorder, but it is not clear whether this is the case as little is known about how GPs view the labelling and recording of anxiety, and their experience of discussing symptoms of anxiety with primary care patients. Alternatively, or in addition, it could relate to the fact that patients often feel reluctant to seek help for mental health problems, although to date no UK study has asked patients specifically about their views and experiences of seeking help for anxiety.

As part of my mixed-methods PhD, I will conduct a qualitative study interviewing patients, GPs, and IAPT practitioners, to understand how they view and experience the identification, diagnosis and management of anxiety disorders in primary care. The interviews will be analysed thematically to highlight and compare practitioners and patients' views of specific issues. Following on from this work, I will undertake a quantitative study focusing on the primary care prescribing for anxiety disorders.

Bethany Bareham

PROMOTING HEALTH AND WELLBEING IN LATER LIFE THROUGH HEALTHIER ALCOHOL USE: WORKING TO ADDRESS FACTORS SHAPING OLDER PEOPLE'S DRINKING

The highest rates of hospitalisations and deaths caused by alcohol misuse in the UK are amongst the older age group. Risks of harm from drinking increase with age, as alcohol affects health conditions and medications that are common in later life. However, drinking can play a central role in older people's social lives. These pros and cons must be balanced by older people, and the care providers supporting them. My doctoral study examined older adults' and care providers' perceptions of factors shaping drinking in later life. By understanding how older people's drinking practices are determined and influenced, potential strategies for intervention with harmful levels of use can be identified. This pitch focuses on avenues for further development in working to support older people to live healthier, more fulfilling lives in relation to their drinking. Risks from drinking become tangible to older people through their direct experiences or personally relevant recommendations. Exploring the impact of personalisation in consultations would further our understanding of these influences. In resource-constrained settings such as primary care, risk screening tools to help clinicians deliver more personalised care may be helpful. Interventions are needed to support older people to develop or maintain fulfilling social lives and prevent harm from drinking. Addressing the roles alcohol can play in later life and targeting factors which shape older people's drinking are crucial first steps in the development of health promoting interventions.

Cini Bhanu

Older people can be at risk of dehydration due to ageing-related physiological changes, swallowing or communication difficulties, environmental factors, acute illness and medications. Dehydration is associated with increased hospitalisation and mortality. There is little known about older people's views around hydration, their understanding of a healthy fluid intake and what support they might need to achieve this.

Qualitative study using semi-structured interviews with up to 40 community-dwelling older people aged ≥75 years, identified as malnourished or at risk of malnutrition, from GP practices in London. Interviews are

audio-recorded and transcribed verbatim and thematic analysis used to identify key emergent themes and their meaning.

Findings suggest that older people lack knowledge about a healthy fluid intake, reporting scarce or conflicting advice. Many were unaware thirst can diminish in later life and relied on thirst or habit as prompts to drink. Awareness of the need to increase fluid intake with hot weather and acute illness was variable. Barriers to achieving this included urinary incontinence and lack of thirst. High alcohol intake was reported amongst some – patterns established over years. Fluid and alcohol intake was not something they would discuss with their GP. Most were open to support from a trained health professional.

These findings highlight lack of awareness amongst older people about adequate hydration. Most do not discuss this with their GP but were open to support. This could be addressed through a potential primary care intervention to support maintaining a healthy fluid intake to prevent adverse outcomes related to dehydration.

Kelly Birtwell

Background and objective

Standard 8-week Mindfulness-based interventions (MBIs) improve wellbeing but can be challenging both to deliver and to participate in. Low-intensity MBIs, which are shorter and less demanding may provide health benefits to participants while requiring fewer resources to implement on a large scale. However, existing low-intensity MBIs have been developed on an ad-hoc basis with limited evidence of feasibility, acceptability or effectiveness.

The present research will develop a feasible and acceptable low-intensity mindfulness-based intervention, using a systematic and rigorous approach.

Method

The research will follow MRC guidance for developing and evaluating complex interventions.

Phase 1: Initial design. Review of existing evidence, online survey and 'course planning' activity for mindfulness teachers and course participants to obtain views on the important elements of MBIs.

Phase 2: Intervention development. A draft intervention and treatment manual will be created and discussed with focus groups comprising of mindfulness teachers and course participants. The intervention and manual will then be refined.

Phase 3: Intervention evaluation. A feasibility study will be conducted using process evaluation. Qualitative and quantitative data will be collected pre- and post-intervention. Quantitative data will be used to estimate parameters that will inform a sample size calculation for a future randomised controlled trial.

Discussion and conclusion

This programme of research will be informed by participant opinion throughout and will provide the foundation for a future randomised control trial. The resulting intervention may be of benefit to a range of organisations, including primary care, higher education, workplace and community settings.

Barry Coughlan

Understanding early developmental difficulties in children is a complex clinical activity. The range of symptom presentations is various and discrete psychiatric classifications share overlapping diagnostic criteria. Thus, making identification and assessment difficult and time-consuming. This is an issue at each level of assessment and is particularly relevant for the behaviourally defined developmental conditions, autism spectrum conditions (ASC), attention deficit hyperactivity disorder (ADHD), and attachment-related difficulties. Primary care services play an important role not only in early identification but also in initiating the referral conversation with the appropriate formal assessment service. Aim: This study explores how clinicians make decisions about the diagnosis of these conditions at each level of assessment. Method: Qualitative semi-structured interviews with NHS staff who hold the clinical responsibility for identification and diagnosis of these conditions (e.g. GPs, psychologists, psychiatrists). Interviews topics include differential diagnosis, referral pathways, and case conceptualization. Interviews are recorded, and data analysed using thematic analysis. Sample size will depend on information power. Implications: The data gleaned from this analysis will a) identify the pertinent features to be collected at a primary care level to assist with subsequent formal assessment b) capture the symptoms which clinicians consider differential in each case c) inform best practice guidelines d) highlight potential areas for training.

Laurie Davies

WHAT ADVERSE OUTCOMES ARE ASSOCIATED WITH POLYPHARMACY IN LATER LIFE? A SYSTEMATIC REVIEW OF REVIEWS.

Background

Polypharmacy is widespread amongst older adults in primary care and has many potential consequences for health and wellbeing. Adverse impacts include reduction in cognitive function, adverse drug events, reduced adherence, increased healthcare utilisation and mortality. Previous research has investigated multiple medication use in patients over 65 years, but a clear summary of the adverse effects on older patients (over 85 years), across a range of healthcare and residential settings, is needed.

Aim

To synthesise existing evidence on the adverse effects of polypharmacy in later life.

Methods

A systematic review of reviews and/or meta-analyses of observational studies in humans is being conducted across eleven bibliographic databases from 1990 to the present date. Records were independently screened by two reviewers using predefined criteria, and their data extracted into structured tables.

Results

43 reviews met the inclusion criteria. The adverse health, social, medicines management and healthcare utilisation outcomes from each included review will be presented narratively, with accompanying tables, forest plots and harvest plots.

Implications

Understanding the different ways in which polypharmacy may adversely affect older people will advance our understanding of how future interventions can optimise prescribing-related outcomes in later life.

Becky Dennison

VIEWS OF WOMEN WITH A HISTORY OF GESTATIONAL DIABETES ON SCREENING FOR TYPE 2 DIABETES POSTPARTUM: A SYSTEMATIC REVIEW AND QUALITATIVE SYNTHESIS

Introduction

A history of gestational diabetes (GDM) increases risk of type 2 diabetes (T2D) by an estimated seven times. As many as 50% of women do not attend recommended T2D screening at six weeks postpartum, nor beyond. Non-attenders tend to have more risk factors for T2D. We aim to synthesise current literature regarding the perceptions of women with previous GDM on postpartum glucose testing in order to understand the factors that influence attendance.

Methods

We searched five databases in September 2017 as part of a group of literature reviews concerning GDM. We included qualitative studies examining women's views and experiences of postpartum glucose testing/ T2D screening. Qualitative data are being analysed in NVivo 11 using thematic synthesis in order to develop descriptive then analytical themes. We are assessing the quality of each study against the Critical Appraisal Skills Programmes (CASP) checklist, and our confidence in each recommendation made using the GRADE-CERQual approach.

Results

From 23,160 citations, we have included 13 full-texts with a median of 19 participants. Most were set in high-income countries and all but one included interviews. Preliminary themes include: the inconvenience of testing; women's knowledge about their T2D risk and whether they wanted to know or feared the test result; and impression they received from their clinicians about the importance of testing.

Discussion

Our study will synthesise current understanding and identify key uncertainties concerning views about postpartum glucose testing. This will inform approaches to increase uptake, such as adjustment of testing protocols, to potentially improve women's long-term outcomes.

Rachel Dewar-Haggart

Between 2009 and 2013, the number of antidepressant prescriptions rose by 36%, while the prevalence of depression rose by only 3.9%, due to the rise in long-term use. Some patients have no evidence-based indications to continue long-term antidepressants, and could stop treatment. However, many are prepared to continue indefinitely. Patient beliefs, attitudes, and behaviours towards antidepressant treatment may be important in determining their use and subsequent depression management.

The PhD aims to investigate constructs of the Theory of Planned Behaviour and other psychological models of health behaviour in predicting the intentions of individuals with depression to continue or stop their long-term use of antidepressants, and whether these intentions are translated into actual behaviour. It aims to elicit patient beliefs about long-term antidepressant use and long-term depression management in primary care.

Over 200 patients from primary care practices receiving antidepressant treatment for 2 years or more have completed postal questionnaires concerning their beliefs about long-term antidepressant use, and their intentions to stop or continue treatment. Structural equation modelling will analyse the relationships between measured variables and latent constructs, to see if the theoretical models can explain patients' behaviour towards long-term antidepressant use. Qualitative interviews were conducted with a purposive sample of patients who completed the questionnaires, to further explore their understanding and views of their depression and current treatment.

The findings will illustrate patients' attitudes and behaviours towards long-term depression management in primary care. Findings may suggest strategies to reduce inappropriate antidepressant prescribing and encourage greater self-management of the illness.

Kate Ellis

WHAT FACTORS AFFECT NEW MUMS PHYSICAL ACTIVITY LEVELS?

Background

Within the first twelve months of childbirth, being physically active is beneficial for physical and mental health, yet many mothers report lower activity levels than women without children and evidence-based interventions are needed. The COM-B model proposes that individuals' capability, opportunity and motivation interact to result in behaviour.

Aim

Use the COM-B model to conduct a behavioural analysis of postnatal physical activity (PNPA) to inform the development of a PNPA intervention.

Methods

Semi-structured interviews followed a pre-prepared topic guide exploring COM-B model components and analysed using framework analysis. A survey, based on the self-evaluation of behaviour questionnaire, was adapted using PPI and refined using interview data. Survey participants rated their agreement with 22 statements relating to the COM-B components. Mean and 95% CI were calculated.

Results

The survey (n=158) identified time, tiredness, childcare, being part of a group, receiving healthcare professional advice, developing a habit and having more motivation as the key influencing factors. The interview data (n=16) also identified engaging in PA with other new mums, limited physical capability following a complicated birth, provision of child-friendly facilities and environments and social interaction, enjoyment and parental beliefs as motivational factors.

Conclusion

The behavioural analysis identifies what factors influence PNPA. Inconsistencies between the data sources suggest some factors influence behaviour on a population level and others at an individual level, demonstrating the need for tailored interventions. Future research will utilise the behaviour change wheel to develop the findings into an evidence-based intervention.

Buddhika Fernando

COSTS OF MEDICALLY UNEXPLAINED PHYSICAL SYMPTOMS (MUPS) IN PRIMARY CARE IN ENGLAND

Introduction

Evidence for physical disease cannot be found in 19% - 49% of patients presenting in primary care. Such MUPS significantly burden the NHS due to increased resource utilization. However, there is limited data and several gaps in the assessment of actual costs of MUPS in England: the oft-cited Bermingham study (2010) applies Dutch prevalence data to calculate costs for England and furthermore, in most research, costs are calculated under trial conditions. We aim to obtain a comprehensive understanding of the actual costs of MUPS in Primary Care in England.

Methods

In a two-pronged approach, we will:

(1) collate all MUS cost estimate details for England through a systematic literature review - search five main databases enhanced by reference chaining and key author searches

(2) Conduct a retrospective, longitudinal cohort study using electronic medical records (CiPCA data base of c.90,000 patients) where

- MUPS patients identified using 3 key criteria - age, GP visit frequency, no diagnosed organic disease · Identification validated by manual examination of patient data by researchers

- Identified patients tracked over 5 years re. visits, referrals, prescriptions within Primary Care, and,

- The costs per MUPS patient per year is estimated using standardised NHS costing data for a total cost estimate of MUPS.

Discussion

This will be the first study to identify MUPS patients from a large, consulting population, track them over a five-year period and estimate costs of MUPS in Primary Care in England under non-trial conditions.

Ben Fletcher

GENERAL PRACTICE BASED PHARMACISTS

In a report published in 2016 by the Kings Fund, UK general practice was described as being "in crisis", with increased workloads not matched by growth in funding or in workforce. The same report encouraged, as an immediate priority, the further development of the primary care workforce through the use of nurses, pharmacists and physician associates. In the current policy environment, NHS England is putting significant funding into the introduction of general practice-based pharmacists (GPBPs). Pharmacists have worked in general practices for a number of years, but never in a widespread and coordinated way. Since July 2015 NHS England have run a pilot where 490 clinical pharmacists have been placed in 650 general practices at a cost of £31 million. It was hoped that having GPBPs would allow GPs to "focus their skills where they are most needed, for example treating patients with complex conditions". The General Practice Forward View committed to a further £112 million investment, with the aim of placing a further 1,500 pharmacists in general practices by 2020.

Whilst introducing pharmacists is a common sense decision, it is unclear what the evidence base is for their effectiveness.

I am conducting systematic reviews of the effectiveness and acceptability of pharmacist interventions in general practice; exploring GP, patient and pharmacist experiences of the NHS pilot by conducting interviews/focus groups; and finally designing optimal general practice pharmacist services using a stated preference discrete choice experiment.

Kome Gbinigie

CLINICAL PREDICTORS OF SERIOUS BACTERIAL INFECTIONS IN OLDER ADULTS IN THE COMMUNITY: A SERIES OF SYSTEMATIC REVIEWS

Background

Older adults with serious bacterial infections can present with atypical symptoms and signs, making diagnosis difficult.

Aim

To determine the clinical features that help to predict serious bacterial infections in older adults in the community.

Methods

We conducted electronic searches of Medline and Medline in process, Embase and Web of Science, from inception up to September 2017. We included observational studies assessing the diagnostic accuracy of symptoms and signs in predicting different bacterial infections in older outpatients. Study quality was assessed using the QUADAS-2 tool.

Results

We identified 21 eligible studies of variable quality, with a total of 120,718 participants (range 65 to 102, 842), assessing the diagnostic accuracy of 66 unique symptoms and signs in predicting UTI, 30 unique symptoms and signs in predicting pneumonia and 5 unique symptoms and signs in predicting bacterial skin infections. Many symptoms and signs typically associated with UTI (e.g. nocturia, urgency and abnormal vital signs; +ve LRs ranging from 0.15 to 1.61) and pneumonia (e.g. cough, sputum production, pleuritic chest pain and crackles; +'ve LRs ranging from 0.94 to 1.05), were of limited use in older adults. The presence of wounds, pressure sores and skin ulcers help to diagnose bacterial skin infections.

Conclusions

The limited evidence of varying quality shows that a number of symptoms and signs traditionally associated with UTI and pneumonia may have little diagnostic value in older adult outpatients. There is insufficient evidence to inform the diagnosis of bacterial skin infections in older adults in the community.

Collaborators Dr José M. Ordóñez-Mena, Dr Thomas Fanshawe, Dr Annette Plüddemann, Professor Carl Heneghan

Christos Grigoroglou

PREVALENCE OF MENTAL ILLNESS IN PRIMARY CARE AND ITS ASSOCIATION WITH DEPRIVATION AND SOCIAL FRAGMENTATION AT SMALL-AREA LEVEL: A SPATIAL ANALYSIS IN ENGLAND

Background: Indicators of poor mental health across the UK suggest widening mental health inequalities. We aimed to spatially describe mental illness prevalence in England at small-area geographical level, as measured by prevalence of depression, serious mental illness (SMI) and antidepressant prescription volume in primary care records, and also how much of the variation in these measures was explained by deprivation, social fragmentation and other sociodemographic characteristics.

Methods

Information on prevalence of depression and SMI was obtained from the Quality and Outcomes framework (QOF) primary care administrative dataset for 2015/16 and the national dispensing dataset for 2015/16 and were assigned at small-area geographies in England. Linear regression models were fitted to examine ecological associations between deprivation, social fragmentation, other sociodemographic characteristics and mental illness prevalence. The spatial clustering of each outcome, for the whole of England and within each geographical region, was quantified using Moran's I.

Results

Mental illness prevalence varied within and between regions, with clusters of high prevalence identified across England. Our models explained 33.4% to 68.2% of variability in prevalence, but substantial variability between regions remained after adjusting for covariates. People living in socially cohesive and socially deprived areas were more likely to be diagnosed with depression, while people living in more socially fragmented and more socially deprived areas were more likely to be diagnosed with SMI. Small-area geographies with high proportions of 25-44 year olds had higher depression prevalence rates, and those with high proportions of 45-64 year olds had higher SMI prevalence rates. Urbanity was associated with higher prevalence for both conditions.

Conclusions

Our findings suggest that to tackle mental health inequalities attention needs to be targeted at localities that are more socially deprived . The role of social fragmentation warrants further investigation, and it is possible that depression remains undiagnosed in more socially fragmented areas. The wealth of routinely collected data can provide informative and robust evidence that will aid optimal resource allocation. If comparable data are available in other countries, similar methods could be deployed to identify high prevalence clusters and to target funding to areas of greater need.

Doug Hardman

WE SHOULD STOP TALKING ABOUT 'PLACEBO EFFECTS' IN GENERAL PRACTICE

Abstract

Experimental research suggests that 'placebos' may be useful in treating conditions common in general practice, including chronic pain, depression, and IBS. This has led to calls for the use of placebo treatment in the clinic. However, there is disagreement over the definition of a placebo, and therefore it is questionable what the central object of inquiry is in many of these experiments. Moreover, there is conflict between how placebos are understood by researchers, and how they are generally understood by healthcare professionals and patients. Researchers increasingly conceive of placebos as processes inherent in the therapeutic encounter, invoking background theories of ritual, meaning, embodiment, and enactivism. Whereas results from my systematic review of healthcare professionals' and patients' views suggest that both of those groups generally maintain an untenable definition of placebos as 'inert' substances having a 'psychological' effect. Despite some admirable attempts to rehabilitate the placebo concept from its illogical origins, this discrepancy suggests that once the term 'placebo' is stretched to its modern iteration, it has limited clinical use. Further, initial findings from my ethnographic study of a general practice in southern England suggest that, instead, the placebo concept is a confused way of understanding the distinction between the lifeworld and the medical system. And that the placebo concept obfuscates rather than illuminates how healing functions across this boundary. Potential treatment benefits inherent in the therapeutic encounter can, therefore, perhaps be better exploited by dropping the confusing and paradoxical placebo from the clinical lexicon.

Athena Ip

DEVELOPMENT OF A WEB-BASED BEHAVIOURAL INTERVENTION TO SUPPORT SELF-MANAGEMENT OF ACNE VULGARIS

Introduction

Acne vulgaris is a common condition with potentially substantial physical and psychological impact. First and second line treatments for acne are topical preparations but non-adherence is common. A substantial proportion of patients progress to oral antibiotics, associated with antibiotic resistance. A behavioural web-based intervention was developed to promote self-management of acne, specifically the appropriate use of topical preparations.

Methods

The intervention was developed using LifeGuide software and following the Person-Based Approach to intervention development. Intervention planning was informed by qualitative research. A secondary analysis of 24 HealthTalk.org interviews with young people with acne was carried out alongside a systematic review and synthesis of the qualitative literature. These studies enabled identification of key barriers and facilitators to the target behaviour to be incorporated into the intervention. Once developed, the intervention was further refined through think aloud interviews with 19 young people to explore user reactions to the intervention content.

Results

Theoretical mapping was carried out and key intervention features were developed to help overcome barriers and facilitators to acne self-management. For example, offering user choice wherever possible to promote autonomy and supporting people to formulate a personal goal. Qualitative think-aloud interviews enabled iterative refinement of the intervention to ensure it is acceptable and persuasive.

Discussion

The Person-Based Approach along with theory and evidence ensured that the intervention was acceptable and feasible, and that it addressed the barriers and facilitators expressed by the target population.

Helen Jarvis

Liver disease is the only chronic condition in the UK with increasing incidence and mortality rates. Non-Alcoholic Fatty Liver Disease (NAFLD) is the commonest cause of liver disease in Europe, but only a small proportion of people with NAFLD will go on to develop liver fibrosis. General practitioners (GPs) face the challenge of identifying which of the many patients at risk will go on to develop serious disease. Recent National Institute for Health and Care Excellence (NICE) guidelines on NAFLD highlighted this as an area requiring further research.

Method

A systematic review to investigate metabolic risk factors and the metabolic syndrome as predictors of disease severity in Non-alcoholic Fatty Liver Disease.

It is widely accepted that people with NAFLD also have metabolic risk factors. However, recent evidence syntheses for the NICE NAFLD guidance found no evidence on predictive factors for NASH/liver fibrosis. The aim of this review is to update the NICE reviews, and include a broader spectrum of evidence. NICE only considered randomised trials and cohort analyses in their search strategies and the searches were completed in 2015. In my review, I include data on adults over 18 at risk of NAFLD, the exposure will be metabolic risk factors that make up the metabolic syndrome and the outcome will be liver fibrosis/cirrhosis.

Results

I will present the search strategy and early results from this ongoing systematic review.

Arnoupe Jhass

A SYSTEMATIC REVIEW OF THE PREVALENCE OF SKIN AND SOFT TISSUE INFECTIONS AND SUBSEQUENT ANTIMICROBIAL USE IN LONG-TERM CARE FACILITIES

With population ageing, the use of long-term care facilities (LTCF) will continue to rise. Residency in a long-term care facility is associated with a higher risk of developing an infection and a higher risk of mortality with an infective cause. However, up to half of antibiotic use in long-term care facilities is estimated to be inappropriate, suggesting a large target for stewardship initiatives. Much of the available literature focusses on respiratory tract and urinary tract infections, which represent the two most prevalent infections. Skin and soft-tissue infections (SSTI) represent the third most prevalent cause.

However, existing prevalence studies lack the granular detail about the types of skin and soft-tissue infections. Therefore the aim of this systematic review is to establish a more accurate estimate of the prevalence of bacterial skin and soft tissue infections and whether the antibiotic use for this indication corresponds. To our knowledge, this is the first systematic approach to analysing the prevalence of SSTIs and the prevalence of antibiotic use in the LTCF setting.

Joanne Jordan

Background: Patients, clinicians and policymakers need high quality information regarding potential future outcomes from systematic reviews (SRs) on which to base healthcare decisions. Search strategies for SRs of prognosis research are challenging due to poor reporting and inconsistent indexing in electronic databases. A recent SR of search filters for retrieving prognosis research with published performance metrics showed high sensitivity, but poor precision. Consequently, researchers conducting prognosis SRs spend many hours screening titles and abstracts, which has an impact on amount of funding required.

Objective: First objective of my thesis is to evaluate performance of most promising search filters for identifying prognosis studies in Medline and EMBASE (OVID) in a real SR.

Methods: Search filters from the previous SR that report high sensitivity are combined with subject specific terms in a systematic review of predictors of unplanned hospital admissions in frail older people. Practical value of each filter is compared.

Results: Relative recall for each search filter when combined with the subject terms is presented as proportion of the relevant studies retrieved. Total number of references that need to be screened and Number Needed to Read (NNR) are also reported for each search filter combined with subject terms for this review. These performance metrics are compared to those in previously published studies.

Conclusions: Recommendations for the most efficient search filters currently available will be reported at the training day. This work forms first stage in a PhD that aims to explore if more efficient search filters to identify prognosis studies can be developed.

Andrew Kingston

DISABILITY AND DISEASE IN THE VERY OLD

Background

Little is known about disability progression in very old age despite this being vital for care planning. We investigate whether distinct trajectories of disability are evident from age 85 to 95 and which diseases are prognostic of worse disability outcomes.

Methods

The Newcastle 85+ Study recruited people born in 1921 through participating general practices in Newcastle and North Tyneside. Participants underwent a health assessment (HA) at baseline, 18, 36 60 and 120 months and a GP record review (GPRR) at baseline, 36, 60 and 120 months. Disability was measured via difficulty in 17 Activities of Daily Living. Trajectory identification was assessed by gender stratified, mortality adjusted, group-based trajectory modelling (GBTM) and the impact of GP diagnosed disease on trajectory membership explored (adjusting for confounding variables).

Findings

The analysis is ongoing; however, early indications suggest that men and women can be described by a five-group model. Three of which show gradually increasing levels of disability at different starting points at age 85. One group of men remain disability free over the ten-year interval. One group of women remain alive but severely persistently disabled. Further results will be presented exploring the impact of disease diagnosis on trajectory affiliation.

Conclusions

The findings from this analysis will provide important evidence to GPs on the disabling effects of disease diagnoses and to social care planners.

Yumna Masood

SHAMIL: BRITISH SOUTH ASIAN RECRUITMENT INTO MENTAL HEALTH RESEARCH IN THE UK

Background: Recruitment of ethnic communities to research is problematic, and researchers lack skills to recruit ethnic communities to clinical trials. Low cultural competence and limited resources discourage ethnic recruitment to trials.

Up till now, as there are is no cultural training available for research staff, therefore, it been proposed to have specialised training provisions which could equip researchers with the skills and the confidence to work with ethnic minorities leading to an increased ethnic recruitment.

A recruitment training programme called SHAMIL (Urdu & Arabic word means to "include") has been developed which is aimed at researchers and clinical research teams to help them increase minority participant's recruitment to mental health trials.

Aim: Assessing the acceptability and impact of SHAMIL intervention to increase participation of British South Asians in mental health trial.

Method: We have worked with the CHEMIST a NIHR PHR funded trial team and have developed multilingual versions of all their recruitment, baseline and outcome measures. The therapy manual has also been culturally adapted and these strategies will facilitate ethnic recruitment into this trial. We have also recruited 3 community pharmacies in Blackburn that will recruit and deliver the intervention. No results available at this stage.

Discussion: This SHAMIL-CHEMIST partnership provides a unique opportunity to develop a new model to enhance recruitment of ethnic minorities to clinical research. No such initiate has been developed in the past and our research team is breaking new grounds with possibilities of rolling out SHAMIL in future clinical trials.

Chris Morton

Introduction

Polymyalgia rheumatica (PMR) is a painful and disabling inflammatory disease that mainly presents in older people. Glucocorticoids are effective in controlling symptoms and previously 18-24 months was regarded as the typical duration of treatment, but evidence is emerging that many patients require longer than this. Given the long-term risk of adverse events associated with glucocorticoids it would be useful to know what factors predict need for long-term use in a primary care setting.

Methods

A systematic review of the prognosis for PMR has been performed, to identify predictors of long-term glucocorticoid use for the next stage of analysis. Studies included in the review either reported prognostic factors or compared outcomes between PMR patients and a control group. Data from the PMR cohort study (N=652) will now be used to assess the impact of a range of variables (e.g. pain and stiffness) on length of glucocorticoid treatment. Joint modelling of longitudinal and survival data will be used to investigate whether short-term trajectories of symptoms are better predictors of treatment duration than single measurements of these symptoms.

Results

A summary of the main findings from the systematic review will be presented at the meeting.

Discussion

Findings from this thesis will enable clinicians to identify patients who are unlikely to cease glucocorticoid treatment within two years, allowing glucocorticoid-sparing medication to be considered at an early stage,

minimising the risk of adverse events. Results will also help expand the limited pool of knowledge available to PMR patients on the prognosis for their condition.

Emma Parry

THE NATURAL HISTORY OF FLARE-UPS: A DAILY DIARY STUDY OF PATIENTS WITH, OR AT HIGH RISK OF, KNEE OSTEOARTHRITIS (OA)

Purpose

To determine, in a sample of community dwelling adults, the natural history of flare-ups in knee osteoarthritis (OA).

Methods

330 adults aged ≥45 years with a recent consultation for knee OA/arthralgia were invited to complete a daily pen- and-paper diary for up to 3 months. Average knee pain intensity in the past 24 hours (0-10NRS) was rated daily, along with pain quality, other symptoms, and interference with usual activities.

Flare-ups were defined as an increase in pain intensity of ≥2 points above participants' rating of their usual pain intensity, sustained for ≥2 consecutive. We calculated the rate of flare-ups in the sample as an incidence density per 100 person-days at risk and used descriptive statistics and plots to summarise duration and nature of flare-ups.

Results

67 participants (mean age 62.2 (SD 10.6); 55% female) completed at least one month of diaries. 30 participants experienced a total of 54 flare-ups (incidence density 1.09 flare-ups per 100 person-days). On average, flare-ups showed reductions in pain within 2 days followed by a longer, gradual return to 'usual' pain intensity . The pattern differed between individuals with the median time to resolution = 8 days (range: 2-30). During a flare-up participants were more likely to report several additional features compared to days when they were not in a flare: swelling (50% vs 35%), limping (64% vs 42%), stiffness (60% vs 26%), night pain (34% vs 10%). On a third of flare-up days, patients increased their pain medication. Despite this, on 15% of flare-up days, pain stopped usual activities.

Conclusions

Our small study with intensive longitudinal data collection suggests acute flare-ups may be experienced by a substantial number of patients. These episodes often last a week or longer, interfere with sleep and daily activities, and lead to increased analgesic use.

Lucy Pocock

Background

People at the end-of-life receive care from multiple teams and organisations. Continuity of care is important and a lack of information sharing is a barrier to the provision of quality end-of-life care.

Nationally, the drive to address this has been through electronic palliative care coordination systems (EPaCCS). Their purpose is to provide a shared record for health and social care professionals, with information about an individual approaching the end-of-life, including their care preferences.

Quantitative studies have shown striking differences in place of death with EPaCCS, but are potentially biased and confounded. Technology is not guaranteed to bring benefit and the initiation of an EPaCCS relies on healthcare professionals opening conversations about death and dying. Whether EPaCCS facilitate such conversations is unclear.

We don't know if EPaCCS improve, or simply document current, practice. Little research has been undertaken to understand how, and by whom, EPaCCS are being used and whether EPaCCS support patients' wishes. Rigorous research is needed to investigate to what extent EPaCCS influence services working together to support 'a good death'.

Aims

Describe the socio-demographic characteristics of patients who die with an EPaCCS record, their cause and place of death and compare these with patients without an EPaCCS record.

Explore the impact of an EPaCCS on the experience of receiving end-of-life care for patients and carers, and understand HCPs' views and experiences of utilising an EPaCCS to provide coordinate care.

Methods

A mixed-methods study, taking place in Bristol, North Somerset and South Gloucestershire, within a realist evaluation paradigm.

Georgia Richards

FACTORS AND VARIATION DRIVING THE INAPPROPRIATE PRESCRIBING OF OPIOID ANALGESICS IN PRIMARY CARE: A SYSTEMATIC REVIEW OF OBSERVATIONAL STUDIES

Objectives

The prescription of opioid analgesics is rising in communities of high-income countries. Some of this increase may be appropriately addressing the growing number of people living with pain. Yet, there is a lack of high-quality evidence to support the use of opioids for people with persistent pain. Importantly, patients receiving high-doses opioids (≥ 90 mg/day oral morphine equivalents, OME) for long durations may be experiencing more harms than potential benefits. Previous studies have focused disproportionately on demonstrating the increases in opioid prescribing without understanding why this increase has occurred. Therefore, we aim to systematically review the evidence to establish what factors are driving the inappropriate prescribing of opioid analgesics and potential variation in opioid prescribing practices in high-income countries.

Method

We searched MEDLINE, EMBASE and Web of Science using "primary care", "factors", "variation", "opioid", "prescribing" and derivatives of these. Two authors independently screened eligible articles, extracted data and assessed quality using the National Institute of Health (NIH) National Heart, Lung and Blood Institute Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies. Observational studies were included if they examined adults (aged ≥ 18) in high-income primary care with patients prescribed doses ≥ 90 mg/day OME.

Results

We identified 3,950 records after 4,421 duplicates were removed. 113 studies were screened for full-text inclusion and data is being extracted from 18 included studies. We anticipate to find a range of patient-, practitioner- and system-level factors that explain the high-dose prescribing of opioids in primary care.

Jamie Ross

Introduction

Evidence suggests that there are significant problems with patients engaging with diabetes self-management education (DSME), with less than 6% of patients attending. Barriers to patient attendance include a lack of enthusiasm, inadequate information provision and poor promotion of DSME by health care professionals (HCP). Given the influence of their views on patient attendance at DSME, it is important to understand the views of HCPs towards self-management generally and self-management in the context of DSME more specifically.

Methods

Semi-structured interviews and focus groups were conducted to find out HCP views of group based and online DSME. Sampling was purposive to recruit a diverse range of professional roles including GPs, practice nurses, diabetes specialist nurses, health care assistants, receptionists and commissioners. Interviews and focus groups were audio recorded and transcribed verbatim. Data were analysed thematically. Themes were reviewed in a multidisciplinary data clinic.

Results

Seventeen interviews and one focus group were conducted with participants (n=22). Themes that emerged from the data included views on the self-management, the responsibility for self-management, the value of the self-management approach to diabetes care and the role of DSME. Strategies to increase participation included having different formats of education available, increasing advertising and making current DSME more accessible.

Discussion

HCPs did not view self-management or DSME as suitable approaches for all patients and as such not all patients are referred to DSME. HCP stressed that one size doesn't fit all and having a menu of education options (including face-to-face and digital) to offer patients is important.

Fabian Sailer

Introduction

Last year we presented a discrete event simulation approach to model multiple sexually transmitted infections (STIs) in a single software. As Chlamydia is the most common bacterial STI in England, it was the first STI we included in the software. We describe how we developed and validated our Chlamydia model.

Methods

The development was based on the "ISPOR modelling good research practice" report and performed by a team of clinicians, health economists, and a programmer. We reviewed existing literature to derive the model structure, which we refined in expert interviews. Once the structure of the model was set, we parametrized the model by reviewing the literature on each parameter.

The model was validated using national surveys, e.g. the Natsal-3 study.

Results

The model is split into three parts; a disease model to describe the natural progress of the disease, a sexual network to describe the patterns of sexual contact and thereby the way infections can spread within a cohort of interest, and lastly a clinical pathway model to describe how the natural progress of the disease can be altered by interventions, e.g. opportunistic screening and treatment.

Discussion

The model was created in a generic way to account for changes in knowledge. It can be adapted to answer different research questions. The Chlamydia model will be connected to models for other STIs to account for coinfections. This will enable the software to examine interventions which might target more than one STI at the same time, e.g. condom distribution schemes.

Gemma Spiers

Background

Unlike healthcare, adult social care in England is not routinely free. Older adults' access to social care may, therefore, be hindered by financial barriers. Evidence also links poor access to social care to increased healthcare utilisation. This research aims to explore the role of wealth in the relationship between social care utilisation and healthcare utilisation by older adults.

Methods

Data from the Newcastle 85+ study was used (n=849), a cohort study of those aged 85 years in 2006 and who were registered with a general practice in the North East of England. Structured interviews and GP record reviews were used to collect information about participants' demographics and socio-economic circumstances, and their use of social care, primary care, and secondary care. Measures of health, need and informal care were also collected. Baseline data were collected in 2006, with four follow ups up to age 95. Scores of each social care utilisation, healthcare utilisation and wealth were created, and the relationships between these modelled at baseline (cross sectional) and at each follow up, adjusting for need and other relevant factors.

Findings

Analysis is on-going; early findings will be presented.

Conclusions

The findings from this analysis will have important implications for policy makers regarding equitable access to care for older adults.

Daniel Stow

Background

Timely recognition of the end-of-life can allow patients to discuss preferences and make advance plans, and clinicians to introduce appropriate care. We examined changes in frailty over one year to identify trajectories that indicate where an individual is at increased risk of dying.

Methods

Electronic health records from 13,149 people age 75+ (cases)who died in a one-year period (01/01/2015-01/01/2016) were age, sex and general practice matched to 13,149 individuals with no record of death over the same period (controls). Monthly frailty scores were calculated for one year before death for cases, and 01/01/2015-01/01/2016 for controls using the electronic frailty index. Latent growth mixture models were used to investigate longitudinal patterns of change and associated impact on mortality. Cases were reweighted to the population level for tests of diagnostic accuracy.

Results

Three frailty trajectories were identified. Rapidly rising frailty was associated with a 180% increase in mortality (OR 2.84 95%CI 2.34, 3.45) for 2.2% of the sample. Moderately increasing frailty was associated with a 65% increase in mortality (OR 1.65 95%CI 1.54, 1.76) for 21.2% of the sample. The largest class (76.6%) was stable frailty. When cases were reweighted to population level, rapidly rising frailty had 99.1% specificity and 3.2% sensitivity (PPV 19.5%, NPV 93.3%) for predicting individual risk of mortality.

Conclusions

People over 75 at highest risk of dying have a rapid rise in frailty from a low baseline. Routine measurement of frailty could support clinicians to identify people with frailty who are potential candidates for palliative care.

Bethan Treadgold

Background

Parents and carers frequently seek information about childhood health conditions online. Research suggests that parents and carers often find the volume of online information bewildering and it is unclear how they make sense of this. Studies have found online information to impact on parents and carers in various ways such as providing support, influencing health behaviour, and increasing confidence in navigating services. This research aims to systematically review and synthesise the qualitative literature exploring parents' and carers' views and experiences of seeking health information online for long-term physical childhood conditions.

Method

Systematic literature searches are being carried out in MEDLINE, CINAHL, EMBASE, PsycINFO and the International Bibliography of Social Science from inception to March 2018. The selection criteria seek qualitative primary research focusing on parents' and carers' views and experiences of seeking information online for long-term childhood conditions. Studies are excluded if they focus on a mental health condition or developmental disorder of language, learning or cognition.

Results

Searches to date identified 13 eligible studies. Two authors will independently screen full-text articles for inclusion, assess methodological quality of included studies (using CASP criteria) and extract data. A third reviewer will resolve disagreements. Thematic synthesis will bring together and integrate the findings.

Discussion

This review aims to provide novel insight into how parents and carers experience seeking information and advice online. This could help clinicians to better understand the background information that parents and carers bring to the consultation and inform how best to signpost them towards evidence-based online information.

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