



National Institute for
Health Research

Research Showcase 2018

School for
Primary Care
Research

How to make friends
and influence
people

PROGRAMME

WELCOME
COLLECTION
13 NOVEMBER



The Wellcome Collection

The Wellcome Collection was established by eminent pharmacist, entrepreneur and philanthropist Sir Henry Wellcome in 1936. The exhibition of historic and scientific art and artefacts is housed in the original Wellcome Building built in 1932. The Wellcome Collection explores connections between medicine, life and art in the past, present and future and provides professionals and the public with a place to learn about the development of medicine and medical science.



Photographs courtesy of the Wellcome Collection

Please use #spcr18 and @NIHRSPCR when tweeting

Welcome

The School for Primary Care Research celebrates another year of impressive research results at the Wellcome Collection this year. Highlights show the growing quality and quantity of evidence supporting primary care practice, as well as the far-reaching impacts made through policy engagement and public involvement.

We warmly welcome you to the showcase during this very special 70th anniversary of the NHS and the national commitment to healthcare for all. As the 'front door' of the health service, primary care was given prominence in NHS campaigns earlier this year emphasising the increasing pressure on practitioners to meet the demands of an ageing population – this focus reinforces our aim to provide a timely response to the primary care needs of future generations.

We hope you are inspired by the collection of presentations on offer and take home new connections and innovative ideas for collaboration and influence.



Professor Richard Hobbs
Director



9.30 - 10.30	Registration, refreshments and poster hanging			
10.30 - 10.45	WELCOME Richard Hobbs Henry Wellcome Auditorium			
	PLENARY SESSION Chair: Richard Hobbs Henry Wellcome Auditorium			
10.45 - 11.05	Irene Petersen Pregnancy Predict Depression Tool: Development and validation of a tool to predict postnatal depression during early pregnancy			
11.05 - 11.25	Tony Kendrick REviewing long term anti-Depressant Use by Careful monitoring in Everyday practice (REDUCE) programme			
11.30 - 12.30	PARALLEL SESSION			
	CHRONIC DISEASE & COMORBIDITY Henry Wellcome Auditorium Chair: Annabelle Machin	OLDER PEOPLE, AGEING AND FRAILTY Burroughs Room Chair: Alyson Huntley	DIGITAL HEALTH Steel Room Chair: Elizabeth Orton	HEALTH SERVICES DELIVERY Dale Room Chair: Ricky Mullis
	Which co-morbidities are prognostic factors for pain and function for knee osteoarthritis following exercise, and do they moderate the effect of exercise? <i>Melanie Holden</i>	Exploring the views and practices of older people at risk of malnutrition and their carers <i>Christina Avgerinou</i>	DIAMOND (Digital Alcohol Management ON Demand): Evaluation of a digital health intervention to reduce hazardous and harmful alcohol use recruiting in hospital emergency departments and online <i>Fiona Hamilton</i>	Understanding Antibiotic Prescribing Patterns in Out-of-Hours Primary Care <i>Rebecca Barnes</i>
	Rheumatological conditions as risk factors for self-harm. <i>Carolyn Chew-Graham</i>	Managing depression and anxiety in frail older people: A qualitative study <i>Rachael Frost</i>	Development of a web-based behavioural intervention to support self-management of acne vulgaris <i>Athena Ip</i>	What makes GP opportunistic interventions effective? A behaviour change technique analysis of 251 GP-delivered brief interventions for weight loss <i>Jana Bourhill</i>
	Chronic morbidity, deprivation and primary medical care spending in England in 2015-16: a cross-sectional spatial analysis <i>Evan Kontopantelis</i>	Risk of Dementia in Patients with Gout and The Impact of Urate-Lowering Therapies: A Large Population-based Cohort Study <i>Louise Crowley</i>	A qualitative exploration into the benefits of an online mindfulness meditation intervention for people with asthma, recruited in primary care <i>Sabina Stanescu</i>	Anticipatory prescribing of injectable medications for adults at the end of life in the community: A systematic review <i>Ben Bowers</i>
	The comorbidity burden of type-2 diabetes mellitus in a large UK primary care dataset: patterns, clusters and future predictions <i>Magdalena Nowakowska</i>	The prognosis of polymyalgia rheumatica in primary care: 2-year follow-up of the PMR Cohort Study <i>Sara Muller</i>	Initiation and Discussion of Information from the Internet in GP Consultations <i>Fiona Stevenson</i>	Primary and secondary health care use before and after introduction of a named GP-scheme for older English patients, 2012-2016 <i>Peter Tammes</i>
12.30 - 13.45	Lunch and poster viewing Williams Lounge and Franks Room			

13.45 - 14.45				
PARALLEL SESSION				
	CARDIOVASCULAR DISEASE Henry Wellcome Auditorium Chair: Rupert Payne	EVIDENCE SYNTHESIS WORKING GROUP Burroughs Room Chair: Geoffrey Wong	DIAGNOSIS & EDUCATION Steel Room Chair: Beth Stuart	HEALTH & WELLBEING Dale Room Chair: Carolyn Chew-Graham
	A multi-method evaluation of a Clinical Trial of an Investigational Medicinal Product (CTIMP) in primary care <i>Ryc Aquino</i>	Understanding the impact of delegated home visiting services accessed via general practice by community dwelling patients: A realist review <i>Ruth Abrams</i>	A systematic review showing the variation in diagnostic criteria and tools developed for lower limb cellulitis <i>Mitesh Patel</i>	Using Pedometers to Increase Physical Activity and Improve health in patients with long-term conditions. a systematic review and meta-analysis <i>Alex Hodkinson</i>
	The diagnostic accuracy and clinical utility of natriuretic peptide based screening for the early diagnosis of heart failure in the community: a systematic review and meta-analysis <i>Clare Goyder</i>	What initiatives have been employed to improve end of life care in Primary Care? -Synthesising the evidence from a realist review <i>Ian Wellwood</i>	What do health professionals think about diabetes self-management education for type 2 diabetes? <i>Jamie Ross</i>	You go into GP training with your eyes wide shut; a qualitative study of training and transition as experienced by newly qualified GPs <i>Sharon Spooner</i>
	Optimising Treatment for Mild Systolic hypertension in the Elderly (OPTIMISE): feasibility study for a randomised controlled trial <i>James Sheppard</i>	The impact of telephone triage on workload and quality in primary care: a realist review <i>Ann-Marie Boylan</i>	'Running in parallel' rather than together -experiences of managing Perinatal Anxiety from the perspective of healthcare practitioners: A qualitative study <i>Victoria Silverwood</i>	Views of women with a history of gestational diabetes on screening for type 2 diabetes postpartum: a systematic review and qualitative synthesis <i>Rebecca Dennison</i>
	Statin use and dose after intracerebral haemorrhage in the UK general practices, 2000-2015: a retrospective cohort study using the Clinical Practice Research Datalink <i>Zhirong Yang</i>	A mixed methods systematic review to explore the impact of advanced care planning for older people on reducing unplanned hospital admissions and improving quality of life <i>Patience Kunonga</i>	Uncertainty about cellulitis and unmet patient information needs: a mixed methods study <i>Emma Teasdale</i>	Gout attack trajectories in a three-year prospective cohort study identified using latent class growth analysis <i>Lorraine Watson</i>
		Experiences of undertaking a realist review to evaluate care navigation in primary care <i>Stephanie Tierney</i>		
14.45 - 15.15	Refreshments, manned poster session and poster judging			
15.15 - 15.45	KEYNOTE: Increasing research impact: 'the researcher-in-residence model' Martin Marshall Henry Wellcome			
	PLENARY SESSION Chair: Richard Hobbs Henry Wellcome Auditorium			
15.45 - 16.05	Milica Blagojevic-Bucknall The risk of gout among patients with sleep apnea: a matched cohort study			
16.05 - 16.25	Jenni Burt Exploring macrocognitive functions in the deprescribing of anti-hypertensive medication: interview study with GPs and older patients			
16.25 - 16.45	Closing comments and prize-giving Henry Wellcome Auditorium			

We would like to thank the Scientific Programme Committee and Peer Reviewers for their voluntary contributions to the development of the programme and the reviewing of abstracts.

All abstracts were peer reviewed by two reviewers. Abstracts were scored (1-5) on the following criteria: Importance and originality; clarity of aims; methodological rigour; results; conclusion/discussion. The highest scoring abstracts are presented as plenaries.

Scientific programme committee

Joy Adamson
 Ben Ainsworth
 Carolyn Chew-Graham
 Georgina Fletcher (Chair)
 Alyson Huntley
 Debbie MaCahon
 Yumna Masood
 Ricky Mullis
 Elizabeth Orton
 Rupert Payne
 Sheena Ramsay
 Miriam Santer
 Beth Stuart
 Geoffrey Wong

Take part in poster judging

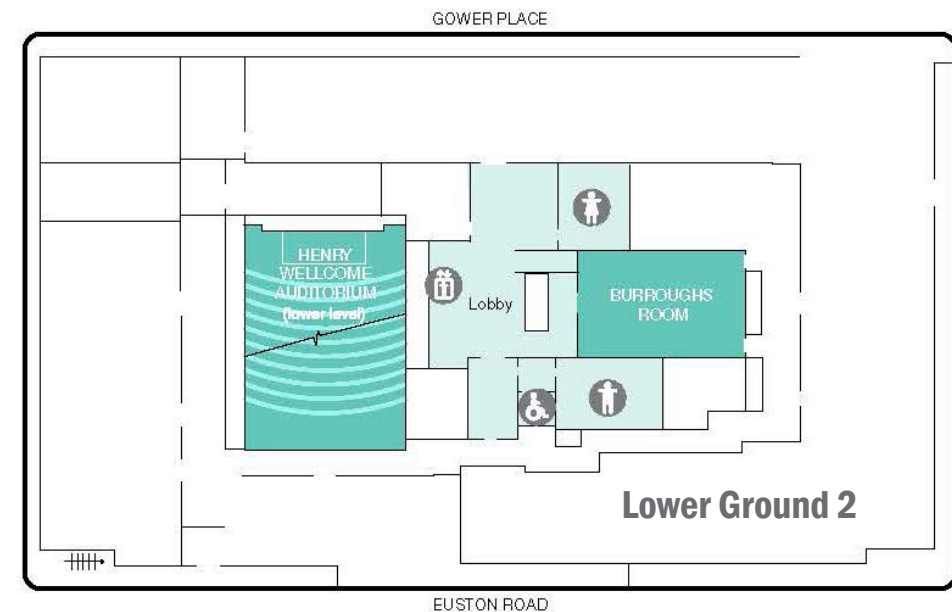
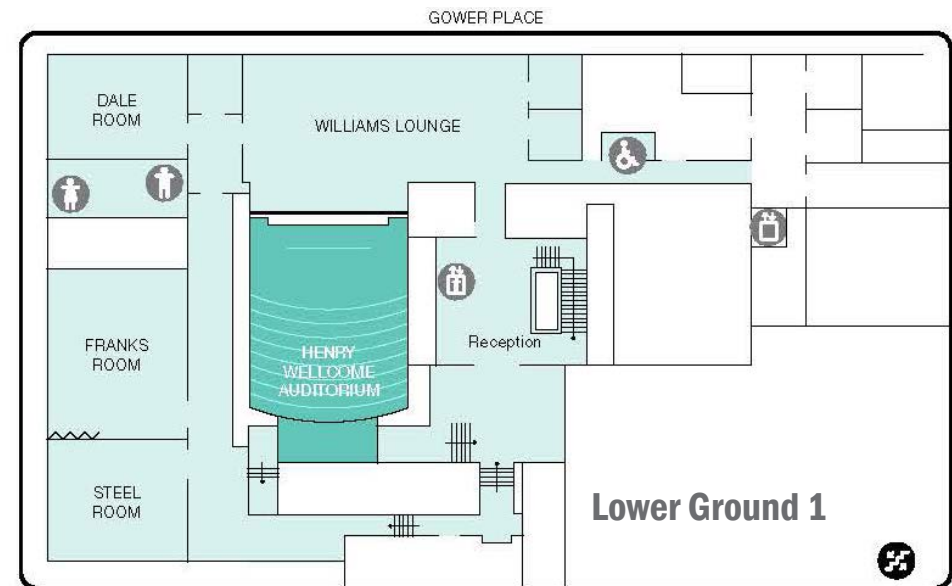
This year, we invite all delegates to take part in the judging of posters. When selecting your choice, please consider the following:

1. Layout and readability
2. Clarity of the scientific message
3. Logic of poster content.

Please complete the form and hand it to one of the conference organisers before 2.45pm. Thank you.

Peer Reviewers

Ben Ainsworth
 Anne-Marie Boylan
 Carolyn Chew-Graham
 Alyson Huntley
 Natalia Lewis
 Yumna Masood
 Deborah McCahon
 Richard Morris
 Ricky Mullis
 Elizabeth Orton
 Rupert Payne
 Sheena Ramsay
 Miriam Santer
 Beth Stuart
 Stephanie Tierney
 Katrina Turner
 Geoffrey Wong



Programme

- 9.30 - 10.30** **Registration, refreshments and poster hanging**
Williams Lounge
- 10.30 - 10.45** **Welcome: Professor Richard Hobbs, SPCR Director**
Henry Wellcome Auditorium
- 10.45 - 11.25** **Plenaries: Irene Petersen & Tony Kendrick**
Henry Wellcome Auditorium
- 11.30 - 12.30** **Parallel session**
Auditorium, Steel, Dale and Burroughs Rooms
- 12.30 - 13.45** **Lunch and poster viewing**
Williams Lounge and Franks Room
- 13.45 - 14.45** **Parallel session**
Auditorium, Steel, Dale and Burroughs Rooms
- 14.45 - 15.15** **Refreshments, manned poster session and poster judging**
Williams Lounge and Franks Room
- 15.15 - 15.45** **Keynote: Professor Martin Marshall, RCGP Vice-Chair**
Henry Wellcome Auditorium
- 15.45 - 16.25** **Plenaries: Milica Blagojevic-Bucknall & Jenni Burt**
Henry Wellcome Auditorium
- 16.25 - 16.45** **Closing comments and prize giving**
Henry Wellcome Auditorium



PLENARIES

Pregnancy Predict Depression Tool: Development and validation of a tool to predict postnatal depression during early pregnancy

[Irene Petersen](#)¹, Kate Walters¹, Michael Sharpe², Charlotte Walker³, Angela Wood⁴, Sarah Hardoon¹

¹University College London. ²Oxford University. ³Independent, London. ⁴Cambridge University.

Introduction

Over one in ten mothers are affected by postnatal depression, but identification of women at high risk could provide opportunities for early intervention.

Methods

We developed and validated a risk prediction tool for postnatal depression, the Pregnancy Predict Depression Tool, based data from The Health Improvement Network (THIN) primary care database. We identified a study population of more than 220,000 women with live births between 2000 and 2013, aged 15-49 years at delivery. We identified women with depression in one year following the birth.

Results

Using data from 176,359 pregnant women in England we developed the Pregnancy Predict Depression Tool for postnatal depression. Included as predictors were: socio-demographic characteristics, history of depression/ anxiety/ other mental disorders, stressors, health behaviours, and obstetric history. Validation of this tool in a cohort of 44,837 pregnant women from Wales, Scotland and Northern Ireland, yielded discrimination C and D statistics of 0.643 (95% CI 0.630, 0.657) and 1.498 (95% CI 1.460, 1.536) respectively and good calibration. Applying a threshold for high risk of 12% yielded a sensitivity and specificity of 70% and positive predictive value and negative predictive value of 31% and 92%, respectively. One-fifth of those identified as "high risk" by the model had no history of depression.

Discussion

The Pregnancy Predict Depression Tool has the potential for identifying pregnant women at high risk of postnatal depression, who may benefit from preventive measures. This is particularly important for women with no history of depression, who may otherwise be missed.

REviewing long term anti-Depressant Use by Careful monitoring in Everyday practice (REDUCE) programme

[Tony Kendrick](#), Emma Maund, Rachel Ryves, Samantha Williams, Hannah Bowers, Adam WA Geraghty, Geraldine Leydon, Carl May, Beth Stuart, Michael Moore, Paul Little

University of Southampton.

Introduction

Median duration of antidepressant prescribing is now >5yrs. Around 10% of adults take them, risking significant adverse effects long-term. Surveys suggest 30-50% of users have no evidence-based indication to continue. We aim to provide practitioner and patient on-line and telephone guidance on withdrawal.

Methods

Five work streams (WS): Systematic review of barriers and facilitators to withdrawal; Qualitative work to inform intervention; Co-production of intervention with patients; Feasibility RCT; Fully powered RCT.

Results

WS1: Qualitative synthesis of barriers and facilitators (21 studies): nine themes: psychological/ physical capabilities; perceptions of antidepressants/depression; fear factor; motivators/goals; doctor as a navigator to discontinuation; information to support decision-making; significant others; support from other professionals. Systematic review of managing discontinuation (15 studies, 12 with analysable results, meta-analysis possible for 2 pairs of RCTs): no difference in cessation rates between CBT+taper (95%) and clinical management+taper (91%) but lower risk of relapse with CBT. No difference in relapse between MBCT+taper (achieving cessation in 70%+) and maintenance antidepressants. WS2: 19 patients interviewed individually and 37 HPs in focus groups. Patient themes: beliefs about medication, fear of relapse and withdrawal symptoms, patient-practitioner interactions (uncertainty about whether to ask to come off), influence of family and friends. HPs: supporting patients rather than making decisions for them, assessing risk and managing expectations, organisational factors, beliefs, need for psychological tools.

Discussion

WS1 & WS2 highlighted key facilitators and barriers to antidepressant withdrawal. Evidence-based practitioner and patient interventions (internet modules plus telephone support) will be demonstrated.

The risk of gout among patients with sleep apnea: a matched cohort study

Milica Blagojevic-Bucknall¹, Christian Mallen¹, Sara Muller¹, Richard Hayward¹, Sophie West², Hyon Choj³

¹Research Institute for Primary Care & Health Sciences, Keele University. ²Newcastle upon Tyne Hospitals. ³Harvard Medical School, Boston, USA

Introduction

Obstructive sleep apnea (OSA) is associated with a range of serious comorbidities. This study investigates whether people with OSA are more likely to develop gout than those without OSA in both short and long term

Methods

A matched retrospective cohort study was undertaken in the UK Clinical Practice Research Datalink. Individuals aged ≥ 18 years with an incident diagnosis of OSA between 1990 and 2010 were identified and age-gender-practice matched to up to four individuals without OSA; follow-up was until end of 2015. Hazard ratios (HR) were estimated using Cox regression adjusted for general health, lifestyle and comorbid characteristics. Risk of incident gout was assessed at different time points and by BMI category. Sensitivity of the findings to unmeasured confounding was assessed.

Results

Study sample included 15,879 patients with OSA and 63,296 without; median follow-up was 5.8 years. 4.9% OSA and 2.6% non-OSA patients developed gout. Incidence rate per 1000 person-years was 7.83 (95%CI 7.29, 8.40) and 4.03 (3.84, 4.23) among those with and without OSA respectively; adjusted HR 1.42 (1.29, 1.56). The risk of incident gout among OSA patients compared to those without was highest 1-2 years after index date (1.64 (1.30, 2.06)). This finding persisted among those overweight and obese. For those with normal BMI the highest significant HR 2.02 (1.13, 3.62) was observed at 2-5 years post index date.

Discussion

OSA patients continued to be at higher risk of developing gout beyond the first year after OSA diagnosis. Peak incidence of gout varies according to BMI.

Exploring macrocognitive functions in the deprescribing of anti-hypertensive medication: interview study with GPs and older patients

Jenni Burt¹, Fiona Scheibl¹, Carol Sinnott¹, Rupert Payne², James Sheppard³, John Benson¹, Jonathan Mant¹, Richard McManus³

¹University of Cambridge. ²University of Bristol. ³University of Oxford.

Introduction

There is mounting concern over rising polypharmacy rates, but decisions about rationalising medication remain challenging. In the absence of guidance on why, how, and when to deprescribe, the safest course for both GPs and patients is often medication continuation, even if a regimen is sub-optimal. The aim of this study is to explore the challenges facing GPs and older patients in considering the deprescribing of antihypertensives.

Methods

We conducted face-to-face interviews with 15 GPs, and 16 patients aged >80 years receiving ≥ 2 antihypertensive medications. GP interviews used chart-stimulated recall techniques, and patient interviews used diagrammatic elicitation techniques. Thematic analysis drew on macrocognitive approaches (the complex way in which we perform tasks "in the wild", including naturalistic decision-making, sense-making, planning and adaptation).

Results

GPs used tacit knowledge and prior experience to rapidly make decisions about the appropriateness of considering anti-hypertensive discontinuation. GPs were typically reluctant to deprescribe without guidance, although more experienced GPs were able to draw on a deeper repertoire of previous encounters and outcomes to facilitate a more individualized approach to treatment decisions. Patients had developed diverse strategies and artefacts to support their taking of anti-hypertensive medication, and stopping such medication could present a challenge to the narratives behind why such medications were embedded in their lives. As such, readiness to change varied widely according to patients' mental models and projected futures.

Discussion

For both patients and GPs, medication management and deprescribing decisions are achieved within a complex framework of cognitive functions built over many years.

PARALLELS

Understanding the impact of delegated home visiting services accessed via general practice by community dwelling patients: A realist review

Ruth Abrams¹, Geoff Wong², Nia Roberts², Kamal Mahtani², Stephanie Tierney², Anne-Marie Boylan², Sophie Park¹

¹Primary care and population health, UCL. ²Nuffield Department of Primary Care Health Sciences, University of Oxford

Introduction

Early visiting services (EVS) have been proposed as a recent intervention to reduce both GP workload and hospital admissions amongst housebound individuals experiencing a healthcare need. EVS involve the delegation of patient home visits to other staff groups such as paramedics or nursing staff. However, it remains unclear how different contexts (such as patient conditions) and the mechanisms underlying EVS influence care outcomes. This review aims to improve our understanding of the ways in which (i.e. how, why and in what contexts) EVS impact (or not) on hospital admissions, GP workload and patient healthcare within primary care settings.

Methods

Given the complex nature of EVS, evidence will be consolidated through realist review- a theory-driven approach to synthesis. We anticipate synthesising a range of relevant data such as qualitative, quantitative and mixed-methods research in addition to grey literature. Following the systematic realist review stages advocated by Pawson, causal explanations will be made visible through the articulation of the interconnectedness of contexts and mechanisms in relation to outcomes regarding EVS.

Results

The process of undertaking a realist review will be presented along with preliminary findings from our review. We will present our emerging analysis, including findings from our stakeholder engagement. Methodological challenges and insights will also be shared.

Conclusion

Our 'live' programme theory will illustrate the causal explanations attributed to our findings. We anticipate our review findings will help to inform the development of future EVS policy and practice.

A multi-method evaluation of a Clinical Trial of an Investigational Medicinal Product (CTIMP) in primary care

Maria Raisa Jessica (Ryc) Aquino, Peter Scott Reid

Primary Care Unit, University of Cambridge

Introduction

Primary care-based clinical trials are key to establishing the generalisability of treatments found to be effective. Yet, such trials are limited, with most clinical research still carried out in specialist centres. The Preventative Role of a fixed dose combination Pill in Stroke (PROPS) trial was a primary care-based clinical drug trial that encountered difficulties during study set-up and implementation, and was closed before completion. The present study is evaluating the PROPS trial retrospectively to identify the barriers and enablers to conducting primary care-based CTIMPs.

Methods

A multi-method case study design was employed. Trial documentation was quantitatively (descriptive statistics) and qualitatively synthesised (thematic analysis). Interviews were analysed using framework analysis, specifically the Theoretical Domains Framework (TDF). Criteria for theme identification are: prevalence, discordant views, and external evidence (i.e. trial documentation).

Results

Fifteen participants (45 invited) were interviewed. Identified barriers included: i) Organisational structure and protocols/governance (TDF domain: Social influences), ii) Difficulties obtaining investigational medicinal product (Environmental context and resources), and iii) Lack of staff (Environmental context and resources). Enablers included: i) Clear understanding of roles (Social/professional role and identity), ii) Good communication (Social influences), and iii) Flexible ways of working (Behavioural regulation).

Discussion

Clinical drug trials in primary care need adequate resources and context-appropriate regulatory frameworks. Clear communication is needed amongst all stakeholders, especially during study development/set-up when roles and responsibilities are defined and agreed. The present study is relevant to research conducted in primary care, providing insight into the development and conduct of similarly designed studies.

Exploring the views and practices of older people at risk of malnutrition and their carers

Christina Avgerinou¹, Cini Bhanu¹, Kate Walters¹, Jennifer Rea¹, Ann Liljas¹, Yehudit Bauernfreund¹, Helen Croker², Jane Hopkins³, Maggie Kirby-Barr³, Kalpa Kharicha¹

¹Department of Primary Care and Population Health, University College London. ²Health Behaviour Research Centre, University College London. ³Patient and Public Involvement and Engagement representative, London.

Introduction

Malnutrition is an important cause of morbidity and mortality in later life, yet is under-recognised in general practice. There is little evidence on the views of older people and carers regarding management of malnutrition in the community.

Aims

To: a) explore views and practices of older people at risk of malnutrition and carers, b) identify elements of primary care based interventions for frail older people at risk of malnutrition, c) identify training and support required to deliver such interventions.

Methods: a) Up to 40 semi-structured interviews with people aged ≥ 75 years from general practices, identified as malnourished/at risk of malnutrition, and carers. Thematic analysis is being used to identify key emergent themes and their meaning.

Results

Early interview findings (N=31; 22 older people, 9 carers) suggest that 'healthy eating' beliefs are established early in life and maintained. For some reduced appetite and low energy were considered part of normal ageing, whereas others attributed weight loss to acute illness, mental health issues or dementia. Knowledge of changing dietary needs in later life and ways to address weight loss associated with ageing appeared poor. Although only a few had discussed weight loss with their GP, many liked the idea of a nutritional intervention delivered in primary care. Some felt that the doctor was best placed to provide that support, whereas others would welcome advice from a dietitian, a nurse, or other trained professional. For people with dementia, training for carers and practical support for the older person were considered appropriate.

Discussion

Older people with reduced appetite and weight loss and their carers are open to advice and support with nutrition, which is currently lacking. Interventions to help people increase/maintain their weight are needed to provide this type of support in the community setting.

Understanding antibiotic prescribing patterns in out-of-hours Primary Care

Rebecca Barnes¹, Geraldine Leydon², Fiona Stevenson³, Catherine Woods², Matthew Booker¹, Gail Hayward⁴, Beth Stuart², Paul Little², Michael Moore²

¹University of Bristol. ²University of Southampton. ³University College London, London, United Kingdom. ⁴University of Oxford.

Despite current antimicrobial stewardship programmes there is evidence that out-of-hours antibiotic prescribing rates are increasing. We know communication plays a significant role in prescribing decisions in-hours; and that training promoting clear communication about symptoms and treatment is more likely to succeed. Our aim is to understand out-of-hours prescribing in real time from a sociological, clinical and organisational perspective.

Following a review of current policy, evidence and training, data will be collected from providers serving the South and West of England. Between 2018-19 we will collect 300 recordings from out-of-hours encounters - telephone calls, primary care centre visits and home visits - focused around the management common infections. Our sampling frame will include: independent prescribers (GPs, advanced nurse practitioners, prescribing pharmacists) and those using patient group directives (e.g., emergency care practitioners) and different patient groups. 50 stakeholders will be invited for focused interviews.

The literature review will focus on understanding the problem and its causes as well as assessing the evidence for current training. Analysis of real time interactions will focus on understanding communication patterns influencing antibiotic outcomes. The stakeholder interviews will be used to support the development of enhanced communication training that will use real examples to guide practitioners' prescribing behaviours.

This study brings together social science expertise from the SPCR Conversation Analysis Working Group and clinical expertise from researchers working in acute care, in collaboration with patients and out-of-hours service providers. The main output will be evidence-based communication training co-produced with key stakeholders to support prudent antibiotic prescribing out-of-hours.

What makes GP opportunistic interventions effective? A behaviour change technique analysis of 251 GP-delivered brief interventions for weight loss

Jana Bourhill¹, Paul Aveyard², Kirsten Frye², Joe Lee², David McCartney², Ben Fletcher², Charlotte Albury²

¹Medical School, University of Oxford. ²Nuffield Department of Primary Care, Health Sciences, Oxford.

Introduction

Evidence shows that attendance at commercial weight management services (CWMS), such as Slimming World, is associated with a greater weight loss compared to a standard primary care intervention. Using anonymised audio-recorded data from the BWeL trial, where GPs offered free CWMS referrals to unselected patients with a BMI>30, this study aims to identify the key behavioural change techniques (BCTs) that are associated with attendance at these sessions.

Methods

We coded the BCTs used in the training video that general practitioners received and in 251 transcribed general practice consultations, enabling us to explore the fidelity between training and practice. To ensure maximal accuracy, two additional trained individuals coded and compared 20 random transcripts, and the coders collectively agreed on a coding framework and codebook. A logistic regression will then be used to identify specific techniques associated with increased attendance at CWMS. We also involved the public to gain feedback on their experiences with certain techniques.

Results

Initial findings show that GPs deviated from the training and used additional BCTs, including delivering information about health consequences. The results of the coding and analysis will be available by August 2018.

Discussion

Previous research has identified BCTs associated with smoking cessation and increased physical activity, which have informed clinical practice – likewise, our data could support updated training to enable practitioners to incorporate effective BCTs into brief opportunistic referrals to CWMS.

Anticipatory prescribing of injectable medications for adults at the end of life in the community: A systematic review

Ben Bowers, Richella Ryan, Isla Kuhn, Stephen Barclay

University of Cambridge.

Introduction

The anticipatory prescribing of injectable medications to provide end of life symptom relief is established community practice in a number of countries. The evidence-base to support this practice is unclear.

Aim

To review the published evidence concerning anticipatory prescribing of injectable medications for adults at the end of life in the community.

Methods

Systematic review and narrative synthesis. Nine electronic databases were searched up to May 2017, alongside reference, citation and journal hand searches. Included papers presented empirical research on the anticipatory prescribing of injectable medications for symptom control in adults living in the community at the end of life. Research quality was appraised using Gough's 'Weight of Evidence' Framework.

Results

The search yielded 5099 papers. 33 papers were included in the synthesis. Healthcare professionals believe anticipatory prescribing provides reassurance, effective symptom control and helps to prevent crisis hospital admissions. The attitudes of patients towards anticipatory prescribing remains unknown. It is a low-cost intervention but there is inadequate evidence to draw conclusions about its impact on symptom control and comfort or crisis hospital admissions.

Discussion

Current anticipatory prescribing practice and policy is based on an inadequate evidence-base. The views and experiences of patients and their family carers towards anticipatory prescribing requires urgent investigation. Research is needed to investigate the impact of the intervention on patients' symptoms and comfort, patient safety, and hospital admissions.

The impact of telephone triage on workload and quality in primary care: a realist review

Anne-Marie Boylan¹, Geoff Wong¹, Nia Roberts¹, Stephanie Tierney¹, Kamal Mahtani¹, Ruth Abrams², Sophie Park², Carl Heneghan¹

¹University of Oxford. ²University College London.

Introduction

Telephone triage is being adopted across many general practices in an attempt to improve the problem of rising demand and reduced supply (Hobbs, et al., 2016). Several previous studies, including Newbould et al. (2017), have demonstrated that it is a reasonably effective intervention for managing workload, but that many patients still need to be seen in person. However, in general, its impact on primary care is not well understood. The aim of this realist review is to determine how, why, in what circumstances telephone triage affects workload and quality in primary care and for whom.

Methods

This review will follow Pawson et al.'s (2005) five steps for conducting a realist review. Data analysis will involve the use of a realist logic analysis, iteratively using the data to develop, confirm, refute and refine the emergent programme theory.

Results

Preliminary findings on the impact of telephone triage on workload based on the literature, and a stakeholder consultation with GPs, practice managers, receptionists and patients will be presented. We will also offer our experience on conducting this type of review, including the issue of appraising the quality (relevance and rigour) of different kinds of sources.

Conclusion

This review will provide a developing programme theory that begins to explain the impact of telephone triage on workload in primary care and will identify gaps in current knowledge on this phenomenon. In addition, it will offer methodological insights into the challenges of using this design to research a complex intervention in primary care.

Rheumatological conditions as risk factors for self-harm. A retrospective cohort study

James A Prior, Rebecca Whittle, Alyshah Abdul-Sultan, Carolyn A Chew-Graham, Athula Sumathipala, Tom Sheperd, Christian D Mallen, Zoe Paskins

Research Institute for Primary Care & Health Sciences, Keele University.

Introduction

Prevention of self-harm, a key risk factor for suicide, is an international public health priority. The WHO recommends that clinicians assess the potential for self-harm in high-risk patients, e.g. those with chronic pain. The risk of self-harm across individual rheumatological conditions (associated with chronic pain) has not previously been examined.

Methods

We conducted a retrospective cohort study using data from the UK Clinical Practice Research Datalink. Patients with a Read code for osteoarthritis, osteoporosis, fibromyalgia, rheumatoid arthritis (RA) or ankylosing spondylitis (AS) were identified between 01/01/1990–31/12/2016 and matched to controls of the same gender and within the same 10-year age category. Incident self-harm was identified by Read code after diagnosis of the rheumatological condition. Hazard ratios (HR) were obtained from Cox-regression models to examine the risk of self-harm in each condition compared to their matched controls. Analysis was initially unadjusted and then adjusted for age, gender, body mass index, smoking, alcohol, anxiety and depression.

Results

Over the 16-year time-period, there were 720,762 osteoarthritis, 126,316 osteoporosis, 26,572 fibromyalgia, 55,678 RA and 24,181 AS patients. Adjusted HRs (95%CI) of self-harm for each rheumatological condition compared to matched controls were as follows; osteoarthritis 1.2(1.1-1.2); osteoporosis 1.5(1.3-1.6); fibromyalgia 2.0(1.6-2.4); RA 1.3(1.1-1.6); AS 1.0(0.8-1.3).

Discussion

Patients with rheumatological conditions in primary care, particularly fibromyalgia are at greater risk of self-harm compared to matched controls, except for those with AS. Clinicians need to be aware of the potential for self-harm in patients consulting with these conditions.

Risk of dementia in patients with gout and the impact of urate-lowering therapies: A large population-based cohort study

Louise Crowley, Alyshah Abdul Sultan, Edward Roddy, Christian Mallen, Joanne Protheroe, Lorna Clarson

Arthritis Research UK Primary Care Centre, Research Institute for Primary Care & Health Sciences, Keele University.

Introduction

Evidence is conflicting surrounding dementia risk in gout patients with hyperuricaemia proposed to exert a neuroprotective effect. Serum urate (sUA) targets guiding urate-lowering therapies (ULT) are poorly evidenced-based with shifting consensus towards a more lenient target to attempt to balance the theoretical harmful effects of hypouricaemia. The aim of this study was two-fold; first, to estimate the risk of dementia among patients with gout, second, to assess the potential impact of ULT.

Methods

Retrospective population-based matched cohort study conducted using the Clinical Practice Research Datalink (CPRD). Gout exposure was defined as a first recorded medical code for gout between April 1998 and February 2016. Each gout-exposed patient was matched to 4 unexposed controls on age(± 5 years), gender, general practice and follow-up(± 3 years). Absolute rates of dementia were calculated and hazard ratios (HR) modeled using Cox Proportional Hazards Regression. The impact of ULT (≥ 6 months therapy) on dementia onset in gout cases was calculated.

Results

Our cohort included 79,097 gout-exposed and 276,808 unexposed with a median follow-up of 5 years. Absolute incidence rate of all-type dementia /10,000 years was lower in the gout-exposed than unexposed (35.6 (95% Confidence Interval(CI) 33.8–37.4 vs 40.7 (95%CI 39.8–41.7)) corresponding to a 17% lower risk (HR=0.83 95%CI 0.78–0.87). The incidence of AD was lower in the gout cohort, but not vascular dementia. Within gout cases, ULT exposure within 1–3 years after diagnosis did not significantly affect dementia risk after adjustment for potential confounders.

Discussion

This provides observational evidence supporting the hypothesis that hyperuricaemia has a neuroprotective role with gout patients having lower dementia risk. This risk was unaffected by ULT, but further studies are required to determine if this differs with longstanding ULT use, ULT dose or urate-lowering magnitude to help devise a more evidence-based sUA target.

Views of women with a history of gestational diabetes on screening for type 2 diabetes postpartum: a systematic review and qualitative synthesis

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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 finding 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.

Managing depression and anxiety in frail older people: A qualitative study

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Introduction

Depression and anxiety are common in later life, particularly when people are becoming frail and have impairments or comorbidities affecting their functioning. This leads to reduced quality of life, increased disability and increased health/social care use. Treatments are commonly not tailored to this population. We aimed to explore frail older adults' experiences of managing depression and/or anxiety, to explore future development or modification of services.

Methods

Qualitative semi-structured interviews with up to 30 older people purposively sampled according to urban/semi-rural area, severity of frailty and severity of anxiety/depression. We explored symptoms of anxiety/depression, interactions with physical health, perceptions and experiences of help-seeking and treatments and what might help in future. We audio-recorded and transcribed each interview and used thematic analysis to inductively derive themes.

Results

Emerging findings from interviews (N=24 completed to date) suggest that frail older people's anxieties focus upon their health, family and the future; whilst depressive symptoms are attributed to difficult family situations, past trauma/loss and role changes. Self-management methods were used frequently and preferred when symptoms were less severe. Perceptions of stigma, wanting to preserve independence and access barriers were key reasons people avoided seeking help. Views of potential treatments were mixed, with poor understanding of different therapeutic approaches.

Discussion

Mental health services for frail older adults need to ensure they address late-life anxieties as well as depression, address barriers to accessing appointments and perceptions of stigma, and clearly describe their services to reduce confusion about them.

The diagnostic accuracy and clinical utility of natriuretic peptide based screening for the early diagnosis of heart failure in the community: a systematic review and meta-analysis

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Introduction

Chronic heart failure is a common and debilitating syndrome and presents a significant burden to patients and society. Patients diagnosed with heart failure in primary care have a better prognosis than those diagnosed in acute settings. However, most cases are detected in secondary care and recent research highlights missed opportunities for diagnosis in the community. Early detection of heart failure through community screening may provide an alternative diagnostic pathway. Natriuretic peptides (NP) are currently used to rule out heart failure in symptomatic patients, and could also have a role in screening patients who have not presented with symptoms. This systematic review and meta-analysis will summarise the evidence on both the diagnostic accuracy and clinical utility of this potential strategy.

Methods

The following data sources were searched to April 2018: Ovid Medline, Embase, Cochrane Database of Systematic Reviews and Cochrane CENTRAL. Diagnostic accuracy studies, randomised controlled trials and observational studies including cohort studies will be included. The primary outcome is diagnostic accuracy of NP screening in comparison with echocardiography. Secondary outcomes include prevalence of left ventricular dysfunction (LVD) and heart failure, mortality, morbidity and hospital admissions.

Results

2054 papers were identified from the search and screening is ongoing. Current estimates suggest approximately 170 papers will be included in full-text screening.

Discussion

This systematic review seeks to understand how accurately NP levels detect LVSD/heart failure in patients who have not presented with symptoms; and to determine what impact early diagnosis may have both on patient outcomes and healthcare systems.

DIAMOND (Digital Alcohol Management ON Demand): a feasibility RCT and embedded process evaluation of a digital health intervention to reduce hazardous and harmful alcohol use recruiting in hospital emergency departments and online

[Fiona Hamilton](#), Fiona Stevenson, Jessica Sheringham, Elizabeth Murray

University College London.

Introduction

Alcohol is a major public health problem, but the proportion of problem drinkers accessing treatment is small, mainly due to stigma but also inadequate services. Alcohol-specific digital health interventions (DHI) have great potential, but trial data comparing DHI with face-to-face treatment are lacking.

Methods

A 12-month feasibility RCT of an alcohol DHI, testing recruitment, online data-collection, randomisation, and an embedded process evaluation. Participants were hazardous or harmful drinkers, recruited from hospital emergency departments in London and also online, randomised to HeLP-Alcohol, a six module DHI with regular prompts (phone, email, text message), or standard care (face-to-face treatment), followed by qualitative interviews.

Results

The website was accessed 1074 times: 420 people completed baseline questionnaires online; 350 did not meet eligibility criteria, 51 declined to participate, 19 were recruited and randomised, three provided follow up data and four agreed to be interviewed. The main themes of the process evaluation were:

- Participants were not at equipoise; they wanted to try HeLP-Alcohol and were disappointed if allocated to face-to-face, engaged poorly and dropped out.
- Other reasons given for drop-out included; not accepting their drink problem; problem drinking interfering with practicalities of the trial e.g. forgetting appointments; being too busy to attend face-to-face sessions.

Discussion

In this feasibility RCT we recruited only 19 participants, illustrating the importance of feasibility studies before Phase 3 trials. Participants were not at equipoise at randomisation, leading to poor recruitment, engagement and retention. An alternative trial design, e.g. a preference RCT, should be explored for future trials.

Which co-morbidities are prognostic factors for pain and function for knee osteoarthritis following exercise, and do they moderate the effect of exercise? Secondary analyses of three randomised controlled trials

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Introduction

Exercise is a core treatment for knee osteoarthritis (OA), with small-moderate effect sizes reported. It is currently unknown whether people with comorbidities alongside knee OA respond differently to exercise than those without. This study aimed to determine which comorbidities may be prognostic factors for pain and function following exercise, and whether they moderate response to a) exercise compared to no-exercise, and b) enhanced exercise compared to usual exercise-based care.

Methods

Secondary analyses of three randomised trials of exercise for knee OA (TOPIK, APEX, BEEP) including six month WOMAC pain and function outcomes, and six clinically relevant comorbidities (BMI, pain elsewhere, anxiety/depression, diabetes mellitus, cardiac problems, and respiratory conditions). Adjusted hierarchical regression models were fitted where data was available from more than one trial; otherwise linear regression models were fitted.

Results

Following exercise, obesity compared to underweight/normal BMI was significantly associated with pain (Mean difference (MD): 0.89; 95% CI:0.23,1.54) and function (MD: 2.34; 95% CI:0.12,4.56), as was moderate compared to no anxiety/depression ((MD: 0.71; 95% CI:0.18,1.24), (MD: 1.80; 95% CI:0.00,3.61) respectively). Presence of cardiac problem was associated with effect of enhanced compared to usual exercise-based care for function ($p=0.041$), indicating people with cardiac problems showed deterioration in function following enhanced exercise. Other findings were not significant.

Discussion

Obesity and anxiety/depression were found to predict pain and function following exercise, and presence of cardiac problems might moderate effect of exercise for knee OA. Confirmatory investigations are required to confirm the associations between comorbidities and response to exercise.

Using Pedometers to Increase Physical Activity and Improve health in patients with long-term conditions. a systematic review and meta-analysis

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Introduction

Diabetes, pre-diabetes and metabolic conditions are a major challenge to the sustainability of health services globally. Physical activity is one of the major modifiable risk behaviours for prevention and management of these conditions. One very popular device for motivating, monitoring and adapting/increasing physical activity in these patients is pedometers. However evidence about the achieved benefits of pedometers varies across the different types, their delivery, and patient factors such as age. Therefore a systematic review, meta-analysis using meta-regression combined with network meta-analysis will better evaluate which factors influence the effectiveness of pedometer use.

Methods

Systematic searches of several electronic databases to April 2018 were conducted to identify randomised controlled trials (RCTs) of pedometer interventions. Two independent reviewers are involved throughout. As pedometer programmes are often considered complex in nature, we will firstly assess outcomes by standard pair wise meta-analyses. Subgroup analysis will be conducted and we will assess the different types of pedometers in a network meta-analysis.

Results

A total of 1,050 articles were identified. Screening and data extraction are currently being undertaken. We have identified over 30 eligible RCTs, but screening of eligible trials, systematic reviews and reference lists is likely to increase the final number of eligible RCTs. Our primary outcome is improvements in physical activity levels. Secondary outcomes include body weight, serum lipid levels and blood pressure.

Discussion

We will provide the most comprehensive and rigorous assessment of the comparable efficacy of different interventional approaches based on pedometers to increase the physical activity and well-being of people with diabetes, pre-diabetes and metabolic conditions. Our findings have the potential to influence current clinical guidance for the self-management in these 'high priority' conditions.

Development of a web-based behavioural intervention to support self-management of acne vulgaris

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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.

Chronic morbidity, deprivation and primary medical care spending in England in 2015-16: a cross-sectional spatial analysis

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Introduction

Primary care provides the foundation for most modern health-care systems, and in the interests of equity, it should be resourced according to local need. We aimed to describe spatially the burden of chronic conditions and primary medical care funding in England at a low geographical level, and to measure how much variation in funding is explained by chronic condition prevalence and other factors.

Methods

We investigated the overall morbidity burden across 19 chronic conditions and its regional variation, spatial clustering and association with funding and area deprivation. A linear regression model was used to explain local variation in spending using patient demographics, morbidity, deprivation and regional characteristics.

Results

Levels of morbidity varied within and between regions, with several clusters of very high morbidity identified. At the regional level, morbidity was modestly associated with practice funding, with the North East and North West appearing underfunded and London overfunded. The regression model explained 39% of the variability in practice funding, but even after adjusting for covariates, a large amount of regional variability remained. High morbidity and, especially, rural location were very strongly associated with higher practice funding.

Discussion

Primary care funding in England does not adequately reflect the contemporary morbidity burden. More equitable resource allocation could be achieved by making better use of routinely available information and big data resources. Similar methods could be deployed in other countries where comparable data are collected, to identify morbidity clusters and to target funding to areas of greater need.

A mixed methods systematic review to explore the impact of advanced care planning for older people on reducing unplanned hospital admissions and improving quality of life

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Introduction

Advance Care Planning (ACP) is a series of discussions, sometimes culminating in a written document, between a patient and health care professionals about their wishes for their future care. It has been shown to improve end of life care. We will gather the views of adults aged ≥ 65 years, their families and the healthcare professionals involved in the ACP process. We will also explore the effectiveness of ACP in this population in reducing unplanned hospital admissions and improving quality of life.

Methods

We searched 18 databases for studies published before May 2018. We included systematic reviews (SR) and randomised controlled trials (RCT) evaluating the effectiveness of ACP; SRs, qualitative and mixed methods studies exploring the views of participants. Critical appraisal tools will vary depending on study type. We will carry out a narrative synthesis of quantitative studies, complimented where feasible with a meta-analysis, a thematic synthesis of qualitative studies, and integrate the totality of these evidence using a narrative side-by-side comparison.

Results

For the effectiveness element of the research a total of 2,729 records were retrieved, of which following title and abstract screening by two reviewers, 49 studies were retrieved for full text screening. Of these, 14 met the inclusion criteria. Results from the qualitative searches are pending.

Discussion

A full discussion of the findings and conclusions will be available for presentation at the SPCR showcase in November 2018, this will include the evidence of effectiveness of ACP and the perspectives of all participants.

The prognosis of polymyalgia rheumatica in primary care: 2-year follow-up of the PMR cohort study

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Introduction

Polymyalgia rheumatica (PMR) is the commonest inflammatory rheumatological condition in older adults. Many patients are exclusively diagnosed and managed in primary care. PMR causes pain and stiffness in the shoulder and hip girdles, usually accompanied by raised inflammatory markers. The PMR Cohort study aims to understand the prognosis of PMR in primary care.

Methods

739 people were mailed a questionnaire at diagnosis. 652 (90%) responded and joined the cohort, receiving further questionnaires after 1, 4, 8, 12, 18 and 24 months. Questionnaires included items relating to PMR symptoms, general health and lifestyle. We are grouping participants according to their pain and stiffness using latent class growth analysis (LCGA). We will use these groups as the outcome in a prognostic model to predict who is at highest risk of a poor outcome.

Results

Reported levels of pain and stiffness at baseline were high (median 8/10). 446 people completed the 24-month follow-up questionnaire (adjusted response rate 78%). Results of the LCGA and prognostic modelling will be presented at the meeting.

Conclusion

Patients tells us that PMR is likely to be a heterogeneous condition from which some people recover well with treatment and others do not. Identifying people at high risk of poor prognosis at the time of diagnosis will allow GPs to refer these people earlier for specialist management, such as steroid-sparing agents.

The comorbidity burden of type-2 diabetes mellitus in a large UK primary care dataset: patterns, clusters and future predictions

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Introduction

A better understanding of multimorbidity in people with type 2 diabetes (T2DM) is needed to provide an insight into the needs of the population and the associated healthcare demands.

Methods

Using anonymised health records from the Clinical Practice Research Datalink (CPRD) we investigated the prevalence and co-prevalence rates of 16 chronic conditions at and after T2DM diagnosis. We used linear regression to predict the prevalence of selected conditions for ten years up to 2028. We used hierarchical clustering to group similar conditions. All analyses were stratified by gender, age and deprivation.

Results

At T2DM diagnosis, almost 75% of people had at least one additional condition and 44% had at least two. Females had more comorbidities compared to males and people from the most deprived areas had more conditions than people from the least deprived areas. The prevalence of cardiovascular diseases has decreased and is predicted to decrease in the next ten years. The prevalence of depression has risen in all analysed groups and is predicted to continue to increase, especially in females and in people from most deprived areas. The cluster analysis showed low clustering structure in the data with diabetes concordant conditions (stroke, atrial fibrillation, coronary heart disease, chronic kidney disease) clustering together in all analysed groups.

Discussion

Challenges exist in the concurrent management of T2DM and its comorbidities, which tend to emphasize the focus on cardiovascular disease. This study showed that mental health is a growing problem for people with T2DM and needs to be addressed by clinical guidelines.

A systematic review showing the variation in diagnostic criteria and tools developed for lower limb cellulitis

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Background

Cellulitis is a common infection seen in primary care, with 60% of cases affecting the lower limb. However, 25% of lower limb cellulitis presentations are misdiagnosed, leading to avoidable hospital admission and antibiotic prescribing. Currently in the UK, no diagnostic criteria is available for lower limb cellulitis.

Objective

We sought to identify diagnostic criteria or tools for that have been developed for lower limb cellulitis.

Methods

A systematic review was conducted using OVID MEDLINE and EMBASE databases. The primary outcome for this review was to describe diagnostic criteria and tools developed. The secondary outcome was to assess the quality of the studies identified using a QUADAS-2 tool.

Results

Six observational studies were included, with large variation in what has been explored so far. Four studies looked at biochemical markers to help differentiate lower limb cellulitis, one study developed a diagnostic decision model and one study looked at imaging. The risk of bias was high for patient selection and the index test in all the studies.

Limitations

We were restricted by the quantity and quality of available data. Results could not be pooled due to the heterogeneity in findings.

Conclusion

There is a lack of diagnostic tools or criterion developed for lower limb cellulitis, with future studies needing to develop a case-controlled design validated in both the primary and secondary care setting. Furthermore, to better understand what should be included in a diagnostic tool or criteria, qualitative research involving expert patients and health care professionals should be undertaken.

What do health professionals think about diabetes self-management education for type 2 diabetes?

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Introduction

Evidence suggests that there are significant problems with patients engaging with diabetes self-management education (DSME), with less than 6% of patients attending education programmes. Studies on the barriers to patient attendance at DSME highlight the influence of health professional (HP) factors. HP related barriers include a lack of enthusiasm, inadequate information provision and poor promotion of DSME. Given the potential influence of their views on patient attendance at DSME, it is important to understand the views of HPs 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 HPs views of self-management and self-management education. Sampling was purposive to recruit a diverse range of professional roles including GPs, practice nurses, diabetes specialist nurses, health care assistants, receptionists and commissioners of care. 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=21). Themes that emerged from the data included views on the self-management agenda, the responsibility for self-management, the value of the self-management approach to diabetes care and the role of structured education.

Discussion

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

Optimising Treatment for Mild Systolic hypertension in the Elderly (OPTiMISE): feasibility study for a randomised controlled trial

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Introduction

Recent evidence suggests that large blood pressure reductions may be harmful in older people, particularly frail individuals with polypharmacy and multi-morbidity. The aim of this study was to assess the feasibility of a trial examining whether antihypertensive medication reduction is possible in older patients without significant changes in blood pressure control at follow-up.

Methods

This feasibility study used an open label, randomised controlled trial design. Eligible patients were aged >80 years, with a systolic blood pressure <150mmHg, receiving ≥ 2 antihypertensive medications with no compelling indication for medication continuation. Consenting patients were randomised to medication reduction or usual care and followed-up for 12 weeks. Those in the intervention group had one antihypertensive medication of the treating GP's choice stopped. The primary outcome was to determine practice and patient recruitment rates for the main trial.

Results

Sixteen practices were recruited inviting 942 patients. Of these, 118 attended a baseline consent visit and 90 (9.6% of those invited) were randomised. Reasons for ineligibility at baseline were blood pressure being too high, taking too few medications or lack of equipoise. Follow-up visits were completed in 88 patients (97.8%). Participants were mostly female (60%), aged 84.7 ± 3.5 years and had a mean blood pressure of $133/70 \pm 12/9$ mmHg. They were taking an average of 2.6 antihypertensive medications and were generally fit (eFI 0.1 ± 0.1).

Conclusions

This study found that a trial of medication reduction in older patients is feasible, but those enrolled were generally less frail and more independent than originally planned.

'Running in parallel' rather than together - experiences of managing perinatal anxiety from the perspective of healthcare practitioners: A qualitative study

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Introduction

Perinatal Anxiety (PNA) occurs during pregnancy or up to 12 months postpartum. PNA is as common as perinatal depression (PND) and can adversely impact on both mother and child. Despite this, research into PNA has received less attention than PND. The National Institute for Health and Care Excellence (NICE) guidance on perinatal mental health (CG192) has identified PNA as a research priority.

Methods

Data were generated using semi-structured interviews with 23 healthcare practitioners (HCPs). An iterative approach to data collection and analysis was taken. Thematic analysis was conducted using principles of constant comparison. A 'Patient and Public Involvement and Engagement' (PPIE) group has been involved throughout the study.

Results

10 General Practitioners, 7 midwives, 5 health visitors and 1 obstetrician were interviewed. Initial analysis reveals several themes: the challenge of differentiating between normal and pathological anxiety, use of case-finding tools versus reliance on clinician judgement or intuition; communication between HCPs, confusion over HCP responsibilities and fragmentation of care.

Discussion

Recruitment of participants was challenging. HCPs suggested that PNA can be difficult to identify, with role and remit boundaries unclear, and mixed views on the use and value of case-finding tools. Care for women identified with PNA was reported to be fragmented, partly due to limited communication between HCPs and role confusion. Co-location of HCPs could ameliorate some of these difficulties. Specific learning needs were identified, with an emphasis on interdisciplinary education.

A qualitative exploration into the benefits of an online mindfulness meditation intervention for people with asthma, recruited in primary care

Sabina Stanescu, Ben Ainsworth, Sarah Kirby

University of Southampton.

Objectives

Asthma is a chronic condition requiring long-term treatment and management, negatively impacting daily life, relationships and quality of life. Digital behavioural/psychological interventions can improve quality of life for asthma patients provided they are engaging and relevant. We aimed to understand the experience and perceptions of people with asthma who used 'Headspace', an online mindfulness intervention, for six weeks.

Methods

Twenty-seven participants (purposely selected from 160 participants in the trial) completed semi-structured interviews 6 weeks after entering the trial. Interviews were analysed with inductive thematic analysis. They addressed the experience of living with asthma, and the relevance and usefulness of non-pharmacological interventions for people with asthma, and costs/benefits of digital interventions for asthma.

Results

Participants all agreed that quality of life is an important outcome for interventions. They described quality of life mainly in terms of activity limitation, and anxiety about specific activities triggering asthma attacks. Participants valued non-pharmacological interventions but noted that interventions should be asthma-specific (rather than general mindfulness or anxiety-reducing). Finally, participants appreciated the newly-acquired awareness of their breathing as well as the accessible nature of the digital intervention.

Conclusions

Our findings have important implications for the development of future digital interventions for people with asthma that target quality of life, highlighting the need for disease-specific components to ensure interventions are engaging and acceptable.

Initiation and Discussion of Information from the Internet in GP Consultations

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Introduction

Encouraging patients to consult the internet prior to seeing their GP conflicts with research pointing to interactional difficulties experienced by both GPs and patients when raising the internet. The Harnessing Resources from the Internet (HaRI) study considers how to manage the introduction and discussion of internet-based health information during consultations by studying what happens in practice.

Methods

282 video recorded consultations with a patient survey reporting information sources accessed prior to the consultation were collected, supplemented by post-consultation semi-structured interviews with 30 patients and 10 GPs. Conversation analysis was used to identify recurrent practices by which GPs and patients introduce use of the internet into consultations and the interactional consequences.

Results

79/282 patients reported using the internet prior to consulting, but only 18 mentioned the internet in consultations. Doctors asked patients about use of the internet in 15 consultations and used it themselves in 23 consultations. Patients referred to the internet to demonstrate work done in advance of consulting. The phase of the consultation in which patients mentioned the internet was consequential for GPs' responses; for example GPs found it difficult to respond during problem presentation. GPs used the internet to seek, and to direct patients to, information.

Discussion

The gap between encouragement to seek information from the internet before the consultation and what happens in practice is potentially problematic. Our analysis will be used to identify strategies to support both GPs and patients to maximise the effectiveness of use of internet resources in GP consultations.

Primary and secondary health care use before and after introduction of a named GP-scheme for older English patients, 2012-2016

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University of Bristol.

Introduction

This study investigated whether the named GP-scheme for persons ≥ 75 introduced in April 2014 decreased risk of emergency hospital admission (EHA), and improved continuity of primary care.

Methods

We obtained data on 27,500 patients aged 65-84 from linked primary care (CPRD) and hospital (HES) data. Patients were followed between April 2012 and April 2016, comprising two-year periods before and after introduction of the intervention. In both periods we determined patients' continuity of primary care (Bice-Boxerman index), and whether they experienced an EHA. The associations between the intervention, and continuity and hospitalisation, were examined using multilevel modelling, adjusting for gender, number of co-morbidities, deprivation, number of GPs in practices, and urban/rural location.

Results

The probability of an EHA for patients aged ≥ 75 increased by 6.3%-points (from 19.9% pre-intervention to 26.2% post-intervention). This increase was bigger than for patients < 75 : 2.1%-points (from 11.6% pre-intervention to 13.7% post-intervention). Analysis including time-age interaction showed the ratio of odds ratios for patients aged ≥ 75 was 1.19 (95%CI 1.07-1.33) compared with those < 75 .

Bice-Boxerman index-score for patients aged ≥ 75 decreased by 0.031 (from 0.434 pre-intervention to 0.403 post-intervention). This decrease was bigger than for patients < 75 : 0.025 (from 0.422 pre-intervention to 0.397 post-intervention). Analysis including time-age interaction showed patients aged ≥ 75 had an extra decrease in their continuity of care of 0.012 (95%CI 0.003-0.020) compared with those < 75 .

Conclusion

The introduction of a named-GP scheme was not associated with improvements in either continuity of care or rates of unplanned hospitalisation.

Uncertainty about cellulitis and unmet patient information needs: a mixed methods study

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Introduction

Cellulitis is a painful skin infection that recurs in approximately a third of cases. Ability to recover from cellulitis or prevent recurrence is likely to be influenced by understanding of the condition. We aimed to explore patients' understanding of cellulitis and their information needs.

Methods

Adults aged over 18 with a history of cellulitis, recruited through primary care, secondary care and advertising, were invited to complete a survey, participate in an interview or both. Qualitative data were analysed thematically.

Results

Thirty interviews were conducted between August 2016 and July 2017. Qualitative data highlighted uncertainty amongst participants in terms of awareness/understanding of cellulitis, particularly their experiences of first episode cellulitis. We found: (1) low prior awareness of cellulitis, (2) uncertainty around the time of diagnosis, (3) concern/surprise at the severity of cellulitis, (4) perceived insufficient information provision. Participants were surprised they had never heard of cellulitis and that they had not received advice or leaflets giving self-care information. Some sought information from the internet and found this confusing.

Two hundred and forty surveys were completed (response rate 17%). Quantitative data showed that, whilst many participants had received information on the treatment of cellulitis (60.0%, n=144), many reported receiving no information about causes (60.8%, n=146) or prevention of recurrence (73.3%, n=176).

Discussion

There is a need for provision of basic information for people with cellulitis, particularly (1) being informed of the name of their condition, (2) how to manage acute episodes, (3) how to reduce risk and prevent recurrence.

You go into GP training with your eyes wide shut; a qualitative study of training and transition as experienced by newly qualified GPs

Sharon Spooner, Louise Laverty

University of Manchester.

During the current 'crisis' of recruitment to general practice, retention of newly trained GPs is of heightened importance. However, some new GPs (nGPs) do not progress from GP specialist training (GPST) to substantive GP careers. This research explores the reasons behind their career choices.

Participating doctors were recruited as they completed GPST or were within 5 years of completion. A combination of individual and focus group interviews gathered narrative and discursive accounts of their perspectives on multi-layered experiences which influence decision-making. Ongoing analysis has identified several prominent themes including: the extent to which they feel properly prepared for GP work, their preferred working patterns, and how they see their future GP careers.

Doctors describe GPST as 'world-class' training but also recognise remaining knowledge gaps and report on a range of difficulties encountered when employed in hospital posts. Experiencing the reality of heavy workloads in general practice has led many to choose work schedules which are more sustainable and allow a healthy work-life balance. Many voice concerns about how GPs may be expected to work differently in future and some are pre-occupied by an uncertain combination of hoping and fearing that things will change.

Although GPST achieves the highest rating amongst all UK ST programmes, sub-optimal transitions from training to long-term GP work jeopardises resolution of the continuing GP workforce crisis and may contribute to less effective primary care in future years. This study provides vital evidence for policy makers, educators and practising GPs about how to improve retention of GPs.

Experiences of undertaking a realist review to evaluate care navigation in primary care

Tierney Stephanie¹, Wong Geoff¹, Nia Roberts¹, Anne-Marie Boylan¹, Sophie Park², Ruth Abrams², Joanne Reeve³, Kamal Mahtani¹

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Introduction

Patients often visit their GP with non-medical problems. Care navigators (CNs) have been introduced into primary care to address this. These individuals signpost and support patients to access relevant, available services, including those in the community or voluntary sector (e.g. organisations to help with debt, with housing, groups to stop people feeling isolated or to promote healthy living). It is proposed that CNs will reduce GP workload and ensure that patients receive the right support, at the right time (NHS England, 2016).

Methods

We have embarked upon a realist review to explore and explain why CNs may work for some individuals, within certain contexts. This approach was selected because CNs represent a complex intervention (i.e. consist of interacting components and target or involve a range of individuals/ organisations). Stages for a realist review outlined by Pawson et al. (2004) are being followed.

Results

In this presentation, we will share our findings and experiences of undertaking a realist review in this area. It will cover: a) setting out – understanding the landscape through initial reading and consulting with key stakeholders, to develop an early programme theory; b) getting stuck in – approaching the literature search; c) dealing with messiness – defining concepts and managing data.

Conclusion

This presentation will generate discussion associated with conducting a realist review on a primary care innovation that seeks to benefit GPs and patients. Findings from our review will be of use to commissioners and providers of CNs when deciding how to implement this role in general practice.

Gout attack trajectories in a three-year prospective cohort study identified using latent class growth analysis

[Lorraine Watson](#), John Belcher, Christian Mallen, Edward Roddy

Keele University.

Introduction

Gout affects 2.5% of adults in the UK but is often poorly managed. The hallmark of gout is recurrent sudden-onset attacks of acute joint pain and swelling. However, little is known about the pattern (trajectory) of attacks over time. We aimed to derive such gout attack trajectories and to determine which patients are at most risk of frequent attacks.

Method

People with gout registered with 20 general practices self-reported the number of gout attacks experienced at 5 time-points (baseline, 6, 12, 24 and 36 months) via a postal questionnaire in a three-year cohort study.

Latent class growth analysis (LCGA) was used to identify distinct classes of gout attack trajectories. Comorbidities, medications, socio-demographic and gout-specific characteristics of members of gout attack trajectory classes were compared.

Results

1184 participants responded to the baseline survey (66%); mean age 65.6 years (SD 12.5), 990 (83.6%) were male. LCGA identified six latent classes: 'frequent and persistent' (n=93), 'frequent then improving' (n=14), 'gradually worsening' (n=278), 'moderately frequent' (n=287), 'moderately frequent then improving' (n=142) and 'infrequent' (n=350). The 'infrequent' class had more members reporting allopurinol use at baseline (73%) and fewer members with a history of oligo/polyarticular gout (27%) compared with other classes. Further characteristics of class members will be presented.

Discussion

For the first-time, distinct gout attack trajectories have been identified. Better understanding of which patients are at most risk of frequent gout attacks will help to target interventions and improve patient care.

What initiatives have been employed to improve end of life care in Primary Care? Synthesising the evidence from a realist review

[Ian Wellwood](#)¹, Mila Petrova¹, Stephen Barclay¹, Isla Kuhn¹, Geoffrey Wong²

¹University of Cambridge. ²University of Oxford.

Context

In recent years numerous initiatives aiming to improve end of life care (EoLC) and promote "a good death" have been proposed. We set out to explore and understand these initiatives and the many, varied and interdependent mechanisms by which they may work (or fail) when applied to the highly complex context of EoLC provision in Primary Care in the UK.

Methods

We are conducting a realist review (applying realist methods to secondary research) to establish what works, for whom, in what circumstances, in what respects, to what extent, and why.

Our cross-School collaborative group has developed a protocol, initiated literature reviews covering UK-derived, EoLC Primary Care literature (1998-2018) and will engage iteratively with key stakeholders including: researchers, service providers and decision makers in Primary Care, patients, bereaved carers and the wider public, policy makers and research funders. We aim to identify, select and appraise a wide range of literature from standard and grey literature databases. These will be reviewed and coded using realist concepts (e.g. context, mechanism and outcome) to analyse the data from multiple perspectives and synthesise the evidence.

Discussion

The project forms part of a group of realist reviews in the evidence synthesis programme, providing opportunities to develop realist review skills that will be used in a related School-funded review (management of complicated grief in Primary Care) and disseminated across the School. The results (expected summer 2019) will inform policy, practice and the research agenda in this important aspect of Primary Care.

Statin use and dose after intracerebral haemorrhage in the UK general practices, 2000-2015: a retrospective cohort study using the Clinical Practice Research Datalink

Zhirong Yang, Duncan Edwards, Jonathan Mant

Primary Care Unit, University of Cambridge.

Introduction

Little is known about statin prescription and intensity use following intracerebral haemorrhage(ICH) in the real world. This study was to examine trends and factors associated with statin prescription and dose following ICH.

Methods

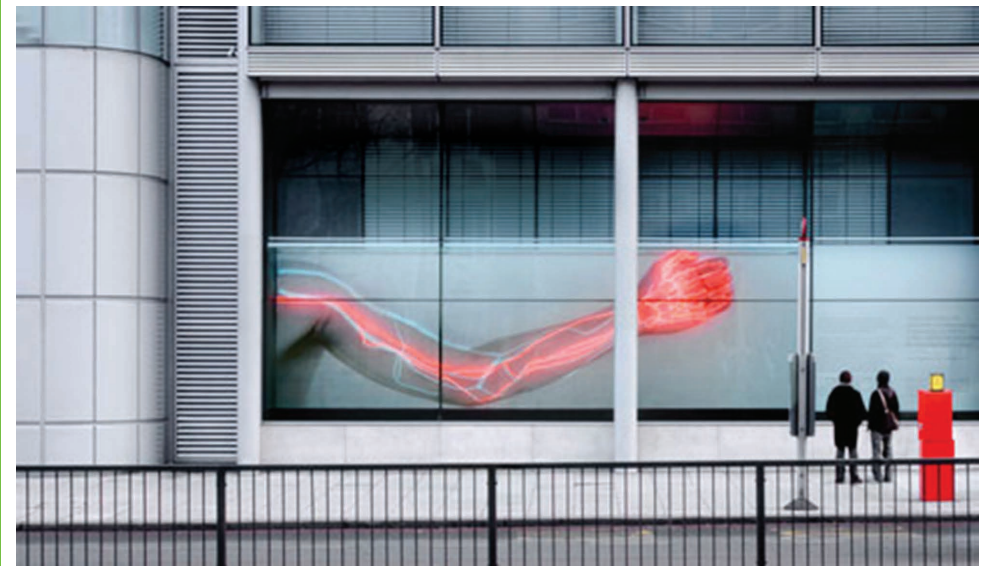
A retrospective cohort study of patients with first ICH between 2000 and 2015 was conducted using the CPRD. Proportions of statin users and high-intensity statin users within one year after ICH were estimated for each calendar year. We used Cox regression and Poisson regression to explore potential factors associated with statin prescription and high-intensity statin use, respectively.

Results

7239 patients with ICH were included. The overall proportion using statins after ICH has been decreasing in recent years. The proportion of high-intensity statin use was increased over time regardless of history of ASCVD and pre-ICH statin use. Among post-ICH statin users, nearly half used statins within the first 30 days after ICH and over 80% used within the early 90 days. Coronary heart disease(CHD) was associated with increased use of statins and high intensity. More than 60% of patients pre-treated with statins continued to use statin following ICH, with high intensity more likely to be prescribed for prior high-dose statin users but less likely for prior low- or medium-dose users.

Discussion

There has been a decrease over recent years in statin use but an increase in high-dose use following ICH. Continuation and early use of statins are common among statin users. CHD and prior statin use are independently associated with post-ICH statin prescription and high-intensity statin use.



POSTERS

1. Evaluating a digital mindfulness-based intervention in a randomised-controlled feasibility trial for people with asthma

Ben Ainsworth, Sabina Stanesco, Sarah Kirby, Beth Stuart, Ratko Djukanovic, Mike Thomas
University of Southampton.

Introduction

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 waitlist control. Participants completed online/postal questionnaires of quality of life (AQLQ), asthma control (ACQ), anxiety (HADS), enablement (PEI) and medication adherence (MARSAs) at baseline, 6-week and 3-month follow-up. Intervention engagement was monitored. 20 patients were purposively sampled for an in-depth interview.

Results

Intervention engagement was high (Logins M 24.2, range 0-192). 69% of patients offered Headspace 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%). Followup AQLQ scores increased in the intervention group at 6-week (M AQLQ improvement = 0.35, 95% CIs 0.17-0.52) and 3-month (M = 0.39, 95% CI 0.18-0.59) but not in the control group (M6wk=0.03, M→3m→=0.11). 13 patients withdrew. Thematic interview analysis highlighted the accessibility of DIs and the importance of a focus on quality of life.

Discussion

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.

2. Frailty in the new General Medical Services contract—what does it mean to Primary Care Providers?

Khulud Alharbi¹ Harm van Marwijk², David Reeves¹ Thomas Blakeman¹

¹University of Manchester. ²Brighton and Sussex Medical School, Mayfield House.

Background

The new General Medical Services (GMS) contract requires general practitioners (GPs) to identify and code all their moderately and severely frail patients and to provide appropriate care. However, frailty is a relatively new and possibly contentious concept to healthcare professionals in primary care.

Aim

- How is frailty understood and enacted by providers in primary care?
- How does this compared with guidance/contractual requirements regarding frailty?
- What are the gaps between 1 and 2 and what issues need to be considered in order to address the gap between recommended and current practice?

Design and Setting

Qualitative study in primary care settings

Method

Qualitative interviews are conducted with up to 20 primary healthcare professionals, including GPs, practice nurses and healthcare assistants. Normalisation process theory NPT provides the framework for analysis and interpretation of data.

Conclusion

Identification of patients with frailty is a requirement of the new GP contract, but it remains unclear whether GPs and other primary healthcare professionals will consider it helpful in making better shared decisions about care or whether it will be perceived as excessive medicalization creating unnecessary work. Understanding the experience of primary healthcare professionals in operationalizing the identification of frailty in their daily practice will help to evaluate this new policy initiative.

3. “I’m not his carer; I’m his wife.” Facilitating mutual support for mental wellbeing within patient-supporter dyads living with chronic physical conditions

Gemma-Claire Ali¹, Morag Farquhar², Peter Scott Reid¹, Jonathan Mant¹

¹University of Cambridge. ²University of East Anglia.

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 patient-supporter dyads living with chronic physical conditions.

Method

Understanding of how to facilitate mutual support in patient-supporter dyads 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 development of a dyadic intervention.

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 allowed us to develop a relevant, acceptable and evidence-based intervention framework facilitating mutual support for mental wellbeing in patient-supporter dyads. The proposed framework will be available for presentation at the Research Showcase.

4. What is helpful and hindering about substance use treatment in primary care: preliminary study findings

Paula Alves, Fiona Stevenson, Sophie Mylan

University College London.

Primary care can be an ideal setting to identify and manage substance use within the context of a holistic health assessment and care plan. It provides easy access to treat physical and mental substance use-related problems, allowing all of patients’ concerns to be accommodated. Also, primary care supports treatment provision for substance users in an environment that has the potential to be less stigmatising than specialist services. Patients receiving substance use treatment (SUT) in specialist services have reported that clinicians’ views about recovery criteria may be “unrealistic” and that clinicians have no idea about their (treatment) experience. However, there is limited research on the patient experience whilst receiving SUT in primary care. A qualitative study has been designed to gain insight about the patient experience of SUT in primary care settings. For this, we will conduct 30 individual, semi-structured interviews with adult male and female patients receiving SUT in GP services across England. Our aim is to discuss the preliminary findings of the thematic analysis of these data, focusing primarily on the helpful and hindering aspects, or events, experienced by patients during consultations to address their substance use in primary care. We will also discuss the implications of our study for future research and practice, as well as the challenges/lessons learned from conducting this study.

5. Examining the role of attachment in primary care mental health assessments

Helen Beckwith

University of Cambridge.

This project will address clinical practice relating to child mental health, exploring when and how clinicians draw upon attachment theory in making sense of difficulties and symptoms experienced by children, and in work supporting families. It builds upon existing research regarding the use of attachment theory and diagnoses within clinical practice (e.g. Woolgar & Baldock, 2015; DeJong, Hodges & Malik, 2016), and investigates the extent to which the integrity of attachment concepts and methods are maintained when applied meaningfully to routine practice.

Until recently, there has been very little published research examining professional behaviour of practitioners working with children and families in context; and has so far primarily focused on social workers (Wilkins, 2016; Lesch, Desit, Booysen & Edwards, 2013; Botes & Ryke, 2011) or unspecified therapists (Burke, Danquah & Berry, 2016). Wilkins (2016) found professionals working in safeguarding contexts reported that the construct of disorganised attachment helped them to effectively identify risk when assessing children and families. However, a recent consensus statement submitted by over 40 experts in the field, including both original authors of the disorganised attachment classification, cautions strongly against this (Granqvist, et al., 2017). It is not expected that the controversy surrounding this application is common to other identified uses; more likely are examples of where practitioners have indeed found ways of translating scientific knowledge that are both valuable and consistent with the intended aims of literature and policy.

The study uses Q methodology to capture consensus and divergent viewpoints regarding the value and utility of attachment knowledge when applied to various aspects of primary care clinical practice. Additional self-report measures relating to clinician demographics, service context and individual differences in aspects of personality will aid interpretation of the data that may helpfully inform future training and policy guidance.

6. Restricted review of published data on adverse events from emollient use in eczema

Alisha Bhanot

University of Bristol.

Background

Emollients are the first line treatment option for atopic dermatitis/eczema of all severity. Despite their widespread and long-term use in treating eczema, reporting of adverse events related to emollient use is limited.

Aim

To conduct a restricted review of published data on adverse events from emollient use in eczema.

Method

MEDLINE (Ovid) was searched from inception (1946) to June 2018. A search strategy was developed using keywords for eczema, emollients and adverse events. All types of study except reviews were included. Eligibility was assessed using a two stage screening process against inclusion and exclusion criteria. References of all included papers were screened for additional eligible papers and data was extracted.

Results

24 papers reported on adverse events with 29 different emollients: 3 contained urea, 5 ceramide, 4 glycerol, 4 herbal and 13 "other". No serious treatment related adverse events were reported for any emollient. The proportion of participants experiencing treatment related adverse events varied between 2-59%. The most common adverse events were skin related and were often mild. The range of participants experiencing non-treatment related adverse events was 4-43%.

Conclusion

We found limited data published on adverse events from emollient use. Poor reporting, missing data and omitting data on adverse events entirely made it difficult to interpret results and compare emollients. The emollients studied appeared to be generally safe to use. However, emollients commonly prescribed in the UK were not represented. Better studies and reporting of adverse events associated with commonly used emollients in the UK are needed.

7. Managing hydration in later life: exploring the views and current practices of older people

Cini Bhanu, Christina Avgerinou, Kate Walters, Jennifer Rea, Ann Liljas, Yehudit Bauernfreund, Helen Croker, Kalpa Kharicha

University College London.

Background

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.

Methods

Qualitative study using semi-structured interviews with 40 older people community-dwelling older people aged ≥ 75 years, identified as malnourished or at risk of malnutrition, from GP practices in London. Interviews were audio-recorded and transcribed verbatim and thematic analysis used to identify key emergent themes.

Results

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 usually discussed with the GP. However, most were open to support from a trained health professional.

Discussion

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.

8. How do GPs and nurses manage prediabetes and why do they refer to the NHS diabetes prevention programme?

Patrick Burch

University of Manchester.

Introduction

The NHS is making a significant investment in a national diabetes prevention programme (DPP). One of these factors that will influence its outcomes is the interaction of patients with health professionals when discussing pre-diabetes, prior to referral to the national programme. There is evidence that GP attitudes towards patients with obesity and impaired glucose tolerance can be quite negative and that treatment of these conditions is viewed as ineffective. This project aims to see how primary care clinicians are currently managing pre-diabetes and how and why they are referring onto the DPP

Methods

This is a qualitative project that uses semi structured interviews and focus groups. GPs and nurses from 6-10 practices will be sampled to reflect diverse populations at local level, including practices in areas with high and low deprivation, and high levels of ethnic minority patients. I aim to recruit 20-30 participants based on two focus groups, and the remainder via individual interviews. I will conduct a thematic analysis drawing on some techniques of a grounded theory approach

Results

I have currently undertaken 14 one-to-one interview and am in the process of arranging focus groups and additional interviews. Preliminary analysis has shown a generally positive approach to pre-diabetes but a number of different aspects that influence a clinicians management or decision to refer to the DPP.

Discussion

Clinician management of pre-diabetes varies greatly between practices and clinicians. This ongoing research is starting to highlight some of the differences in management and factors that influence this.

9. Clinical perspectives on the assessment and diagnosis of developmental conditions in children

Barry Coughlan¹ Robbie Duschinsky¹ Marinus van IJzendoorn¹ Matt Woolgar²

¹University of Cambridge. ²Kings College London.

Context

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). Interview 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.

10. What adverse outcomes are associated with polypharmacy in later life? A systematic review of reviews

Laurie Davies, Barbara Hanratty, Joy Adamson, Andrew Kingston, Adam Todd

Newcastle University.

Introduction

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

The adverse health, social, medicines management and health care 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.

11. Impact of health and social care interventions on unplanned hospital admissions, timely discharge and well-being of community dwelling older population: A mixed method meta-review of systematic reviews

Shoba Dawson¹ Patience Kunonga² Gemma Spiers¹ Fiona Beyer² Lorna Duncan¹ Matthew Booker¹ Dawn Craig² Ruth McDonald³, Ailsa Cameron¹ Barabara Hanratty² Chris Salisbury¹ Alyson Huntley¹

¹University of Bristol. ²Newcastle university. ³University of Manchester.

Introduction

Hospital episodes for the >65yrs population have continued to increase, rising to 6.3 million in 2016-17 period. Whilst some older people need to be admitted to the hospital, there is growing evidence to suggest that timely care provision in the community is more appropriate for many. This mixed-method meta-review aims to identify and examine systematic review (SR) evidence of health and social care interventions for the community-dwelling older population regarding unplanned hospital admissions, timely hospital discharge and patient well-being.

Methods

A search strategy was run in eight databases in April 2018, restricted to OECD countries and to those published from 2013 onwards to reflect the relevant evidence. Quality of quantitative data and qualitative data will be appraised using ROBIS and GRADE-CERQual tools respectively. Both data extraction and quality appraisal will be conducted by one reviewer and checked by a second reviewer.

Results

Searches retrieved 8720 papers. Title and abstract screening undertaken independently by four reviewers is nearly complete, and we estimate including approximately 80-100 full-text SR. Initially we will group the reviews by condition, e.g. general older population, COPD, etc. In a multi-disciplinary team meeting in June, we will rank and prioritise topics. We will write an overall report and individual publications for the project end in 2019.

Discussion

At the SPCR showcase In November, we will present our overall findings of the meta-review as well as the evidence of health and social care provision impact on hospital admission, timely discharge and patient well-being for the general older population.

12. Optimising Management of Patients with Heart Failure with Preserved Ejection Fraction in Primary Care (Optimise-HFpEF)

Ian Wellwood¹ Jonathan Mant², Richard Hobbs³, Clare Taylor³, Carolyn Chew-Graham⁴, Thomas Blakeman⁵, Duncan Edwards², Faye Forsyth², Aaron Long³, James Brimicombe², Susana Borja-Boluda², Christi Deaton²

¹University of Cambridge. ²University of Cambridge. ³University of Oxford. ⁴Keele University. ⁵University of Manchester.

Introduction

Around 900,000 people in the UK have heart failure (HF), which accounts for 2% of NHS expenditure and causes or complicates 5% of emergency hospitalisations. Around half of patients with HF have a preserved ejection fraction (HFpEF) rather than reduced ejection fraction (HFrEF). HFpEF poses a challenge to clinicians given lower awareness of the condition, patient heterogeneity, difficulty in diagnosis, and lack of an evidence base for effective treatment beyond management of comorbidities and fluid status.

Aim

To develop a programme of optimised management by improving our understanding of the needs and experiences of patients with HFpEF, clinical decision-making and management in Primary Care; integrating research findings with patient and clinical expertise.

Methods

Multiple methods including: 1). systematic literature review. 2). qualitative study involving semi-structured interviews with patients, carers and healthcare professionals (HCPs). 3). cohort study of 200 patients with HFpEF in Primary Care followed for 12 months. 4). consensus methods (nominal groups of patients and HCPs) to develop an optimised management programme delivered in primary care with specialist support. The “House of Care”, systems thinking and the concepts of “Burden of Treatment” and “minimally disruptive medicine” will provide theoretical frameworks for the optimised programme.

Conclusion

This cross-School collaboration will provide key information on HFpEF, build research capacity and inform the finalised programme which will be piloted and trialed in a subsequent study.

13. Impact of hospital admission upon patterns of primary care prescribing

[Rachel Denholm](#), Richard Morris, Sarah Purdy, Rupert Payne

University of Bristol.

Introduction

Hospitalisation may result in important changes to prescribed medicines, but the nature of these changes and whether they are sustained is unknown. The study aimed to investigate changes to primary care prescribing post-hospitalisation.

Methods

A retrospective cohort study of 100,000 randomly selected adults hospitalised in 2014 was conducted using CPRD data. Weekly drug counts were calculated immediately pre-hospitalisation, and 4-weeks and 6-months post-discharge. Difference in drug counts by urgency and hospital speciality were investigated.

Results

There were 99,304 eligible hospital admissions. On average, 4.6 ± 5.0 drugs were prescribed pre-hospitalisation, increasing with age (<45-years 1.6 ± 2.9 vs. >75-years 7.6 ± 5.0 drugs) and multimorbidity (0 conditions 1.1 ± 2.2 vs. ≥ 5 conditions 11.2 ± 5.7 drugs).

Drug count changed by 0.1 ± 2.2 and -0.4 ± 3.2 drugs at 4-weeks (n=95,892) and 6-months (n=92,419) post-discharge, respectively. Patients prescribed more drugs prior to hospitalisation had a greater change: 0 drugs 0.5 ± 1.4 (4-weeks) and -0.7 ± 3 (6-months) vs. ≥ 10 drugs 0.5 ± 1.4 and -2.4 ± 5.6 drugs, respectively.

Emergency attendees had an average change in drug count of 0.3 ± 2.8 (4-weeks) and -0.4 ± 3.8 (6-months) post-discharge, compared to 0.1 ± 1.7 and -0.4 ± 2.9 for elective attendees, respectively. Amongst emergency attendees, change in drug count 4-weeks post-discharge varied by hospital speciality from 2.24 ± 3.73 for cardiology to -0.26 ± 3.57 for ear, nose and throat. By 6-months post-discharge, all specialities, except cardiology, reported a decrease in average drug count.

Discussion

We found little change in prescribing after hospital discharge, with some long-term decline, in contrast to previous studies which report an overall increase. Greatest changes in prescribing were observed amongst patients prescribed more drugs pre-hospitalisation.

14. Buddy Up: Feasibility of a 'buddy' intervention for postnatal physical activity

[Kate Ellis](#), Stephen Sutton, Sally Pears

Primary Care Unit, University of Cambridge School of Clinical Medicine.

Introduction

Being physically active during the postnatal period is beneficial for physical and mental health, yet many mothers report lower activity levels than women without children. A lack of time, tiredness, childcare and being active in a group are key factors influencing postnatal physical activity. Buddy Up is a newly developed intervention targeting these factors through paired (two new mums) physical activity counselling sessions. This study aims to assess 1) feasibility of recruitment and adherence to a paired intervention protocol 2) acceptability of the intervention 3) potential efficacy for increasing physical activity levels.

Methods

We will recruit 40 pairs through advertising at community settings. Participants will be matched with a buddy by nominating an existing friend or by researchers. Buddy pairs will attend three physical activity counselling sessions using motivational interviewing techniques, which aim to build mutual support to encourage each other to participate in physical activity together. Participant rates will be calculated to assess the feasibility of recruitment and adherence. Post intervention questionnaires and semi-structured telephone interviews with a subsample of participants will assess intervention acceptability. Assessment at baseline and three-month follow up will assess objective and self-report physical activity levels and barrier efficacy. Physical activity data before and after the intervention will be compared using statistical tests.

Discussion

The Buddy Up study will determine whether it is feasible to recruit new mums in pairs, whether the intervention is acceptable for participants and explore its potential efficacy for increasing physical activity levels.

15. Costs of Medically Unexplained Physical Symptoms in Primary Care in England

Buddhika Fernando

Research Institute for Primary Care and Health Sciences, Keele University.

Introduction

Evidence for physical disease cannot be found in 19% - 49% of patients presenting in primary care. Such Medically Unexplained Physical Symptoms (MUPS) are a significant burden to the NHS due to increased resource utilization and high costs. However, there is limited data and several gaps in the assessment of actual costs of MUPS in England: the oft-cited Birmingham 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 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 of 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):
 - 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
 - The costs per MUPS patient per year is estimated using standardised NHS data costing to arrive at a total cost estimate of MUPS in Primary care in England

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.

16. 'I'm Fine': exploring patient assertions of status in advanced Chronic Obstructive Pulmonary Disease (COPD) and clinical implications for primary care

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Introduction

Patients can be reluctant to say they need support, telling clinicians they are "fine" despite having unmet needs. Research in mental health settings suggests that when patients do this they are less likely to follow treatment plans. To date these findings have not been explored in patients with advancing physical health conditions and their clinicians.

Aim

To explore the presence and role of "I'm Fine" or equivalent assertions for patients with advanced COPD.

Methods

Criteria based on Attachment Theory were used to identify 'I'm Fine' cases from the Living with Breathlessness Study (LWB) dataset of 235 patient mixed-method interviews. Quantitative analysis explored key variables between cases and non-cases. Qualitative analysis explored discourses within cases. Focus groups with healthcare professionals (HCPs) considered implications for primary care practice.

Results

21 patients asserted they were 'fine', despite unmet needs. These patients described treatment non-adherence, reluctance to think about the future and avoidance of healthcare advice-seeking. They were also more likely to report no exacerbations and score less on the COPD Assessment Test. However all wanted to see more of their GP. HCPs recognised the existence, and behaviours, of this group but described difficulties in engaging with them.

Conclusion

The existence of a sub-group of patients with advanced COPD who assert they are 'fine' (when not) has implications for the delivery of primary care. Patients who demonstrate these behaviours are at risk of medication non-adherence and ineffective collaborative planning with HCPs. Evidence-based interventions are needed to enable HCPs to support this patient group.

17. Validating the Support Needs Approach for Patients (SNAP) tool in primary care: a person-centred approach for patients with advanced Chronic Obstructive Pulmonary Disease (COPD)

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Introduction

Primary care is at the forefront of COPD management. A person-centred approach is advocated, yet patients have difficulty articulating their needs to health care professionals (HCPs). The Support Needs Approach for Patients (SNAP) tool aims to enable patients to identify and express their support needs but its validity is unknown.

Aim

To establish the face, content and criterion validity of the SNAP tool in advanced COPD.

Methods

Two-stage mixed method primary care study involving patients with advanced COPD, and their carers. Stage 1: Face and content validity assessed through focus groups involving patients and carers (n=12), considering the appropriateness, relevance and completeness of the SNAP tool. Data analysed using thematic analysis within a Framework Approach. Stage 2: Content and criterion validity assessed in a postal survey through patient self-completion of the SNAP tool and disease impact measures (Chronic Respiratory Questionnaire, COPD Assessment Test, and Hospital Anxiety and Depression Scale). Content validity assessed using summary statistics; criterion validity via correlations between tool items and impact measures.

Results

The SNAP tool has good face, content and criterion validity. Patients and carers found the tool patient-friendly and potentially useful. No items on the tool were redundant, and clear correlations were found between tool items and the majority of items/sub-scales of the impact measures.

Discussion

The SNAP tool has good face, content and criterion validity. It has the potential to facilitate person-centred care by enabling patients to express their support needs to HCPs. Future work will pilot SNAP in clinical practice.

18. Impact of point-of-care panel tests in ambulatory care: a systematic review and meta-analysis

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Background

Ambulatory care physicians including General Practitioners (GPs) frequently encounter diagnostic uncertainty; point of care testing (POCT) might reduce this. This systematic review and meta-analysis evaluates the quantitative impact of POCT in ambulatory care with a focus on blood based panel tests. This forms part of a series of systematic reviews which assessed the overall impact of POCT in ambulatory care.

Methods

Systematic review and meta-analysis of RCTs and before-after studies. Outcomes focus on the impact of POCT panels on patients and healthcare processes. Search databases included Medline, Embase, Cochrane Database of Systematic Reviews, Cochrane CENTRAL.

Results

We included 19,562 patients from 9 studies, 8 of these were RCTs, and one was a before-after study. None were based in primary care. No significant difference in mortality was reported. General POCT panel tests resulted in disposition decisions being made 40 minutes faster (95% CI -42.53 to -37.02, I²=0%) compared to the usual care group. This in turn resulted in a reduction in length of stay for patients who are subsequently discharged by 34 minutes (95% CI -63.66 to -5.23). There was no gain in LOS for patients who were admitted to hospital.

Discussion

Well patients who could be discharged and unwell patients who require quicker management decisions may benefit most from the implementation of general POCT panel tests. Future research should be performed in primary care and identify how POCT can contribute meaningful changes to patient care rather than focusing on health care processes and should also consider the patients perspective.

19. The extent of medication complexity in UK general practice

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Introduction

Complexity of patients' medication regimens may provide insight into treatment burden, but little is known about contemporary patterns of medication complexity in primary care.

Method:

A cross-sectional analysis was conducted in 299,843 patients aged ≥ 1 year, randomly selected from the CPRD. The Medication Regimen Complexity Index was used, based upon the dosage form, frequency, and additional instructions of each drug. Higher scores correspond to increased complexity. MRCI score was compared across demographic factors using descriptive analyses. Variance of MRCI score attributed to individual MRCI components was investigated using multinomial logistic regression.

Results

Overall, 35.9% of patients had ≥ 1 prescription; of those patients, median MRCI score was 5 (IQR=3-9). MRCI score increased with age (median (IQR) scores, 1 (0-5) and 7.5 (3-13) for ages 55-64 and ≥ 85 years respectively) and increasing morbidity (4 (2-7) and 12 (7-18.5) for 1 and ≥ 4 long-term conditions respectively). COPD (median MRCI 14, IQR 9-21), heart failure (12, 7-19) and bronchiectasis (12, 6-19) were associated with the greatest complexity. The lowest complexity was observed for migraine (3, 1-5) and depression (3, 2-7).

Drug count accounted for 29.3% of the variance across MRCI quintiles, with the proportion of medication that were non-tablets, had additional instructions, and dosed >1 per days explaining a further 7.9%, 12%, and 0.2% of the variance, respectively.

Conclusion

Medication complexity captures aspects of medication-use not reflected in simple drug counts. Understanding what contributes to medication complexity will help inform strategies to reduce medication burden and improve medication adherence.

20. Dying to be cared for: End-of-life hospital admissions and the practical reasons which discourage patients from dying at home

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Introduction

Enabling death at home remains an important priority in end-of-life care policy. However, nearly half of all deaths occur instead in the hospital, with admissions at the end-of-life often negatively labelled. Admissions are often attributed to an unsuitable home environment where the needs of dying patients are not sufficiently met.

Aim

To understand the practical reasons which discourage death at home and facilitate hospital admissions at the end of life.

Design and Setting

Qualitative case-study of admission of patients (case-patients) close to the end-of-life to a large English hospital.

Method

Retrospective in-depth semi-structured interviews with healthcare professionals (n=30) and next-of-kin (n=3) involved in an admission. Case-patients (n=9) had died within three days of admission, were aged over 65 and had had either cancer, chronic obstructive pulmonary disease or dementia. Interviews were transcribed and analysed thematically.

Results

Home-based end-of-life care appeared precarious. Hospital admission for the case-patients was considered by healthcare staff when the following criteria were not present or were failing at home: 1) adequate space and equipment 2) continuous family support 3) available nursing provision. In these circumstances, home was not recognised to be a suitable place of care or death, justifying seeking alternative care provision elsewhere.

Discussion

End-of-life care at home often required substantial input from family and professional carers. Where this care was insufficient to meet the needs of patients, home was no longer deemed to be desirable by healthcare staff and hospital care was alternatively sought.

21. Patient Reported Outcome Measures for Acne: A mixed methods validation study

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University of Southampton.

Background

Acne vulgaris is very common amongst adolescents and adults and can have substantial negative social and psychological impact. Research is needed to clarify which treatments are most effective, however, trials to date have used a range of outcome measures. This hinders interpretation of research findings. This study therefore aims to assess the acceptability and validity of patient reported outcome measures (PROM) for acne.

Methods

This study evaluated the acceptability, validity and reliability of two acne PROMs, the Skindex-16 and COMPAQ, comparing them with the validated Acne-QoL. People with acne aged 18-50 were recruited to the study through primary care mail-out, secondary care opportunistic recruitment and community advertising. Participants completed the questionnaires at baseline, 24 hours and 6 weeks later. Qualitative think-aloud interviews were conducted to explore acceptability and face validity of the measures. Interviews were transcribed verbatim and analysed using thematic analysis.

Results

204 participants completed the questionnaires. Initial results suggest that internal consistency and reliability were high with Cronbach's alpha and ICC values greater than 0.90 for both questionnaires. However, there were floor effects for both questionnaires' social functioning subscales.

17 participants took part in qualitative interviews. Participants expressed a range of views relating to the scales' usability and acceptability, such as questionnaire layout, emotional reactions, and relatability of questions.

Discussion

Final results are expected at the end of June. This analysis will inform the choice of outcome measure in future acne studies and results will be fed back to the international Acne Core Outcomes Research Initiative.

22. What are the support needs of people with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME)? A meta-ethnography of qualitative studies

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Introduction

The literature suggests that many treatments for Chronic Fatigue Syndrome (CFS)/Myalgic Encephalomyelitis (ME) may not be acceptable to patients, and that people with CFS/ME value support to manage their condition. There is limited understanding of what this support should be. This study investigates the ways in which people with CFS/ME understand and perceive formal (from professionals) and informal (from significant others) support.

Methods

A systematic search for qualitative studies was conducted in databases (including MEDLINE, EMBASE, AMED, CINAHL-P, PsycINFO) from their inception to October 2017. Titles, abstracts and full texts were screened for eligibility by two reviewers. Eligible studies were quality appraised using the Joanna Briggs Critical Appraisal Checklist for Interpretive & Critical Research. Data synthesis is being performed using Noblitt and Hare's seven-step meta-ethnography. The study has been informed by a Patient and Public Involvement group.

Results

The search resulted in 7418 unique citations. 137 manuscripts were reviewed in full text, and 47 studies satisfied eligibility criteria and were included. Analysis is preliminary, revealing positive and negative dimensions of support. Positive support was desired in all aspects of life, including prompt diagnosis/referral, patient-centred/tailored treatment, financial/social support through benefits and work adaptability, and unconditional understanding/help from family and friends. Negative input was experienced as delegitimising, and included trivialising or psychologising of symptoms.

Discussion

Findings will inform clinician understanding of the support required by people with CFS/ME, policy for the commissioning of services, and the role played by broader support networks.

23. Exploring the causal factors for mental health problems experienced by medical undergraduates in the United Kingdom: a realist review in progress

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Introduction

Medical students have been shown to be at increased risk of experiencing mental health concerns in comparison to the general population. An exploration of the factors underlying this problem is essential due to the significant personal, societal and financial burden resulting from poor mental health. Our aim is to produce a map of mental wellbeing mechanisms in relation to their contexts and outcomes in this population.

Methods

A realist approach has been used to review the current literature and explore this topic by considering 'what happens, for whom and under which circumstances'. An initial scoping search has been performed to construct an Initial Programming Theory (IPT) based on existing theories of mental health relevant to this population. We present the rationale behind choosing this methodology and describe the output of our initial search.

Results

Relevant theories included wider psychological research, such as the dual continua model of mental health and wellbeing, and population-specific models, such as those discussed by Dunn et al. and the GMC. We combine these ideas into an IPT which highlights the role of individual, group and social factors acting upon a 'coping reserve' to influence mental wellbeing.

Discussion

This acts as the starting point of our realist review. A systematic search of all relevant databases will now be undertaken to explore published evidence, which will be compiled into context-mechanism-outcome configurations. These will inform the modification of our IPT to produce an overarching Programming Theory intended to inform recommendations for future research and interventions.

24. The role of Information Specialists supporting the SPCR Evidence Synthesis Working Group

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Introduction

Information Specialists (IS) are influential in ensuring high quality systematic reviews (SRs) are conducted and reported.

Aim

To highlight contribution of three IS professionals supporting the SPCR Evidence Synthesis Working Group's (ESWG) SR programme.

Isla Kuhn works with SPCR researchers in Cambridge on two realist reviews – a new (to her) form of research methodology, requiring multiple searches that evolve and adapt according to initial search findings. Beyond this, based in the Medical Library, she supports researchers with all/any aspect of searching, use of reference managers, finding full text papers, and much more.

Nia Roberts, Outreach Librarian in Oxford, collaborates with researchers on reviews across two ESWG workstreams. She manages search processes for several reviews, developing strategies, running searches across multiple databases and managing results with reference software. In addition, she is an advisor on search strategies and methods on other reviews.

Jo Jordan manages a SR team that conduct, support and provide training in a Research Institute at Keele. The team have two ESWG SRs underway, for one of which Jo is lead reviewer, and provide specialist advice for prognosis SRs. Her SPCR PhD Fellowship will develop efficient search filters to identify prognosis research in SRs.

Discussion

All three contribute to the ESWG Steering Committee. Another aspect of their role is to provide training and offer peer reviewing of search strategies to authors of ESWG SRs without access to IS or librarian support. They would like to encourage other IS professionals from SPCR's partners to join the network.

25. Systematic review comparing the outcomes and recurrence rates of hiatus hernias following either mesh or suture-based repair surgery

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Introduction

Our systematic review aims to establish the recurrence rates and outcomes in hiatus hernia treatment and compare the use of mesh or only sutures. We also aim to map the extent of research into this topic. We aim to evaluate whether mesh has a positive effect on recurrence rates and if this is outweighed by more serious complications than occur with simple suture-based surgery. We also are focussing on the length of follow up in studies, after reading several case reports, which report long term complications which may not have been shown on typical 1-2 year follow ups in randomised controlled trials. Some of the outcomes we aim to evaluate include dysphagia, readmission and reoperation, pain, and quality of life.

Methods

This review is ongoing. We initially conducted patient and public involvement (PPI). We are searching Medline and Embase as well as surgical journals for any studies which report on mesh use in hiatus hernias. We are searching for any study type in order to maximise the breadth of our study. We then plan to conduct a meta-analysis based on recurrence rates, and a qualitative assessment of the outcomes of surgery.

Discussion

The study into the use of mesh in hernia surgery was inspired by the vaginal mesh, used to treat incontinence and prolapse, has been shown to lead to serious complications. With this review we aim to evaluate the relationships between mesh used in hernia surgery and dysphagia, readmission and reoperation, pain, and quality of life.

26. Evaluation of a pilot intervention to support adherence to anti-hypertensive medication using interactive voice response, as an adjunct to primary care

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University of Cambridge.

Non-adherence to anti-hypertensive (HBP) medication is a significant challenge to public health, and current practices show limited efficacy. Interactive Voice Response (IVR) interventions are effective at supporting adherence, but no such intervention has been developed and piloted. This submission describes the preliminary findings of the first pilot intervention to support adherence to HBP medication.

Eighteen patients with HBP, presumed to be non-adherent, were recruited from three primary care practices. Patients completed a theory-based questionnaire at baseline (T1) and follow up (T2); and received highly tailored IVR messages daily, for 28 days. Medication adherence was measured using the Medication Adherence Rating Scale (MARS) at T1 and T2. Refill adherence data were obtained by practice databases for a period of three months before T1 and at T2. The Medication Possession Ratio was used to calculate refill adherence. Descriptive statistics and t-test facilitated data analysis.

Patients reported better emotional state at T2 (mean=2.0, sd=.70) in comparison to T1 (mean=2.2, sd=.65); $t(17)=2.04$, $p=.05$. Patients had fewer days of refill non-adherence at T2 (Mean=7, SD=20.8) in comparison to T1 (Mean=14.7, SD=17), but that difference was not statistically significant; $t(17)=1.19$, $p=.249$. There was no effect in MARS. At T2, 82% of patients reported that the IVR was easy to use, 72% they would recommend it to other patients, and 77% were satisfied with the intervention.

IVR is a feasible intervention to support medication adherence, between primary care consultations. Future studies should investigate its effects further, using rigorous designs.

27. The clinical utility of point-of-care tests for influenza in ambulatory care: A systematic review and meta-analysis

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Background

Point-of-care tests (POCTs) for influenza are diagnostically superior to clinical diagnosis, but their impact on patient outcome and healthcare processes is unclear.

Methods

A systematic review and meta-analysis of controlled studies comparing influenza POCTs versus usual care in ambulatory care settings. Studies were identified by searching six databases and assessed for quality using the Cochrane risk of bias tool. Estimates of risk ratios (RR), standardised mean differences, 95% confidence intervals and I² were obtained by random effects meta-analyses. We explored heterogeneity by sensitivity analyses and meta-regression.

Results

26,125 citations were retrieved. Seven randomised studies (n=4,324) and six non-randomised controlled studies (n=4,774) were included. Most evidence came from paediatric emergency care settings. Study quality was moderate in randomised studies and risk of bias was higher in non-randomised studies.

In randomised trials POCTs had no effect on admissions (RR 0.93, 95% CI 0.61-1.42, I²=34%), returning for care (RR 1.00 95% CI=0.77-1.29, I²=7%), or antibiotic prescribing (RR 0.97, 95% CI 0.82-1.15, I²=70%), but increased prescribing of antivirals (RR 2.65, 95% CI 1.95-3.60; I²=0%). Further testing was reduced for full blood counts (FBC) (RR 0.79, 95% CI 0.68-0.91; I²=0%), blood cultures (RR 0.82 95% CI 0.68-0.99; I²=0%) and chest radiography (RR 0.80, 95% CI 0.67-0.95; I²=36%), but not urinalysis (RR 0.89, 95% CI 0.77-1.04; I²=13%). Time in the emergency department was not changed. Fewer non-randomised studies reported these outcomes, with some of the findings reversed (fewer antibiotic prescriptions and more FBCs in tested patients).

Interpretation

Point-of-care testing for influenza affects prescribing and testing decisions, particularly for children in emergency departments. Observational evidence and heterogeneity indicate challenges for real-world implementation.

28. The impact of anxiety on quality of life and treatment response in rheumatoid arthritis: A systematic review

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Introduction

Rheumatoid arthritis (RA) is the commonest inflammatory arthritis. Co-morbid anxiety and depression are common, but under-recognised and under-treated. Depression in RA has been linked to reduced treatment response and a worse quality of life (QOL). Past research has focused on the impact of depression, hence this systematic review aims to determine the impact of anxiety in RA on QOL and treatment response.

Methods

Databases (Web of Science, PsycINFO, CINAHL, Embase, Medline) were systematically searched for relevant studies. Primary outcome measures were DAS-28 and SF-36, though validated secondary outcome measures were included. Titles, abstracts and full texts were independently screened by two reviewers. Data extraction and quality appraisal of studies was carried out using a customized, piloted data extraction tool and the Newcastle-Ottawa-Scale. A narrative synthesis and meta-analysis were performed.

Results

6404 articles were identified. After screening, 16 final studies (13 cross-sectional and 3 cohort), involving 4012 participants were included. 6 studies reported DAS-28, whilst 6 included secondary outcome measures for treatment response. 5 studies reported SF-36, whilst 6 included secondary outcome measures for QOL. The narrative synthesis showed anxiety to have a significant negative impact on QOL and treatment response. A meta-analysis of primary outcome measures supported this correlation, though was limited by heterogeneity.

Conclusion

Anxiety in RA negatively impacts on QOL and treatment response. Improved identification and management of co-morbid anxiety could help to reduce disease activity and improve QOL. Future intervention studies should evaluate the best approach to the identification and management of anxiety in patients with RA.

29. User testing methods to improve readability and understanding of participant information sheet for ethnic minorities in research

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Background

People from ethnic minorities have been reported to have higher rates of mental health problems and are less likely to take part in mental health research. Previous research also indicates that participant information sheets (PIS) are complex and in turn hampers participant recruitment. Testing the readability of patient information is a recent method and is done through User Testing method. This involves potential participants reading the information, and then being asked to find and show understanding of 12-15 items of information. Our study aims to assess the quality of PIS in lay South Asian people using performance based user testing.

Method

The performance of the original ROSHNI-2 trial PIS was tested in South Asian people speaking Urdu. There were two rounds of testing including 30 participants in total - with the information revised according to its performance after the first round. The study explored the understanding of 21 key facts under four categories: the nature and purpose of the trial; processes and meaning of consent; study procedures and effectiveness of the intervention.

Result

The original PIS for the ROSHNI-2 trial may not have enabled valid consent. Combining performance-based user testing led to a significantly improved and preferred information sheet.

Discussion

Combining user testing by lay South Asian people when designing study design and information material will result in a greater proportion of participant's ability to understand information about the trial and assure valid consent process. This, in turn, will improve evidence base about ethnic minority recruitment to trials.

30. Risk prediction models for colorectal cancer incorporating genomic markers: a systematic review

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Introduction

Colorectal cancer (CRC) is the second leading cause of cancer-related death in Europe and the United States. In a previous project funded by the SPCR we showed that several risk models based on phenotypic variables have relatively good discrimination in a UK population and may improve efficiency of CRC screening. Models incorporating genomic variables may perform better. In this study we aimed to identify and compare the performance of models containing genomic variables.

Methods

We updated a previous review by searching Medline and EMBASE from January 2014 to September 2017 to identify primary research papers reporting or validating risk models. We included multivariable models incorporating at least one genomic variable and applicable to asymptomatic individuals in the general population. Screening of studies for inclusion and data extraction were completed independently by two researchers.

Results

From 9512 papers in the literature search we identified 13 new risk models and 1 validation study. Adding those identified previously and through citation searching, there were 20 risk models. Seven had acceptable-to-good discrimination (C-statistic >0.7) in the development sample and three in external populations. Where reported (n=5), the discrimination of models combining genomic with phenotypic variables was higher than those with phenotypic or genomic alone.

Discussion

A large number of new risk models incorporating genomic variables have been developed. Combining genomic with phenotypic variables appears to increase discrimination but external validation studies are needed for confirmation. Further research is also needed on the feasibility and acceptability of incorporating genomic data within population-based screening programmes.

31. Using conversation analysis to explore communication of cardiovascular disease and cancer risk in primary care

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Introduction

The communication of cardiovascular disease (CVD) risk to patients is incorporated into many clinical guidelines and the NHS Health Checks programme. Similar models predicting risk of cancer have been developed but are much less widely used.

Studies in CVD show that healthcare professionals (HCPs) adopt a range of approaches when communicating risk. The aim of this study is to use conversation analysis (CA) to explore the range of language and communication techniques used by HCPs when discussing risk of CVD and cancer with patients, and the impact these different approaches have on patient decisions about lifestyle change and medication.

Methods

Within an on-going study on cancer prevention in primary care, patients from 3 GP practices in the East of England will receive their estimated risk of cancer in addition to their CVD risk within NHS Health Checks. We are also recording routine NHS Health Checks to collect data on communication of CVD risk alone. For this study we have brought together experts in CA from three members of the SPCR to study the interaction immediately preceding and throughout the communication of risk. We will then link this with data collected on intention to change behaviour and take medication from questionnaires completed immediately and 3 months after the consultation.

Results

The study is ongoing. We aim to complete data collection by the end of September.

Discussion

To our knowledge this will be the first application of CA to risk communication in primary care. The findings will inform future guidance for HCPs.

32. Clinical Decision-Making in Ambulatory Emergency Care

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Introduction

Ambulatory emergency care (AEC) aims to provide hospital equivalent medical care in out-of-hospital settings with equivalent outcomes, whilst promoting patient independence and reducing the risk of hospital associated harms. There is no current training pathway for AEC clinicians and this study aims to understand the professional work of decision-making within the AEC environment. This study explores the tacit clinical practices and real-world reasoning tasks for clinicians working at the primary and secondary care interface.

Methods

This qualitative investigation uses focused ethnography within a case study approach to explore the intellectual processes underpinning clinical decision-making in AEC.

Results

Three AEC sites were purposively sampled to recruit twelve clinicians (5 GPs, 5 Consultants, 2 AEC Coordinators) and 70 hours of participant observation was complemented by 8 hours of participant interviews. Decision-Making in AEC was disseminated in time, place and person with individually-tailored plans negotiated with patients and their networks. Whilst working, clinicians frequently combined multiple roles including; triage, expert clinical advice, resource management and trainee supervision. Team interactions affected decision-making; interruptions could provide crucial information but breaks-in-task could prolong work tasks and increase cognitive load. Ten participants also worked in ED, Acute Medicine and Out-of-Hours General Practice. Participants explained how this new AEC 'community of practice' developed, and changed their clinical practice, due to the increased interaction between community and hospital based clinicians.

Discussion

The findings show the intellectual challenge of AEC decision-making and how this 'community of practice' emerged from joint working at the AEC interface.

33. Early symptoms and treatment duration in polymyalgia rheumatica: a joint modelling approach

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Introduction

Polymyalgia rheumatica (PMR) is a painful and disabling inflammatory disease that mainly presents in older people. Glucocorticoids are an effective treatment that are usually needed for around 18-24 months, although many people struggle to discontinue treatment because of relapses. 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

Data from the PMR cohort study (N=739), collected over a 2-year period, will be used to investigate 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

Findings to date will be presented at the meeting.

Discussion

Findings 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.

34. Polypharmacy associated with concurrent use of prescribed and non-prescribed medicines among older adults with multimorbidity

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With increasing life expectancy, the number of people living with complex and chronic health conditions is also on the rise. Multiple medicines (polypharmacy) are often needed to treat these conditions but there are concerns about the adverse consequences of unnecessary or inappropriate polypharmacy. While the use of prescribed medicines is the main predictor of polypharmacy, there are knowledge gaps around the increasing use of non-prescribed medicines (NPMs) obtained via self-medication with over-the-counter, herbal and other medicines. The adverse consequences of NPMs use may be even greater for older, frail adults who are already on numerous prescribed medicines and experiencing cognitive and functional impairments and other geriatric syndromes, increasing risks of treatment non adherence, drug toxicity and interactions, poor quality of life, hospitalisations and death.

This ongoing programme of work aims to understand the contribution of concurrent use of prescribed and NPMs to polypharmacy among older adults. A systematic literature review is being undertaken to identify and synthesise current evidence around NPMs use among older adults. The second phase of work consists of secondary data analyses of a longitudinal population-level dataset to investigate trends, patterns and factors associated with NPM use and variables such as sociodemographic, disease and health status and health service use. Early findings show inconsistencies in descriptions of NPMs, marked variations in estimated NPMs prevalence, and patients' under-reporting of NPMs use during clinical consultations. This presentation will detail key findings and discuss implications for clinicians and policymakers on strategies that go beyond review of prescribed medicines.

35. The natural history of flare-ups: A daily diary study of patients with, or at high risk of, knee osteoarthritis

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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 knee osteoarthritis were invited to complete a daily pen-and-paper diary for up to 3 months. Average knee pain in the past 24 hours (0-10NRS) was rated daily, along with pain quality, and other symptoms.

Flare-ups were defined as an increase in pain of ≥ 2 points above participants' rating of their usual pain intensity, sustained for ≥ 2 consecutive days. We calculated the rate of flare-ups, incidence density 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 flares participants were more likely to report: 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.

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.

36. The red leg dilemma : a scoping review of the challenges in diagnosing lower limb cellulitis

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Background

An important priority for cellulitis research, identified by both patients and health care professionals at the cellulitis priority setting partnership, is diagnosis.

Despite being a common presentation in primary care, over 25% of lower limb cellulitis cases are misdiagnosed, resulting in avoidable hospital admission and antibiotic prescribing. Understanding what the challenges are in diagnosis would help to develop resources to reduce this.

Objectives

To examine and map out the challenges identified by patients and health professionals in diagnosing lower limb cellulitis.

Methods

A scoping review was performed in MEDLINE and Embase. Inductive analysis was used to develop groups to be further explored. Quantitative data was summarised by narrative synthesis, with inductive thematic analysis used to generate key themes.

Results

Two groups of clinical cases of misdiagnosis and service development were explored. 49 different pathologies were misdiagnosed, including seven malignancies. Key themes include urgent clinical reassessment if the initial diagnosis is not responding to antibiotics and consider rarer pathologies in co-morbid or immunosuppressed patients. Two different services have been piloted in the outpatient setting, reducing the misdiagnosis rates of lower limb cellulitis, as well as each saving at least £100,000.

Conclusions

This review highlights the range of alternative pathology that can present as cellulitis, with clinical features often overlapping, as well as services already developed to minimise misdiagnosis. Future work should focus on gaining a greater understanding of the challenges in diagnosis through qualitative research, involving expert patients and specialist clinicians.

37. Development of the Polypharmacy Appropriateness Index

Rupert Payne¹ Tony Avery², Brian Bell², Jenni Burt³, Rachel Denholm¹ Deborah McCahon¹ Richard Morris¹ Sarah Rodgers², Peter Tammes¹

¹University of Bristol. ²University of Nottingham. ³University of Cambridge.

Introduction

Polypharmacy is widespread in primary care. Although sometimes clinically justified, polypharmacy can be inappropriate, leading to undesirable outcomes. We have identified a set of 12 implicit prescribing indicators considered relevant to polypharmacy appropriateness. We will report ongoing work to operationalise these indicators in electronic health records, and to validate the resulting automated Polypharmacy Appropriateness Index (PAI) against expert opinion.

Methods

Operationalisation is being conducted using routine GP data from the Clinical Practice Research Datalink (CPRD), and is considered possible for 8 of 12 indicators; this will be facilitated by mapping CPRD products to the Multilex medication decision support database. A random sample of 600 cases will then be drawn from CPRD, ensuring uniform distribution of the unweighted sum of the indicators. Summaries will be developed for each case (current prescribing, relevant clinical details) and distributed to a clinical expert panel (N=30) using an online survey. Experts will rate polypharmacy appropriateness using a 7-point scale. Multivariable regression will be used to model the association between separate component indicators and the expert ratings, determining optimal weightings for the PAI components. Concordance between expert ratings and PAI will be calculated.

Results

We will present the final approach to operationalising the different component indicators, including difficulties encountered and implications for applying the approach in working clinical systems. The final weighted PAI will be described, and correlation between expert ratings and PAI reported.

Discussion

The PAI has the potential to improve polypharmacy management, providing a means for effective targeting and monitoring of interventions.

38. What impact have inspections, reports, and ratings had on the quality of care in general practice?

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Introduction

Between October 2014 and April 2017 the Care Quality Commission (CQC) inspected all GP practices in England for the first time, publishing a report and rating on each practice. The first inspection cycle utilised an estimated £60 million, in CQC and GP practice related costs, but claims have been made that inspections are unhelpful to quality improvement, particularly in underperforming practices. However, evidence on the impact of inspections is scarce, and the factors which contribute to their effectiveness or otherwise have not been fully investigated.

Methods

NIHR Doctoral Research Fellowship project Oct 2017–Sept 2022

A realist review of the literature will be used to answer:

Q1. What is already known about the role and impact of inspections in general practice organisations; specifically, what works, for whom, in what context, how and why?

Using mixed-methods (bi-variate/multi-variate analyses, interrupted time series analyses, and qualitative interviews) the following will be addressed:

Q2a/b. What GP practice related characteristics are associated with the initial overall CQC rating and ability to improve or otherwise? Why and how does this association exist in GP practices rated 'inadequate' or 'requires improvement'?

Q2c. Can impacts from CQC inspections, reports and ratings be detected across different measures of quality, and from the perspectives of different stakeholders? Have any impacts detected been sustained? Why and how do these impacts occur in GP practices rated 'inadequate' or 'requires improvement'?

Synthesising the evidence from Q1 and Q2 the following will be addressed:

Q3. What lessons can be drawn for quality assurance and quality improvement in general practice?

Anticipated benefits

Understanding the impact of inspections and public reporting on the quality of general practice, and the factors which enabled quality improvement or otherwise, in particular in poorly performing practices, is necessary to inform evidence-based policy and practice.

39. Methods for handling missing ethnicity data and their impacts on the association between ethnicity and type 2 diabetes diagnoses in UK primary care

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Introduction

Research on ethnicity using UK primary care electronic health records (EHRs) is hindered by incomplete ethnicity data. Standard MI performed under missing at random (MAR) might not yield a plausible ethnicity distribution, potentially due to a missing not at random (MNAR) mechanism. We proposed calibrated- δ adjustment MI for incorporating the ethnicity distribution from an external population dataset in the imputation.

Methods

Using a large EHRs database, we conducted a cross-sectional study to examine the association between ethnicity and the prevalence of type 2 diabetes (T2D) diagnoses in primary care. We fitted a logistic regression model, adjusting for age group, sex, deprivation status. For missing ethnicity, we compared a complete record analysis (CRA), single imputation with the White ethnic group, standard MI, and calibrated- δ adjustment MI based on the UK census distribution.

Results

Of 404,318 individuals, 77% had ethnicity recorded. The odds of T2D diagnosis increased with age and deprivation, and were higher in non-White ethnic groups. For the Asian group, calibrated- δ adjustment MI yielded considerably lower estimate (OR = 2.36, 95% CI 2.26 to 2.47) compared to CRA (OR = 3.59, 95% CI 3.43 to 3.75), single imputation (OR = 3.63, 95% CI 3.47 to 3.79), and standard MI (OR = 3.58, 95% CI 3.43 to 3.73). Findings were similar for the Black group.

Discussion

Standard MI might not impute ethnicity consistently with the population level. Appropriately utilising the census distribution of ethnicity in the imputation can lead to scientifically relevant changes in the inference for non-White ethnic groups.

40. Crossing the digital divide in online self-management support: case study of usage data from HeLP-Diabetes

Shoba Poduval, Saddif Ahmed, Louise Marston, Fiona Hamilton, Elizabeth Murray

University College London.

Introduction

There are concerns about whether digital health interventions widen health inequalities, due to the gap between those who do and do not use the internet, a concept known as the "digital divide". HeLP-Diabetes is an online self-management programme for adults with type 2 diabetes developed for people from different demographic groups.

The aim was to compare the characteristics of people who registered for the programme against the target population (people with type 2 diabetes in London). The characteristics of people who registered for the programme and used it were compared with those who did not use it. The number of visits to each section of the website by different demographic groups was analysed.

Methods

A retrospective analysis of data on the use of HeLP-Diabetes in routine practice in four London CCGs was undertaken. Data were collected on gender, age, ethnicity and education. Data on webpage visits were collected automatically by the website.

Results

The characteristics of people who registered for the programme reflected the target population. The mean age was 58 years, over 50.0% were from black and minority ethnic backgrounds, and nearly a third had no qualifications beyond school leaving age. There was no strong association between demographic characteristics and use of the programme, or differential use of the programme.

Discussion

This study provides evidence that a digital health intervention can be implemented in the NHS without widening health inequalities. This may be due to integration into the health care system, and careful design with extensive user input.

41. UK Central & Eastern European (CEE) Mental Health: a scoping exercise to map what is known to a UK Primary Care context

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The population of UK resident CEE communities has increased significantly since 2004. CEE nationals face a 'double health inequality' with migration related psychological strain and residual home nation mental health burden. A higher incidence of affective disorders, alcohol misuse and mental health stigma has been reported, with differing help seeking behaviour and primary care usage to UK nationals. Socioeconomic uncertainty surrounding 'Brexit' has further impacted well-being.

A scoping review of UK CEE mental health literature is being undertaken, incorporating publications identified through research databases (MedLine, PubMed, PsychINFO, Web of Science, SCOPUS, AMED), reference lists, policy documents and grey literature. Results will be complimented by an online expert survey and expansion of current CEE community public and patient involvement initiatives.

A number of published academic surveys, qualitative reviews, and cohort studies have been identified, covering a range of mental health conditions. Provisional emergent themes include significant community mental health stigma, dissatisfaction with primary care, and the significant influence of negative social determinants on mental health.

The scoping review and accompanying findings are intended to rapidly map available evidence and key concepts on the current mental health needs of the CEE community to a UK primary care context. Identification of cultural themes in presentation, explanatory models, and barriers/facilitators to care will direct discussion and potential for development of culturally adapted primary care approaches. Findings will be viewed in the wider context of minority and marginalised community mental health research within UK primary care BAME research themes at the University of Manchester.

42. "GP Skin": An exploration of routine consultations for dermatology problems in adults in general practice

Emma Le Roux, Peter Edwards, Rebecca Barnes, [Matthew Ridd](#)

Centre for Academic Primary Care, Population Health Sciences, University of Bristol.

Introduction

Dermatological conditions present frequently in General Practice (GP), and many are chronic, requiring high levels of self-management with topical therapies. Treatment failure is common due to low adherence with the topical treatments. Whilst supported self-management and shared decision making (SDM) around treatment decisions could improve disease outcomes, there has been little research exploring either content, conduct or decision-making in dermatology consultations. We seek to describe routine GP consultations and their immediate outcomes for adults with dermatology problems.

Methods

This is a secondary analysis of data from the One in a Million Study, an archive of 327 video-recorded routine GP consultations and linked data recorded between July 2014-April 2015 in south-west England. Our study is based on the 45 consultations where a skin problem was discussed. A coding instrument and codebook has been developed and refined before applying to all consultations. 20% of the consultations will be double coded and inter-rater reliability assessed. Data will be analysed using Stata, with descriptive statistics reported and simple tests performed where and as appropriate.

Results

Data will be presented on: characteristics of consultations for dermatological conditions (including time spent on skin problems and co-occurrence with other conditions); observed SDM for skin conditions (using OPTION 5), as well as self-reported SDM; medication recommendations (observed and self-reported); observed self-management advice, follow-up arrangements and record keeping.

Discussion

Better understanding of routine GP consultations for skin problems will support the development of interventions to improve primary healthcare professionals' skills in promoting self-management practices.

43. Investigating whether sleep quantity and quality influences the frequency and duration of upper respiratory tract infections: a systematic review

Charlotte Robinson, Charlotte Albury, Imogen Jury, Benjamin Fletcher, David McCartney, Joseph Lee

Oxford University.

Introduction

Upper respiratory tract infections (URTIs) are a common cause for medical attendance. It is a commonly held belief having 'good sleep' protects against URTIs. NHS choices states there may be a relationship between sleep and URTIs, and recommends most individuals need around 8 hours sleep a night. Whilst there is some supporting evidence indicating sleep habits are related to susceptibility to infections, this has not been reviewed. This systematic review aims to examine the available evidence on the relationship between sleep and URTIs, and to determine whether an association exists.

Methods

A systematic search will be conducted across three electronic databases. We will additionally review references of included studies, and expert opinion will be sort to identify additional studies. Studies will be included if they are: looking at adult populations; the association between sleep quality or quantity and URTIs; and if they allow a comparison between quantity or quality of sleep. The primary outcome is to collect data from included studies on the rate of occurrence of URTIs, and on the proportion of participants who experienced at least one URTI, to determine whether there is an association between sleep and URTIs. Patient and public involvement was conducted to refine our research question, and to identify search terms and potential confounding factors.

Discussion

The systematic review is ongoing. We intend to finish data analysis by August 2018. The results from this study could be used to inform patients about associations between their sleep patterns and health, in relation to URTIs.

44. Development of a Chlamydia Disease Model as part of a Sexually Transmitted Infections Modelling Software Development of a Chlamydia Disease Model as part of a Sexually Transmitted Infections Modelling Software

Fabian Sailer¹ John Saunders², Greta Rait^{3,4}, Rachael Hunter³

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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.

45. Exploring the views of key stakeholders on the REVISiT intervention aimed at improving the safety of prescribing of GP Associates in training

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Introduction

The need to enhance the prescribing skills of general practitioners in training (GPAITs) was highlighted in the GMC PRACtICE study. This led to the development and pilot testing of the REVISiT intervention which is an educational intervention involving pharmacist-led retrospective review of prescribing with feedback. After being positively received by GPAITs and their trainers, this study aims to consider the next steps for the development of the REVISiT intervention.

Methods

Health care professionals and members of the public participated in interviews (n=28), two focus group (n=19) and a stakeholder event between January and November 2017 to explore if, and how, REVISiT should be taken forward. Interviews and focus groups were semi-structured in nature; audio recorded; transcribed verbatim; and thematically analysed for emergent themes.

Results

Participants mentioned the positive contributions REVISiT could make in enhancing prescribing safety. They commented that REVISiT should be considered for all prescribers. Nonetheless, the need to prioritise some prescriber groups was recognised as resources are finite. The role of pharmacists in REVISiT was considered ideal. But, participants were also able to consider other methods of reviewing prescribing in practices with no access to a pharmacist. Although some participants suggested that REVISiT was ready for rollout, some stressed the need for more evidence on effectiveness.

Discussion

The REVISiT intervention has potential to contribute to improving prescribing and patient safety in general practice. Having received much interest, there is a need to establish more evidence to allow its consideration as part of standard GP training and practice.

46. Operational failures in primary care: A critical interpretative synthesis of system-level problems affecting general practitioners' work

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Difficulties recruiting and retaining general practitioners (GPs) and unacceptable levels of burn-out have led to a crisis in primary care. Characterising what frustrates GPs' work may help address this crisis. Using the healthcare management construct "operational failures" (defined as problems in the supply of information, equipment and materials) as a sensitising concept, we aimed to review and synthesize existing literature for evidence of system-level problems frustrating GPs' work.

We searched seven medical and management databases for papers published in English from inception until October 2017. Inclusion criteria were primary care studies, using empirical data (observational, experimental and qualitative), addressing disruptions and frustrations in GPs' work. One author reviewed titles/abstracts for all retrieved citations. Two other authors screened a 30% subset of citations, screened full texts and determined inclusion. Data were synthesized using a critical interpretive approach.

Our search retrieved 8534 unique citations. No paper used the term operational failures, but 84 addressed problems that conformed to the general definition. System-level problems in: information supply related to hospital admissions, tests and medications; in equipment related to poorly designed technologies (e.g. electronic health records); and in materials concerned stationary and clinical supplies. The impact of these problems on GPs in terms of time-wasted, interruptions or job satisfaction was infrequently explored.

Despite an extensive literature on operational failures in primary care, there is little evidence for how they interfere with or disrupt GPs' work. Future research must address this gap in order to prioritize targets for future improvement work in primary care.

47. How was it for you? Developing a participant experience of trials questionnaire: a qualitative study of participant and professional perspectives

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Introduction

Involving members of the public in designing trials helps to make them better and easier for those taking part, but we also need a way of finding out from trial participants themselves how they found it.

Aim

To identify domains and questions to include in a new questionnaire measuring participant experience

Methods

Twelve professional stakeholders involved in the funding, management and delivery of trials were asked for their views on measuring participant experience and domains to include in the questionnaire. Twelve trial participants were asked about their experience of participation. Data were analysed thematically.

Results

Trial participants described participation as contributing to something worthwhile. A majority wanted reassurance throughout the process to avoid feeling disappointed. Logistics (e.g. travel and parking) and assessment processes have an important role in determining whether someone would participate again or promote participation to others.

Professionals identified advantages to measuring experience as: i) understanding how trial design impacts experience to inform future trial design ii) comparing results over time iii) understanding the difference between experience of the intervention and trial processes. Potential disadvantages included: i) potential to cause burden and distress to participant ii) increasing workload for trial teams iii) creating a monitoring process that negatively impacts relationship between trial leads and sites iv) influencing trial integrity. Questionnaire domains identified motivations for participating, recruitment and consent processes, communication with team, and unacceptable demands of the trial.

Discussion

Implications for developing a measure of participant experience for use in clinical trials will be discussed.

48. The association between changes in hypertension guidelines and the management of hypertension and cardiovascular outcomes

Sarah Stevens¹ James Sheppard¹ Richard Stevens¹ Jonathan Mant², Christian Mallen³, Richard Hobbs¹ Carl Heneghan¹ Bryan Williams⁴, Richard McManus¹

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Introduction

In 2011 National Institute for Health and Care Excellence (NICE) guidelines recommended the routine use of out-of-office blood pressure monitoring for the diagnosis of hypertension. We aimed to assess the impact of this change on the incidence of hypertension, cardiovascular morbidity and out-of-office monitoring.

Methods

We used cohort data from adults registered at English general practices within the Clinical Practice Research Datalink between 1/4/2006 and 31/3/2017. The primary outcome was incidence of hypertension (determined from diagnostic codes). Secondary outcomes included out-of-office monitoring and cardiovascular morbidity. The impact of the change in guidance was examined using interrupted time series analysis on age and sex standardized rates per 100 person-years.

Results

We studied 4523107 adults with median follow-up of 4.4 years (48.5% men, mean age = 43.3 years). The incidence of hypertension fell steadily from 2.0% in April 2006 to 1.3% in March 2017. The change in guidance in 2011 had no effect on the incidence of hypertension (change in rate = -0.12; 95% CI [-0.37 to 0.13]) or cardiovascular events (change in rate = 0.03, 95% CI [-0.04 to 0.10]). However, the rate of recorded out-of-office monitoring changed significantly (change in rate = 0.65, 95% CI [0.47 to 0.82]) and overall increased from 0.57% in April 2006 to 1.86% in March 2017.

Discussion

The change in NICE guidance in 2011 was associated with a significant increase in the rate of out-of-office monitoring in England, but had no impact on the incidence of hypertension or cardiovascular morbidity.

49. Optimising implementation of research findings in primary care: Results from a qualitative study

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Keele University - Research Institute for Primary Care and Health Sciences.

Introduction

Evidence suggests that significant delays exist in translating research findings into clinical practice. There is limited evidence examining barriers and enablers to knowledge mobilisation in primary care at an organisational level. The purpose of this study was to identify potential barriers and facilitators to implementing an evidence-based model osteoarthritis consultation in primary care.

Methods

Focus groups were conducted with professionals working within three general practices. Each general practice had participated in a control arm of an implementation trial and had received training for the trial intervention at the end of the study. Focus groups were audio recorded, transcribed, and analysed thematically using an underpinning theoretical model.

Results

Three focus groups were conducted, with a total of 21 participants. Factors perceived as key to implementation were: a whole practice approach to training, the opportunity for reflection and feedback, the 'fit' of the intervention with existing systems, and the alignment of the intervention to current healthcare policy for managing patients with long-term conditions. The role of the patient was also identified as an important facilitator of knowledge mobilisation for implementation.

Discussion

This study illustrates important organisational factors in mobilising research evidence in primary care. The importance of interventions aligning with policy and practice agendas, and the value of opportunities to collectively consider the motivations, intentions, and action plans for knowledge mobilisation in each organisation were key. The focus group discussions provided an opportunity for mobilising knowledge with 'in practice' reflection and facilitated implementation planning.

50. Parents' and Carers' views and experiences of online health information for long-term physical childhood conditions: A systematic review and synthesis of qualitative research

Bethan Treadgold¹ Ingrid Muller¹ Emma Teasdale¹ Neil Coulson², Miriam Santer¹

¹University of Southampton. ²University of Nottingham.

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.

51. Development of a patient reported outcome measure for polymyalgia rheumatica: formation of dimension structure and item reduction

Helen Twohig¹ Sara Muller¹ Caroline Mitchell², Christian Mallen¹

¹Keele University. ²University of Sheffield.

Introduction

Polymyalgia rheumatica (PMR) is a condition that causes pain, stiffness and disability in older adults. It typically has a sub-acute onset and responds rapidly to treatment with glucocorticoids. The treatment is tapered, guided by clinical assessment, typically over 2-3 years. Steroid medication itself causes significant morbidity and adverse effects have to be balanced against PMR symptoms. There is currently no standardised way of assessing PMR; something that causes difficulty in research studies and in clinical practice. We aim to develop a patient reported outcome measure (PROM) to assess PMR-related quality of life. A long-form questionnaire was developed from data from a qualitative study of patient experiences of PMR and face validity work with patients and professionals. Here we present the next stage of the development process: formation of dimension structure and item reduction.

Methods

250 patients with PMR, recruited from practices across the West Midlands, will be asked to complete two copies of long-form questionnaire – one responding as they would have done at the time of diagnosis and one responding as appropriate now. The data will be analysed using factor analysis / item response theory to confirm dimension structure and reduce the number of items. Consistency within each dimension will be analysed using Cronbach's alpha and floor/ ceiling effects will be considered.

Results

Results will be available by the time of the meeting.

Discussion

At the end of the process we will have a shorter-form questionnaire with factor structure determined, ready for further validity and reliability testing.

52. Parents' perceptions of antibiotic use and antibiotic resistance (PAUSE): a qualitative interview study

Oliver Van Hecke, Chris Butler, Kay Wang, Sarah Tonkin-Crine

University of Oxford.

Background

Antibiotic resistance is an important societal health issue. There remains public misconception about antibiotic use and resistance. Preschool children are at particular risk of receiving unnecessary antibiotics because they commonly present in primary care, and many childhood infections are self-limiting. Our aim was to explore parents' perceptions and understanding of antibiotic use and resistance when considering how to manage their young child with an acute respiratory tract infection (RTI) and to explore what strategies parents would find acceptable to minimise antibiotic resistance for their families.

Methods

Semi-structured interviews with a purposive sample of 23 parents of preschool children who recently had an acute RTI across greater Oxfordshire during the 2016-7 winter. Thematic analysis was used to analyse the data.

Results

Parents had a sense of unrealistic optimism about how antibiotic resistance was likely to affect their family. They considered their families to be at low risk of antibiotic resistance because their families were "low users" of antibiotics. Very few parents considered antibiotic resistance as a possible harm of antibiotics. Parents wanted antibiotic awareness campaigns to have a universal, relevant message for families that fit into their daily lives about the impact of antibiotic resistance.

Discussion

Future communication about the potential impact of unnecessary antibiotic use and antibiotic resistance needs to focus on outcomes that parents of young children can relate to, and in a format that parents will engage with to make a more informed decision about the risks and benefits of antibiotics for their child.

53. Multisite pain and falls in older people

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Falls are common in older people; multisite pain maybe a potential falls' risk factor in this group. This research aims to describe the relationship between multisite pain and falls in community-dwelling older people. Data from the North Staffordshire Osteoarthritis Project, a prospective cohort study of community-dwelling adults aged ≥ 50 years, was linked with GP records, Hospital Episode Statistics (HES) and national mortality data. Logistic regression tested the relationship between multisite pain and self-reported falls in 4386 participants with complete data. Survival analysis tested the relationship between multisite pain and GP- or HES-recorded falls in 1¹375 participants. Analyses were adjusted for confounders and putative influencers of the pain-falls relationship.

Multisite pain predicted future self-reported falls; each additional pain site conferred a 12% increased odds of falling at three years (OR 1.12(1.01-1.24) $p=0.04$) and a 3% increased odds of falling at six years (OR 1.03(1.02-1.04) $p<0.01$). Multisite pain predicted GP-recorded falls; those reporting 'some pain' had a 26% increased risk of falling (HR 1.26(1.01-1.57) $p=0.048$) and those reporting 'widespread pain' had a 27% increased risk (HR 1.27(0.98-1.65) $p=0.07$). Multisite pain was not associated with HES-recorded falls.

These data suggest that multisite pain is an independent risk factor for future self-reported falls. Additionally, multisite pain is a likely influencer of the relationship between other risk factors and future falls. Primary care could proactively identify older adults with multisite pain and instigate existing falls prevention guidelines. Future research will establish the impact of pain management interventions on future risk of falls.

54. Management of Patients with Heart Failure with Preserved Ejection Fraction: Perspectives of Patients and Healthcare Professionals. A qualitative study

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Introduction

Approximately half of patients with heart failure (HF) have heart failure with preserved ejection fraction (HFpEF). They are often older, female with multiple comorbid conditions, under-diagnosed, and experience sub-optimal management and poor outcomes. We aimed to explore patients' and healthcare professionals' (HCPs) understanding of, and perspectives on managing/self-managing, HFpEF and comorbidities, to determine needs and preferences for care and support, and feasibility of providing such care. "Burden of Treatment" was used as a sensitising framework for analysis.

Methods

Qualitative study of a purposive sample of patients with HFpEF and HCPs in primary care and specialist services in East England, Staffordshire and Manchester. Semi-structured interviews were transcribed and analysed using framework analysis.

Results

Interim analysis has identified themes associated with burden of treatment including: 1). Understanding diagnosis / terminology: Some patients were unaware of or disliked the (potentially stigmatising) term "heart failure" while "HFpEF" was reported as seldom used by HCPs with patients. 2). Impact of symptoms: from HFpEF and co-morbidities. 3). Treatment: Some found medication taking and follow-up visits burdensome, most accepted these. 4). Monitoring / support: Most patients reported scheduled cardiac-related follow up; few had access to cardiac specialist nurses or rehabilitation. 5). Communication: Communication problems were reported both at diagnosis and follow up, between patient and HCP, and between HCPs.

Conclusions

Initial analysis demonstrates complexity and variation in patient management and access to support. Findings will inform a SPQR-funded, theory-based research programme of optimised management for patients with HFpEF, to support clinical decision-making and management in Primary Care.

55. Quantifying the Severity of Type 2 Diabetes (T2DM) in England using Clinical Primary Care Records and Linked Hospital and Mortality Data

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Introduction

Diabetes is associated with increased morbidity, mortality and healthcare utilisation. However, there is no validated measure to infer T2DM severity from available medical records. From a systematic review we conducted, no UK-based multifactorial clinical tool is available to grade diabetes severity. This NIHR-SPCR funded project aims to quantify the severity of T2DM using primary and secondary care data in a collaboration between five universities.

Methods

We used data from the Clinical Practice Research Datalink (CPRD) of people with T2DM. The T2DM severity was defined using baseline and longitudinal patterns of 35 severity domains (including cerebrovascular and cardiovascular disease, diabetes-related complications). We used survival models to assess the association between developed severity scores and all-cause mortality after controlling for age, gender and patient-level deprivation.

Results

We identified 152,022 eligible T2DM cases registered in 400 general practices in England. Hypertension and hyperlipidaemia were among the most-commonly present domains. A 1-unit increase in baseline severity score was associated with increased risk for all-cause mortality (HR=1.29, 95% CI: 1.28; 1.29). Age-gender adjusted analysis decreased the association between the severity score and mortality to aHR=1.12 (95% CI: 1.11; 1.13). Additionally adjusting for deprivation further decreased the association to aHR=1.11 (95% CI: 1.11; 1.12).

Discussion

Increasing diabetes severity is associated with increased risk for mortality. However, more research and modelling refinement are planned for this ongoing study. The developed severity algorithm will be informative to practitioners and could stratify clinical management of people with T2DM and support commissioning and public health programmes for T2DM.



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