Understanding Telehealth in Heart Failure.

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Introduction

Enthusiasts for telehealth extol its potential for supporting heart failure management but randomised trials have been slow to recruit and produced conflicting finding. Roll-out in the real world is slow. Robust business models are lacking. We sought to inform policy by making sense of a complex literature.

Method

Boell's hermeneutic methodology was used to appraise [2]3 reviews (including [2]0 meta-analyses); six 'mega-trials'; and [1]0 syntheses of qualitative and mixed-method studies.

Results

A range of technologies employed in experimental trials yielded ambiguous findings dogged by heterogeneity, difficult implementation in real-world settings and widespread resistance among patients and clinicians. We surfaced a number of tensions:

- Between heart failure as an isolated condition and the more prevalent coexistence with co-morbidities impacting on outcomes like hospitalisation and mortality
- Between the hypothetical models of "empowered", self-managing patients and the fatigued, depressed or confused individuals identified in multiple studies
- Between management as a "cold" biomedical practice based on a modernist vision dominated by objective biometrics versus a "warm", relationship-based, adaptive practice that engages with the patient's unique predicament
- A bioengineering view that continuous biomedical data may allow preempting of deterioration versus the reality of a high signal:noise ratio

Discussion

The limited adoption of telehealth for heart failure has complex clinical, professional, institutional and philosophical causes, which are unlikely to be elucidated by adding more randomised trials to an already crowded literature. An alternative approach is proposed, based on naturalistic study designs, social and organisational theory, and co-design of new service models.

The impact of linking weight with health on patient outcomes in a brief intervention for weight loss.

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Objectives

Guidelines exhort GPs to give opportunistic interventions encouraging patients to stop smoking or lose weight because clinical trials show such interventions are effective. However, GPs usually only intervene on health behaviour when the patient's presenting problem is linked to a particular health behaviour. GPs believe that brief interventions are most effective in this context, although some evidence suggests this may be harmful. This project explores how GPs linked weight and health, and with what effect, during opportunistic interventions for weight loss.

Method

Conversation analysis was used to explore audio recordings from consultations which showed how GPs opportunistically linked weight with health, and how patients responded. This method enables identification of the efficacy

and acceptability of different consultation strategies. The lead researcher investigated these conversations and compared interactional evidence with patient outcomes.

Results

When delivering an opportunistic intervention for weight loss GPs often linked the patient's weight with their health. When this occurred, patients frequently displayed resistance and engaged in moral work which lengthened the encounter. However, different methods of linking produced varying levels of resistance from patients, which can be associated with future engagement with weight loss.

Conclusion

Although GPs feel that intervening opportunistically is especially effective when the patient has a medical reason to change behaviour, recordings show that attempts to motivate patients by linking their weight and health usually result in resistance. As a strategy to motivate patients to change their behaviour, linking to the patient's health condition is probably best avoided in general practice consultations.

Service Users and Supporters Working Better Together: Facilitating mutual support for mental wellbeing between people living with chronic physical conditions and their supporters.

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Introduction

Chronic physical conditions can negatively affect the mental wellbeing of people living with these conditions and the family and friends supporting them. Studies of unmet needs in these populations have identified a thirst for strategies that help service users and supporters to look after each other's mental wellbeing, but research into how to facilitate this mutual support is scarce. Qualitative research is required to understand what these groups want to know about mental wellbeing in the context of coping together; how they experience the interaction between chronic conditions, mental wellbeing and relationships; and what their ideas and preferences are for an intervention facilitating mutual support for mental wellbeing.

Methods

Individual and dyadic interviews will be conducted with service users and supporters living with cancer, chronic pain, coronary heart disease, dementia and/or stroke. Interviewees will also complete brief validated questionnaires about their mental wellbeing and how they cope with problems within relationships. Interview transcripts will be analysed using a combination of interpretative phenomenological analysis and the framework method.

Results

Qualitative interviews will begin in May 2017, so preliminary results will be available for presentation at the Showcase.

Discussion

Findings from this qualitative work will be synthesised with results from completed literature review to develop a relevant, acceptable and evidence-based intervention framework facilitating mutual support for mental wellbeing. In doing so, this work will promote the more efficient, more cost-effective, and thus more widely available delivery of mental wellbeing support to service users and supporters living with chronic physical conditions.

Facilitators and barriers to teaching undergraduate medical students in primary care: The GPs' perspective.

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Abstract

The length and quality of medical students' GP placements influences career choice. However 12 of 25 English medical schools have difficulty recruiting GP teachers. Failure to recruit GP teachers therefore threatens expansion of GP numbers. There has been no research on UK GP motivation to teach since the 1990s. We seek to understand contemporary motivators and barriers for GP engagement with undergraduate education in the UK.

Semi-structured interviews were undertaken with 25 GP teachers at four UK Medical Schools representing different locations and curricula types. We purposively sampled: GPs new to teaching, established GP teachers and GPs who have recently stopped. We undertook NVIVO-assisted deductive and inductive thematic analysis of interview transcripts.

Medical schools facilitated engagement in providing feedback, resources and peer support communities. Locum and salaried doctors perceived involvement in teaching as increasing autonomy through development of a portfolio career. Conversely, some partners perceived that their autonomy was being reduced by increasing service demand and decreasing remuneration, which is insufficient to replace lost clinician time. Other barriers included preference for postgraduate training and inadequate advertisement of teaching opportunities.

This study can inform future recruitment and retention of GP teachers. Medical schools must optimise their interface with, and develop communities of practice for, GP teachers and ensure recruitment fully covers a workforce increasingly comprised of salaried and locum doctors by using new technology such as social media. We must all lobby for implementation of the 2016 Health Select Committee recommendation to increase financial resources for primary care teaching.

Can we value patient and public involvement (PPI) in primary care research using health economic methods?

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Introduction

Appropriate funding for patients and public involvement (PPI) should be allocated within studies, and reflect the value of PPI. We explored the feasibility of using health economics methods to value PPI in primary care research.

Methods

Four NIHR Research for Patient Benefit (RfPB) funding panels were randomly selected and members sent an online survey. Using a 'budget pie' methodology, respondents were asked to state the proportion of funding they would allocate to PPI in the case of two separate, hypothetical research proposals (proposal A - medical record review study; Proposal B - clinical trial). We hypothesised that funders would recognise a need for more funding for PPI in Proposal B (sensitivity to scope). To further explore views of valuing PPI, we conducted "think-aloud" interviews.

Results

29/80 (36%) committee members responded to online survey. 4/17 (24%) of the West Midlands committee completed the survey via "think-aloud" interviews (overall response rate of 34%). Median value for PPI in Proposal A was £6,913 (£0-£25,000) compared with £14,091 (£2,500- £50,000) for Proposal B. More respondents gave a higher value for Proposal B, demonstrating sensitivity to scope. Overall, lay members gave higher values for

Proposal B than academics/clinicians. Respondents reported finding the task difficult, typically resorting to crude 'rules of thumb'. Isolating the value of PPI from other research elements was considered artificial.

Discussion

Findings were sensitive to scope, providing some indication of the relative value of PPI, although responses may have been framed more in terms of cost than true value.

Trials need participants but not their feedback? A scoping review of measures of participant experience of taking part in trials.

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Introduction

Recruitment and retention are longstanding problems in trials. Some of the problems may reflect that trial design and delivery is not sufficiently 'patient-centred'. Most trials collect extensive data from patients, but it is unclear whether patient experience is routinely measured. We conducted a scoping review of studies reporting assessment of patient experience of participation in a trial.

Methods

A search of Medline, PsycINFO, Embase and CINAHL and hand searching was conducted in [2]0[1]6. Additional sources included policy documents, websites and experts. We extracted data on trial context and population, patient experience measures included, and the results of those experience measures. We conducted a narrative synthesis.

Results

We found [1]6 studies. All were from the US, published post-[2]000 and conducted in a wide range of contexts. None of the studies used a formal definition of patient experience and a wide variety of measures were used. Overall, patients reported relatively high levels of satisfaction with the trial process, as well as positive evaluations, such as the likelihood of future participation or recommendation others.

Conclusions

Current published evidence is sparse. Standardised assessment of patient experience of trial participation may provide opportunities to enhance trial design and delivery. This could complement other methods of enhancing patient-centredness, and might improve recruitment, retention, and long-term patient engagement.

Using primary care records to describe patterns in the annual prevalence, incidence and management of carpal tunnel syndrome over a [2]0 year period.

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Introduction

Carpal tunnel syndrome (CTS) is a symptomatic compression neuropathy of the median nerve at the level of the wrist. This study aimed to provide updated epidemiological data to describe patterns in the annual prevalence, incidence and management of carpal tunnel syndrome over a [2]0 year period in a UK primary care population.

Methods

This study is a series of descriptive analyses set in the Clinical Practice Research Datalink (CPRD), between [1]993 and [2]0[1]3. Patients aged [1]8 years and over were included. The numbers of individuals with evidence of an existing (prevalent) or new (incident) diagnosis of or treatment for CTS were identified in each annual period, using coded data.

Episodes of care were identified by Read code and linked prescription and referral data, and expressed as the percentage of prevalent cases in each calendar year. Emerging patterns were described and Joinpoint regression was applied.

Results

The standardised prevalence increased from [2]6.3 per [1]0,000 person years (95% CI [2]6.[1] to [2]6.4) in [1]993 to 35.5 (95% CI 35.3 to 35.6) in [2]0[1]3 and the standardised incidence increased from [1]9.9 per [1]0,000 person years (95% CI [1]9.8 to [2]0.[1]) to [2]6.4 (95% CI [2]6.[2] to [2]6.5). The percentage of prevalent individuals having surgery increased from [1]9.4% in [1]993 to [2]7.4% in [2]0[1]3.

Discussion

Further research into whether CTS could be more effectively managed in primary care with non-surgical treatments and to understand the reasons behind an increase in the use of surgery is warranted.

Increased risk of mortality following recorded presentation of symptoms of breathlessness and wheeze in primary care: a matched cohort study using electronic health records.

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Introduction

The prognostic value of common respiratory symptoms including breathlessness and wheeze in predicting long-term COPD, asthma or IHD outcomes is unknown. The aim was to explore whether a new record of undiagnosed breathlessness/wheeze is associated with all-cause and disease-specific mortality.

Methods

This was a cohort study of adults aged ≥[1]8 years, within the Clinical Practice Research Datalink. Patients with a first coded record of breathlessness/wheeze symptom in primary care between [1]997-[2]0[1]0 and with no prior diagnostic record of COPD/asthma/IHD or other respiratory disease were the 'exposed' cohort. They were then matched by age, gender and practice [1]:[1] to an 'unexposed' cohort who also had no prior diagnoses or a recorded symptom. The risks of future death from COPD/asthma/IHD and any cause were compared using time to event models.

Results

There were [1]5[1],396 patients identified for both cohorts (4[2].5% male; median age 60 (IQR 46,7[2])), with a median follow-up of 6.3 years. The all-cause mortality rates were [2]88.5 and [1]54.8/[1]0,000 person-years in the exposed and unexposed cohorts, respectively. Patients recorded with breathlessness/wheeze had higher risks of all-cause mortality (HR [1].57; 95%CI [1].53,[1].6[2]), COPD-related mortality (HR [2].8[1]; 95%CI [2].[2]4,3.5[1]) and IHD-related mortality (HR [1].55; 95% CI [1].44,[1].67).

Discussion

Symptoms of breathlessness/wheeze presenting in primary care, but not given a specific diagnosis is a risk factor for earlier mortality, independent of later diagnosis of asthma, COPD or IHD. This suggests that GPs should consider targeted investigations, monitoring and follow-up when patients initially present with such a symptom, to ensure accurate diagnosis made as early as possible.

Anticholinergic drugs and the risk of dementia: a nested case control study.

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Introduction

Anticholinergic drugs are prescribed for a wide variety of conditions, and are prescribed frequently in older people. These medicines have several serious side effects, including confusion and short term memory loss, but it is less clear whether their long-term use is associated with an increased risk of dementia. Studies investigating whether there is an association have tended to be relatively small.

Methods

A nested case control study was carried out using the QResearch database. Cases with a diagnosis of dementia were identified and matched with controls by age, sex, calendar time and practice. Information was extracted on prescriptions for strong anticholinergic drugs prior to the diagnosis of dementia or the equivalent date in matched controls (index date). Information was also extracted on potential confounding variables. Conditional logistic models were used to estimate associations with anticholinergic drug exposure.

Results

The study included 58,769 cases and [22]5,574 controls. During a [1]0 year exposure window (from [1] to [11] years prior to the index date) 33,[2]53 (56.6%) cases and [11]5,096 (5[1].0%) controls had received prescriptions for [1] or more anticholinergic drugs. The most commonly prescribed anticholinergic drugs were antidepressants ([1]5,9[2]8 ([2]7.[1]%) of cases and 5[2],560 ([2]3.3%) of controls) and antivertigo drugs ([1]3,969 ([2]3.8%) of cases and 48,990 ([21].7%) of controls).

Findings on the associations with dementia will be presented.

Discussion

This study is a large study with detailed assessment of anticholinergic drug exposure. The results will be important in determining whether these drugs contribute to an increased risk of dementia.

Supporting family carers to care for their relatives at end of life - A role for the internet?

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Introduction

The majority of care for people with dementia is provided by family or friends at home. Caring for someone with dementia is one of the most demanding caring roles, but carers cannot always access support. This study aimed to understand what family carers find challenging towards end-of-life and their views of receiving online support for their caring role.

Methods

Semi-structured interviews were conducted with current and former older family carers (65 years above) of people with dementia, purposively sampled to include those with a variety of experience using the internet. Participants were recruited through general practices, and dementia organisations. Interviews were analysed using thematic analysis.

Results

Carers discussed several challenges; the meaning of end-of-life, adapting to a caring role, and a lack of openness. Carers expressed a lack of understanding about what to expect towards end-of-life. They discussed a need for more information and details around when end-of-life begins, but also more practical issues such as eating and nutrition. Adapting to their caring role was highlighted including managing medical decline and needing discussions of taboo topics such as sexuality. Carers views on support delivered online varied reflecting a diversity of internet use. However, many questioned trusting an online resource and who would deliver and monitor its content or support.

Discussion

The internet is seen as helpful for supporting carers, however it is not beneficial to develop an online resource to simply be used as a source of information, cares want interaction with and direction from trusted professionals.

Empowering older people with multimorbidity to improve safety in primary care: Development and feasibility study of an intervention to support effective communication.

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Introduction

Older people with multimorbidity are likely to experience more patient safety incidents. In primary care, threats to safety often arise as a result of breakdowns in communication and trust between patients and staff. Previous research has shown patients can be empowered to express their concerns and communicate more effectively. However, no such intervention has been developed for older people with multimorbidity.

Methods

We will carry out a mixed-methods study following the four stages of the person-based approach to intervention development: [1]) Planning: observation of consultations and interviews with stakeholders. [2]) Design: create intervention with patient and public involvement (PPI). 3) Development and evaluation of acceptability: think aloud study and modification of the intervention. 4) Implementation and trialling: feasibility study with qualitative process evaluation.

Results

The results of this study will highlight: [1]) The aspects of effective communication techniques that are underused by patients, which may be most beneficial and acceptable, and what could support their use. [2]) How the acceptability, usability, and usefulness of supportive materials can be enhanced. 3) The feasibility of evaluating the effectiveness of these enhanced materials.

Discussion

The information learned through this study will lead to a better understanding of how patients communicate their needs and concerns to healthcare staff, and how this might be improved. The emphasis on qualitative research and PPI will ensure the developed intervention meets the needs of older people with multimorbidity, and has the potential to empower patients, increase satisfaction with care, and reduce risks to patient safety.

How do physiotherapists approach analgesic use in patients with hip osteoarthritis? Findings from a mixed methods study.

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Introduction

Pharmacological and non-pharmacological management approaches are recommended for patients with hip osteoarthritis (OA) and combined treatments may have synergistic benefits. As physiotherapists have recently been granted independent prescribing rights, they are ideally placed to deliver combined treatments. We explored how

physiotherapists currently address analgesic use among patients with hip OA, and the acceptability of prescribing for this patient group.

Methods

A cross-sectional questionnaire was mailed to 3[12]6 UK-based physiotherapists. A case vignette explored approaches to analgesic use among patients with hip OA. Semi-structured telephone interviews were undertaken with [21] questionnaire responders and analysed thematically.

Results

Of the [1]646 (5[2].7%) responders, [11]48 physiotherapists had treated a patient with hip OA in the last 6 months (applicable responses). Most physiotherapists (98.3%) reported that they would address analgesic use for the patient with hip OA, usually by signposting the patient to their GP (8[2].7%). 56.[2]% would discuss optimal use of current medication, and 3[2].7%, would discuss use of over the counter medications. Interviews revealed that "instinct" guided how physiotherapists addressed analgesic use. Although many recognised the benefits of prescribing, a barrier was the additional responsibility centring around patient safety.

Discussion

Whilst most physiotherapists currently address analgesic use with patients with hip OA, how they do this is variable. Despite recognising the potential benefits of independent prescribing, many physiotherapists did not want this additional responsibility. Support and guidance to address safe analgesic use in patients with hip OA may help to align care with best practice and reduce onward GP referral.

Identifying risk of diabetes using an artificial neural network in primary care: comparative cohort study.

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Introduction

A standard model for identifying people at risk of diabetes utilises data from electronic health records but doesn't include blood glucose levels. We compared the performance of an artificial neural network (ANN) with a traditional Cox proportional hazards algorithm, and measured the impact of including blood glucose levels in the model.

Methods

Using the Clinical Practice Research Datalink, Cox proportional hazards and ANN models were derived with and without addition of the patient's most recent blood glucose level as an input. Performance was assessed using the area under the receiver operating curve (AUC), with a diagnosis of diabetes over [1]0 years as the outcome.

Results

79,959 records were included in the analysis. The AUC for the Cox proportional hazards algorithm (for women) was 0.8[2]3 [95% confidence interval 0.799, 0.848], rising to 0.838 [0.8[1]5, 0.86[2]] with the inclusion of blood glucose. The AUC for the ANN was 0.834 [0.8[1]3, 0.855], rising to 0.849 [0.8[2]9, 0.870]. Results for men were similar. Of [1]00[1] people with a blood glucose at baseline of >7.0mmol/L (random or fasting), [2]9% and 55% were diagnosed with diabetes by a maximum of 5 and [1]0 years follow up, respectively.

Conclusion

The ANN model was not significantly superior to the traditional algorithm in this study. Inclusion of blood glucose conferred a marginal, non-significant benefit to both approaches. Ensuring follow up of people with raised blood glucose levels in primary care, irrespective of other risk factors, offers an effective means of identifying a small but high risk population for diabetes.

Andrographis Paniculata for symptomatic relief of respiratory tract infections in adults and children: a systematic review and meta-analysis.

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Introduction

Antimicrobial resistance is a substantial threat to public health. Safe and effective alternatives are required to reduce unnecessary antibiotic prescribing. Andrographis Paniculata has been traditionally used for cough, cold and influenza, suggesting a role in respiratory tract infections (RTIs). This systematic review evaluated the clinical effectiveness and safety of A. Paniculata for symptoms of acute RTIs.

Methods

English and Chinese databases were searched from their inception to March [2]0[1]6 for randomised controlled trials (RCTs) evaluating oral A. Paniculata without language barriers. The primary outcomes were improvement in RTI symptoms and adverse events (AEs). Methodological quality was evaluated using the Cochrane risk of bias; two reviewers independently screened eligibility and extracted data.

Results

Thirty-three RCTs (7[1]75 patients) were included. Most trials evaluated A. Paniculata (as a monotherapy and as a herbal mixture) provided commercially but seldom reported manufacturing or quality control details. A. Paniculata improved cough (n=596, SMD: -0.39, 95%CI [-0.67, -0.[1]0]) and sore throat (n=3[1]4, SMD: -[1].[1]3, 95% CI [-[1].37, -0.89]) when compared with placebo. Evidence also suggested that A. Paniculata (alone or plus usual care) has shortened the duration of cough, sore throat and sick leave/time to resolution 3 when compared versus usual care. No major AEs were reported and minor AEs were mainly gastrointestinal. The methodological quality of included trials was overall poor.

Conclusions

A. Paniculata appears beneficial and safe for relieving RTI symptoms and shortening time to symptom resolution, although findings should be interpreted cautiously owing to poor study quality and heterogeneity.

What are the experiences and support needs of migrant women exposed to domestic violence in healthcare? A qualitative study and synthesis.

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Introduction

Migrant women exposed to domestic violence face many barriers (e.g. language) when seeking healthcare. Domestic violence is often surrounded by silence; migrant women do not disclose for fear of the consequence (e.g. deportation, loss of children) and healthcare professionals often do not ask, for several reasons including lack of training.

Aim

To gain insights into abused migrant women's experiences of healthcare and support needs, including identification of barriers and facilitators.

Methods

A systematic review and synthesis of qualitative research and semi-structured interviews with migrant women and professionals were conducted. For the qualitative synthesis, relevant qualitative papers were synthesised using the methods of meta-ethnography, including identification of second-order constructs and development of third-order constructs through a process of translation across studies, to produce a line-of-argument synthesis.

The [1]9 interviews were purposively sampled, recorded, transcribed and analysed using thematic analysis and the constant comparative method.

Results

In the synthesis, three over-arching (third-order) constructs emerged: ([1]) constrained help-seeking and help-receiving, ([2]) triggers and conditions for disclosure of abuse, (3) person-centred care (experienced and needed). My interviews revealed barriers in healthcare such as language, fear of the consequences and coercive control.

Discussion

This is the first synthesis of qualitative research on the experiences and healthcare needs of migrant women exposed to domestic violence. This study breaks new ground as this group of women is under-researched, as is the role of healthcare; it provides evidence that should inform interventions to improve the healthcare response to these populations.

rEHR: An R package for manipulating and analysing Electronic Health Record data.

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Research with structured Electronic Health Records (EHRs) is expanding as data becomes more accessible; analytic methods advance; and the scientific validity of such studies is increasingly accepted. However, data science methodology to enable the rapid searching/extraction, cleaning and analysis of these large, often complex, datasets is less well developed. Commonly used software is inadequate, resulting in bottlenecks in research workflows and in obstacles to increased transparency and reproducibility of the research. Preparing a research-ready dataset from EHRs is a complex and time consuming task requiring substantial data science skills. In addition, certain aspects of the workflow are computationally intensive, for example extraction of longitudinal data and matching controls to a large cohort. The rEHR package simplifies and accelerates the process of extracting ready-for-analysis datasets from EHR databases. It has a simple import function to a database backend that greatly accelerates data access times. A set of generic query functions allow users to extract data efficiently without needing detailed knowledge of SQL queries. The package also contains functions for cutting data by time-varying covariates, matching controls to cases, unit conversion and construction of clinical code lists. The package has been tested with one for the largest primary care EHRs, the Clinical Practice Research Datalink (CPRD), but allows for a common interface to other EHRs. This simplified and accelerated work flow for EHR data extraction results in simpler, cleaner scripts that are more easily debugged, shared and reproduced.

Testing mediators of the effects of the COgnitive Patient Education (COPE) intervention for low back pain.

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Introduction

Many interventions for the treatment of low back pain (LBP) exist, but the mechanisms through which such treatments work are not always clear, especially when interventions incorporate different components and methods of delivery. Mediation analysis, a statistical analysis method which can help explain how a treatment did (or did not) achieve an effect on the outcome, can be used to explore these mechanisms.

Methods

Secondary analysis of the COPE trial (n=[21]6), a randomised controlled trial which aimed to investigate the effectiveness of Explain Pain (an educational intervention to improve the accuracy of patients knowledge about their pain) in a Norwegian primary care LBP population, was undertaken. Mediation analysis via structural equation modelling was used to examine the mediating effect of change in the three variables thought to be targeted by the COPE intervention (illness perceptions, back pain myths, pain catastrophising) on the effect of the intervention on post-treatment disability outcome.

Results

Statistically significant mediating effects were found for changes in illness perceptions and pain catastrophising, indicating that these factors partly explain the effects of the intervention on disability outcome (illness perceptions mediating effect coefficient 0.08, 95% CI 0.03 to 0.[1]5; pain catastrophising mediating effect coefficient 0.05, 95% CI 0.0[1] to 0.[12]), accounting for [2]6% and [1]5% of the treatment effect individually.

Strategies to recruit ethnic minorities to clinical trials in the UK: Systematic Review.

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Background

People from ethnic minorities are reported to have higher rates of physical illness and mental disorders. Despite this, they are underrepresented in clinical research. This reduces the generalisability of research findings and hinders the development of accessible services.

Researchers often face difficulties in recruiting ethnic minority participants to research due to low levels of cultural competence and limited resources. There are few published trials focusing on ethnic minorities in the UK and we need to understand what recruitment strategies have already been implemented and recommended when recruiting ethnic participants. This will help researchers in applying these lessons to future clinical trials.

Method

To identify strategies for recruiting ethnic minorities to clinical trials in the UK a systematic review of published randomised controlled trials exclusively targeting ethnic minorities was conducted. Multiple databases were searched by combining the terms “ethnic minorities”, “randomised controlled trials” and “United Kingdom”. Data was extracted on recruitment strategies described by each RCT and then themes were created.

Results

Twenty included RCT’s identified various strategies to recruit ethnic communities to clinical trials. These have been described under three overarching themes; adaptation of screening and outcome measures, culturally specific recruitment training and recruitment processes.

Discussion

The review highlighted that researchers employed limited strategies to enhance the recruitment level. The full extent of the use of strategies was not evident from the studies. There is a need for wider training and support for the trialist to build up recruitment skills to facilitate the recruitment of ethnic minorities to clinical trials.

The Child and Adolescent Musculoskeletal Pain (CAM-Pain) Study: A Feasibility Study testing a way of identifying, recruiting, and collecting data from children and adolescents in Primary Care.

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Introduction

Musculoskeletal symptoms such as knee pain are common in children and as many as 50% will seek healthcare. However, a significant gap exists in the literature with no published studies on children consulting in primary care with musculoskeletal pain in the UK, and very few elsewhere. The CAM-Pain feasibility study aims to test a way of

identifying, recruiting, and collecting data from patients aged 8-19 years consulting in primary care about musculoskeletal symptoms.

Methods

Patients were identified by electronic Read codes (recorded reason for consultation) signifying a musculoskeletal consultation. Fortnightly database searches were carried out at 14 general practices and eligible patients were mailed an invitation to participate. Patients who responded positively had a baseline interview with a research nurse, and were followed-up after 6-weeks. Study outcomes included: processes (recruitment rates), data collection (acceptability), resource utilisation (mail-outs), ethics and safety.

Results

Baseline recruitment is complete and follow-ups will be completed by June 2017. Up to February 2017, 141 invitations were sent and 45 patients responded (27 positive, 18 declining participation). The main reason for declining was having no time. Of the 27 positive responses (19% response rate), 14 were female (mean=13.7yrs, range 9-18). Analysis is ongoing, and study processes relevant to participant recruitment, participating GPs and research nurses will be presented.

Discussion

The expected numbers of consulting patients were invited, but response rates were low. Further work is needed to identify ways to conduct studies in this population in order to address the current knowledge gap in this field.

Can electronic medical records be used to identify a prodromal syndrome for rheumatoid arthritis?

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Introduction

Early diagnosis and treatment improves outcomes in patients with rheumatoid arthritis (RA). If a prodromal syndrome could be identified using data routinely contained in the primary care electronic medical record, this could improve time from symptoms to diagnosis and facilitate early treatment.

Methods

RA cases were identified in the Clinical Practice Research Datalink between 2007 and 2012. The earliest indication of RA was set as the index date for cases and 4 matched controls. We used conditional logistic regression in a data-driven approach to compare the prevalence of high level (3-character) Read codes present in at least 5% of the records of cases or controls in the 2-year period before the index date.

Results

3077 RA cases (14215 controls) were identified. In the two years prior to the index date, cases were significantly more likely to receive Read codes for some pain and musculoskeletal problems (e.g. upper limb pain), as well as for non-specific entities (e.g. chat with patient). No clear clinical symptoms that would be helpful in identifying patients for earlier referral were identified.

Discussion

This data driven approach to identify early symptoms of RA in electronic medical records was not successful. This may be because key symptoms are not routinely recorded using Read codes. By using the hierarchical structure of Read codes to truncate them, we may have missed symptoms where they are coded across Read code categories. We are now using a priori symptoms defined by Read codes across chapters and comparing the two approaches.

Primary care interventions to improve uptake and adherence to exercise/activity programmes in people with peripheral arterial disease related intermittent claudication (PAD-IC): a systematic review.

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Introduction

Exercise is recommended for people with peripheral arterial disease related intermittent claudication (PAD-IC), however, many people with PAD-IC fail to engage in regular physical activity. We aimed to review the literature on the effectiveness of interventions delivered in primary or community care to improve uptake and adherence to exercise/activity programmes in people with PAD-IC.

Methods

Systematic review following recognised methods, including all relevant published and unpublished studies. (Protocol PROSPERO #20160:CRD42016046186)

The search strategy examined four databases: MEDLINE, CINAHL, EMBASE, Psych INFO databases from inception to May 2016, supplemented by review of reference lists and citations. Primary search terms included; “Primary care, Peripheral Arterial Disease, intermittent claudication, uptake, completion, adherence, exercise/activity programmes, physical activity”. No date or language restrictions.

Titles, abstracts and full papers were reviewed independently and quality appraised (CASP tools and Dixon-Woods criteria) summarised and reported.

Results

We screened 1481 references, from which 10 papers including 702 patients met inclusion criteria (four UK based). Designs, interventions and scope of studies were diverse and included theory based behavioural interventions and pedometry/accelerometry. Interventions seldom defined, explicitly targeted or measured adherence directly.

Barriers and enablers for the adoption of patient safety tools to improve patient safety in UK primary care.

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Introduction

Patient safety in primary care lags behind secondary care in terms of research/ measurement and quality improvement work. There are tools available to explore and potentially improve patient safety in primary care. The aim of this study was to explore acceptability, feasibility and implementation factors relating to the use of a patient safety toolkit in UK primary care.

Methods

Qualitative study using Framework analysis. Study participants were 35 general practice staff from 23 practices in the Midlands and North-West of England who piloted 2-3 safety tools; comprising GP partners, GP registrars, practice managers and nurses.

Results

Participants were generally positive about using a patient safety toolkit due to perceived importance of safety in general practice. Organisational pressures underpinned a preference for short, simple tools. For acceptability, tools need to be clinically relevant, able to identify safety issues and instigate change. Barriers and enablers specific to individual tools were identified.

Discussion

This study suggests that a patient safety toolkit is acceptable to general practice if feasibility issues are addressed. The study findings will be useful to clinicians, managers, commissioners and policy makers who may be involved in encouraging the use of patient safety tools in primary care.

Determining the extent of delay in consulting for, and the diagnosis of, giant cell arteritis in primary care.

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Introduction

Giant cell arteritis (GCA), if untreated, can lead to blindness and stroke. The extent to which diagnosis of GCA is delayed in UK primary care remains unclear, as do the points in the healthcare pathway at which delays occur. Our objectives were to determine the extent of i) consultation delay for GCA symptoms in general practice and ii) delay in receiving a diagnosis for GCA after general practice consultation.

Methods

Adults ≥50 years of age registered with [1]80 English general practices and with a first Read coded diagnosis of GCA in the three years before baseline were included. GCA patients were mailed a cross-sectional survey, recording the time-period of consultation delay (time-period between symptom onset and consultation) and diagnostic delay (time-period between consultation and final diagnosis). Delay was reported as median number of days (interquartile range).

Results

From the baseline survey, 3[1]8 GCA patients responded (60%). Mean age was 73.7 (SD8.[2]), disease duration was [2].7 years (3.5) and the majority were women (69.8%). Median consultation delay was [1]4 days (7,4[2] days), diagnostic delay was [1]4 days (4,35) and total delay was 35 days ([1]8,9[1]).

Discussion

Though highly variable, on average patients can expect to receive a diagnosis of GCA within a month and the extent of delay is similar at the appraisal and health-seeking interval and the diagnostic interval. Due to the potential serious consequences of any such delay, both patients and general practitioner's would benefit from additional education on the (difficult to identify) signs and symptoms of GCA.

Individual factors associated with self-reported measures of cold homes during winter.

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Introduction

An estimated 5500 people die every year in England and Wales from living in a cold home. Older people are susceptible to cold, but it is unclear how to identify those who particularly find it hard to keep warm in winter.

Methods

[1]409 men aged 74-95 from a UK population-based study reported measures of cold homes in a questionnaire in [2]0[1]4, specifically (i) difficulties in meeting the heating/fuel costs; (ii) staying in bed longer in order to stay warm; (iii) inability to keep the living room comfortably warm; (iv) turning the heating off even when cold because of worries about costs. Associations between individual factors and self-reported measures of cold homes were estimated using logistic regression models. Reports of cold homes (assenting to at least three of the above measures) were related to mortality over [2].[1] years follow-up.

Results

Manual social class, having increasing financial difficulties, and being not married were associated with each of the four measures of cold homes (adjusted odds ratios ranged from [1].6[1] to 4.68; p<0.05 for all). Poor respiratory health, lower grip strength, and social isolation were also associated with reports of cold homes. [1]3[1] men died: those who reported cold homes had increased mortality rates: unadjusted hazard ratio (HR) was [2].83 (95% Confidence Interval [1].[1]5-6.9[2], p=0.0[22]), and [2].46 (95%CI 0.93- 6.53, p=0.07[1]) after adjustment for several demographic and clinical measures.

Conclusions

Identifying older people who find it hard to keep warm in winter is possible: such people have increased mortality risk.

Access to social care and its influence on healthcare utilisation for older adults: a systematic review of international evidence.

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Difficulties accessing social care is thought to be linked to increased use of healthcare for older adults, yet the evidence for this is unclear. This systematic review synthesised the evidence on this relationship. Access to social care was defined using the four domains of Gulliford et al.'s ([2]00[2]) model of healthcare access: availability and supply, utilisation, equity and quality.

Systematic searches of published and grey literature were conducted in ten electronic databases, and records screened for relevance and inclusion against review criteria. Forty-eight studies were included in the review and mapped against the four accessibility domains. A narrative synthesis was used.

In UK studies, greater availability and supply of care homes and social care expenditure was associated with reduced secondary healthcare use for older adults. This trend was also observed, to a lesser extent, across studies from other high income countries. Home based social care was associated with greater use of planned and unplanned secondary care compared to institution based social care (i.e. care homes), but studies rarely controlled for level of need. There was little evidence about primary care use outcomes, nor the influence of equitable access to social care. Evidence on the influence of social care quality was excluded due to inconsistency in how this was reported across studies.

Increased availability and supply of social care for older adults has the potential to moderate use of secondary care. Further research should explore the impact of equitable access to social care, as well as primary care use outcomes.

Frailty scores to predict mortality in older people using data from population based electronic health records: case control study.

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Background

In [2]0[1]7, GP practices in England will be required to identify patients living with moderate and severe frailty. There is a strong association between severity of frailty and mortality. Few studies have attempted to determine the predictive value of frailty scores for mortality at an individual level.

Objective

Assess the performance of a frailty score – the electronic frailty index (eFI) - to predict short term mortality and survival in older adults.

Methods

Anonymised primary care data were obtained from 13,149 individuals age 75 and over who died 2015 - 2016, 1:1 matched to patients with no record of death in the same time period. Weighted receiver operating curve (ROC) analyses to determine optimum eFI cut-points to predict mortality and survival in three months with a target sensitivity of 75% in a development sample. Diagnostic accuracy tests in a validation sample using proposed cut-points.

Results

ROC in development sample proposed eFI cut-point of 0.19 to predict mortality and 0.31 to exclude mortality as an outcome at three months. Diagnostic accuracy in validation sample: 76% sensitivity, 53% specificity, 11% ppv for predicting mortality and 78% sensitivity, 47% specificity, 95% ppv for predicting survival

Conclusions

A single frailty measure has low predictive value for mortality in older adults, even close to death. A frailty measure can identify groups of individuals at a lower risk of dying within three months. Understanding of the application of individual measures of frailty is essential, if they are to be introduced into widespread use in primary care.

Establishing research priorities to improve the management of patients with advanced heart failure using the James Lind Alliance method.

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Background

Heart failure (HF) is a complex clinical syndrome affecting 1-2% of the adult population. HF places a heavy burden on both patients and their carers which often increases in the advanced stages of the illness. Research priorities have traditionally been set by researchers and funders but involving patients in the process can lead to more valid, credible and relevant research findings. This project sets out to establish the research priorities for advanced HF identified by those most affected by the condition.

Methods

The Universities of Oxford, Bristol and Cambridge will establish an Advanced Heart Failure Priority Setting Partnership (PSP) using the James Lind Alliance method. A steering group of people directly affected by advanced HF including patients, carers and clinicians will oversee the project. An initial online survey will determine what the priorities for advanced HF research should be. The members of the steering group will promote the survey through their 'wider partner networks' which include patient groups, healthcare clinics and through relevant websites such as HF charities and local NHS trusts. A review of the literature will be carried out to identify where priorities have already been addressed, and where research gaps exist. Priorities will then be sorted to generate a shorter list for discussion at a final workshop where a 'Top 10' priority list will be agreed.

Outcomes

The priorities will be disseminated widely to researchers and funders to ensure this project has the maximum impact on the advanced HF research agenda.

Acute Flares of Knee Osteoarthritis in Primary Care: A Feasibility and Pilot Study Process Evaluation.

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Introduction

Knee osteoarthritis (OA) affects 25% of adults aged over 50, and leads to over 400,000 general practice consultations in the UK each year. Despite the misconception that OA is a slowly progressive condition, patients often complain of acute flares that are difficult to cope with, particularly when pain is severe and unpredictable. It is unclear what these events are and what they signify. Existing guidance for patients and practitioners does not specifically address the management and prevention of acute flares. Our study aims to develop and test a system for capturing 'real-time' information on these acute flare-ups, the things that trigger them, and which patients are most often affected.

Methods

The study comprises the following stages: 1) Questionnaire development (complete). 2) Web-based data collection platform development (complete). 3) Pilot data collection with 50 participants from general practices using the web-based data collection platform (currently live). Using a combination of time- and event-contingent data collection we are exploring a range of potential physical, psychological and social triggers. Pilot analysis will estimate key parameters for a future main study, including recruitment (eligibility, screening, consent), retention, flare-up frequency, and participant characteristics. Process data will be gathered on website usability and questionnaire completeness. Patient engagement is supporting all study procedures.

Discussion

This presentation will report the findings from all stages of system development and pilot testing. The lessons learned from this process and how they are informing a funded large-scale online observational case-crossover study, opening for recruitment during 2018, will be discussed.

The changing incidence of poisonings amongst young people in England, 1998-2014.

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Background

Most medically-attended self-harm episodes in young people are poisonings. However, accurate and up-to-date population level data on poisoning incidence are lacking. Recent linkage of English primary care, hospital and mortality data allows these to be quantified to inform service delivery and reduce self-harm.

Methods

An open cohort study of 1,736,527 young people aged 10-24 between 1998-2014 was conducted using linked Clinical Practice Research Datalink, Hospital Episode Statistics and Office for National Statistics mortality data. Incidence rates by poisoning intent were calculated by age, sex, deprivation, substance and year.

Results

Total poisoning incidence rates increased by 25% from 1998/99-2013/14 (adjusted incidence rate ratio (aIRR) 1.25, 95%CI 1.20-1.30). Two-thirds (66%) were intentional. Intentional poisoning rates increased by 52% while unintentional rates remained unchanged. Intentional rates increased almost exclusively among females, gradually between 1998/99 and 2013/14 among 16-18 (88% increase) and 19-24 (36% increase) year olds but among 10-15 year olds only in the last 2 years (79% increase). A two-fold increased poisoning risk for the most compared to least deprived quintile persisted over time (aIRR 2.21, 95%CI 2.02-2.23). The greatest increases for specific substances over time were seen amongst females aged 16-18 in which paracetamol poisonings increased three-fold, NSAID poisonings 2.7 fold, and opiate/psychodysleptic poisonings 13.6 fold.

Conclusions

Commissioning of services needs to address the growing problem of intentional poisonings among young people, especially among females and more deprived groups. GPs should limit supplies of medication, for both psychiatric and non-psychiatric conditions, while being mindful of at risk groups when prescribing.

External validation of risk prediction models for incidence of colorectal cancer using UK Biobank.

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Introduction

Stratifying the population into categories using simple risk scores offers the potential for improving the efficiency of colorectal cancer (CRC) screening programmes. We aimed to compare the performance of risk models predicting incidence of colorectal cancer in a UK population.

Methods

Having identified twelve risk models in a previous systematic review, we performed external validation within the UK Biobank cohort. For the main analysis we included only participants with five year follow-up. We assessed discrimination using the area under the receiver operating characteristic curve (AUC) and calibration graphically and using the Hosmer-Lemeshow statistic.

Results

Among the 373,[1]64 men and women with 5 year follow-up and no prior history of CRC there were [1],7[1]9 (0.46%) cases of incident CRC. In men, the QCancer[1]0 model had the highest discrimination (AUC: 0.7[1]; 95% confidence interval: 0.69 to 0.7[2]), with the models by Tao, Driver and Ma also having AUCs over 0.67. Discrimination was lower in women: the QCancer[1]0, Tao and Wells models were the best performing with AUCs between 0.64-0.66. Assessment of calibration was only possible for five of the models for men and two for women. All overestimated risk, particularly at higher deciles of observed risk. Results from a sensitivity analysis including those with less than 5 years follow-up were similar.

Conclusions

Several simple risk models have relatively good discrimination in a UK population. Modelling studies are now required to estimate the potential health benefits and cost-effectiveness of implementing stratified risk based CRC screening.

Risk of fragility fracture among patients with psoriasis: A population based matched cohort study from the United Kingdom.

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Introduction

Psoriasis is a common inflammatory skin disease affecting [2]-4% of the population. This study estimates the effect of psoriasis on the risk of fracture.

Methods

A [1]:4 matched cohort study, matched on age, sex and general practice, was conducted utilizing data from the Clinical Practice Research Datalink, a large UK database of primary care medical records. The exposed population was defined as psoriasis patients aged >40 years with an incident diagnosis between [1]990-[2]004, who were followed up until [2]0[1]5. The incidence rate of fracture was calculated as the number of incident diagnoses per [1]0,000 person-years, stratified by sex. Adjusted hazard ratios (HR) and 95% confidence intervals were estimated using a Cox proportional hazards model.

Results

[2]4,[21]9 patients with psoriasis and 94,8[2]0 controls were included in the study. The mean age was 59 years at study entry and just over half (5[1]%) of the patients were male. The incidence rate of fracture was 58.4 (95%CI:55.6-6[1].3) and 53.[1] (5[1].7-54.5)/[1]0,000 person-years for the exposed and unexposed, respectively. Patients with psoriasis had [12]% increased risk of fracture (HR: [1].[12]; 95%CI: [1].06-[1].[1]9) compared to the unexposed. The risk was slightly higher in males ([1].[22] ([1].09-[1].36)) than females ([1].09 ([1].03-[1].[1]7)).

Conclusions

This study reports for the first time, an increase in fracture risk in patients with psoriasis. A higher risk was found in males than females. These findings suggest that fracture risk assessment needs to be considered for individuals with psoriasis.