Research Session 1: Providing Pharmacy Services to Diverse Communities

A theoretically-based exploration of multi-compartment compliance aid use amongst residents of very sheltered housing and their care team in the North East of Scotland


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Focal points

- To explore the provision, use, monitoring and perceived impact of multi-compartment compliance aids.
- The Theoretical Domains Framework was a useful analytical tool in identifying determinants of MCA use.
- The pressure on pharmacy to meet the burgeoning demand for MCAs has overtaken their capacity to supply.

Introduction

The vision is that, ‘older people in Scotland are valued as an asset, their voices are heard and they are supported to enjoy full and positive lives in their own home or a homely setting’.

While NHS pharmaceutical care plays a significant role, ‘the use of multi-compartment compliance aids (MCA) has become regarded as a panacea for medicines use’. This research aimed to explore the provision, use, monitoring and perceived impact of MCAs from the perspectives of very sheltered housing (VSH) residents, who are generally older and frailer necessitating 24-hour warden service, and those people they identified as part of their care team.

Methods

Multiple case studies were conducted in NE Scotland focusing on VSH residents aged ≥65 and using an MCA for ≥6 months. Potential participants were identified by their Senior Carer who screened for cognitive/welfare issues. The Lead Pharmacist invited and consented each resident to take part in a 15 minute audio-recorded, semi-structured interview. Questions were based on 14 domains of the Theoretical Domains Framework (TDF) relating to purpose, utility and management of medicines to identify determinants of MCA use. Residents participating also identified people in their care team for interview. Verbatim transcripts were analysed independently by 3 researchers using the Framework Approach. This study had NHS Ethical and Research & Development approval.

Results

Twenty interviews were conducted with residents at three sites (A,B,C). Further interviews were conducted with people in the residents care team which included: formal carers (17), GPs (8), pharmacists (8) and one family member. Findings indicate consensus around purpose of MCAs (knowledge) with varying views around who is/should be involved in the decision to start an MCA and why (social influences; role; beliefs about capabilities). Health professionals thought it important that residents and carers knew what/why medicines were prescribed (knowledge; role; beliefs about consequences), one GP noted, ‘I don’t know what tablets look like’ (GP1A). Carers affirmed residents, ‘know how many, and the colours . . . you think they don’t know but they do’ (Carers A). Some residents asserted their independence, ‘it can be really annoying when somebody says ‘oh you can’t take it at this time’, I say, yes I can do it. Don’t tell me I can’t take it’ (Case 6C; beliefs about capabilities). Prescription changes were challenging to implement (nature of the behaviour; knowledge; skills), ‘you’re sitting there going, oh, is it that one? I don’t know and that’s really problematic’ (GP 1B) or ‘it’s a little white tablet, well she’s got 3 or 4 of those’ (Carers A). While MCAs were viewed as desirable (emotions; reinforcement; beliefs about consequences), ‘I just hope there’s never bottles, no, honestly, the blister pack is perfect, brilliant, excellent’ (Carers B) few were aware of the implications for pharmacy, ‘we’ve got 53 at the moment, 50 is our maximum but we’ve crept up a little . . . a lot of the time I’m chained to the pharmacy . . . I feel so guilty – it could be your mum, it could be your granny and they’re really struggling’ (Ph 1A; environmental; emotions).

Discussion

This study captured multiple perspectives of MCAs: residents and carers reliance, GPs lack of alternatives and pharmacists empathy. However, with an increasingly aged, multimorbid population dependent on polypharmacy the pressure on pharmacy to meet the burgeoning demand for MCAs has overtaken their supply capacity. Further research is needed to identify the process by which MCAs are initiated, reviewed and supplied.

References

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0002
Evaluating pharmacist input to pharmaceutical care of patients in dispensing medical practices in the Scottish Highlands

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Focal points

- Study aim was to conduct an evaluation of patient facing pharmacist input to pharmaceutical care of patients in dispensing medical practices.
- Care issues were identified in 92.2% of patients, 86.7% of which were managed without GP referral.
- While findings are not necessarily generalizable, they contribute to plans to expand the service.

Introduction

While NHS Highland is the largest geographical health board in the United Kingdom, covering approximately 41% of the land mass of Scotland, residents constitute <10% of the Scottish population. The North and West Highland Operational Unit covers a particularly remote and rural area, with population density of 2.3–14.4 people/km\(^2\), compared to 68.4 across Scotland.\(^1\) This Unit contains a high number of dispensing medical practices, which have historically had no patient-facing pharmacist input to patient care. A pilot has been implemented in which two dispensing practices are supported by a clinical pharmacist independent prescriber undertaking targeted medication reviews. Patients prescribed four or more medicines are prioritised by the length of time since their last documented doctor or nurse led medication review. The aim of this study was to conduct an interim (6 month) evaluation of the pharmacist input.

Methods

Different methods of patient recruitment were employed in the two practices. In practice 1, patients were contacted in writing by practice staff and given an appointment to attend the pharmacist consultation. In the second, patients were contacted in writing and invited to make an appointment. During the consultation, the pharmacist recorded the following data on a pre-piloted Excel spreadsheet: number of prescribed medicines; pharmaceutical care issues (category from a standardised dropdown list, description of issue); pharmacist action (prescribed, advice given, no change, referred to GP; description of the action); description of outcome at follow-up. This study was approved by the Ethics Panel of the [state University].

Results

The majority of patients (83.3%, 50) in practice 1 attended the scheduled appointment compared to around half (49.7%, 91) of those invited to make an appointment in practice 2. Patients were prescribed a median of 11 medicines (interquartile range, IQR, 9–15, maximum, 24) at the time of the appointment. Pharmaceutical care issues were identified in 92.2% (130) patients, who had a total of 241 pharmaceutical care issues. Almost all of the issues, 86.7% (209) were managed by the pharmacist without any need for GP referral. Pharmacist actions in resolving these issues were: 26.8% (56) prescribed a new medicine or different dose/formulation; 56.0% (117) provided advice to the patient (e.g. alter timing of medicines, administration, trial of ‘as required’ rather than regular dosing, smoking cessation); and 17.2% (36) no change to medicines but altered repeat prescription record. Those issues referred to the GPs were mainly around the need for further investigations to confirm diagnosis.

Discussion

There was a marked difference in patient recruitment between the two practices. While the reasons for this are unknown (and will be explored in a qualitative phase), this could be attributed to different modes of recruitment. Pharmaceutical care issues were identified in almost all patients and these were largely resolved without any GP input. Patients are to be followed-up to determine the longer term outcomes and an independent qualitative evaluation planned of the experiences of patients, pharmacist and practice staff. While findings are not necessarily generalizable, they will contribute to plans to continue and expand the pilot within NHS Highland, which is directly in line with the Scottish Government strategy, ‘Prescription for Excellence’. This articulates that pharmacists in Scotland will be clinical pharmacist independent prescribers managing care loads of patients and that those in remote and rural areas need to have equity of access to pharmaceutical care.\(^2\)

References


Acknowledgements

The authors wish to acknowledge the input of: GPs and staff at both practices participating in the pilot.
The self care behaviours of offshore workers: opportunities for behaviour change interventions

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Focal points
- This research utilised a questionnaire to explore aspects of self care amongst offshore workers.
- BMI, fruit and vegetable intake, smoking and alcohol were identified as areas of concern.
- Self care behaviour change interventions which target offshore workers are recommended.

Introduction
The oil and gas industry is a vital contributor to the global economy and a key source of employment within oil-producing countries. Financial forecasts predict its continued economic influence; however, oil production is largely dependant on a skilled population who are adept in coping with the demands of an offshore environment. Due to the high risk nature of work offshore it is a requisite that personnel engage in health promoting behaviours. Although medical screenings may serve to mitigate particular health issues, and as a consequence it is often assumed that offshore personnel are fit and healthy, the literature is suggestive that this may be an inaccurate perception. The research aimed to determine the extent to which offshore workers engaged in self care behaviour and to identify areas which required behaviour change.

Methods
Employees from the global oil and gas industry who attended a one day Further Offshore Emergency Training course, at a local training facility, were recruited daily by the researcher over a 16 week period. Participants were asked to complete a contact form to enable the researcher to send out an email invitation containing a link to the questionnaire. The questionnaire was reviewed by both an expert panel and a sample of offshore workers in an effort to ensure face and content validity. In addition, a pilot study, using a sample from the primary recruitment site, was used to assess the feasibility of the proposed recruitment strategy and estimate the sample size required for the main study. The questionnaire comprised eleven validated tools (e.g. FAST Alcohol Screening Test; International Physical Activity Questionnaire; Pittsburgh Insomnia Rating Scale-2; Mindful Attention Awareness Scale) to evaluate health. A prize draw for a £50 retail voucher was offered as an incentive; alternatively, participants could submit the questionnaire anonymously. Two reminder emails were sent to non-responders. Ethical approval was granted by the School Research Ethics Committee.

Results
236 questionnaires have been returned (52.3% response rate). Participants were aged 23–64 years (mean: 42.7; SD. 9.8) and the majority were male (n = 175, 75.1%). Thirty-five (14.8%) participants disclosed that they suffered from a long term health condition. Just over half of those completing a medication adherence measure were classified as adherent (n = 13, 52.0%). Around one fifth were smokers (n = 48, 20.5%). And almost two-thirds (n = 126, 62.1%) were deemed to be at risk of hazardous alcohol use. The mean BMI of offshore workers was 27.32 (SD 3.96), categorised as overweight. Over half (n = 127, 55.2%) engaged in high levels of physical activity and the majority did not achieve five-a-day fruit and vegetable guidelines (n = 130, 55.1%). The mean average mindfulness score was 4.41 (SD. 0.81), representative of a high level of dispositional mindfulness. A number of participants were severely bothered by insomnia (n = 113, 47.9%).

Discussion
The evidence derived from this research is suggestive that there are key areas relating to the health behaviours of the offshore workforce that warrant addressing, and as a consequence, it may be beneficial to implement health programme which promotes engagement in positive health behaviours. Consequently, there are opportunities for the implementation of technology-based health and pharmacy services which target medication adherence, weight management, smoking cessation and alcohol use. An in depth qualitative study will provide evidence to enhance the foundation on which to base future interventions.

References

Perspectives of homeless patients on their prescribed medicines

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Focal points
- A qualitative study conducted with homeless patients to explore expectations, beliefs and behaviours relating to their prescribed medicines.
- Homelessness was perceived by participants to adversely impact timely collection and retention of prescribed medicines.
- Doctors were the preferred source of information for prescribed medicines.
• Barriers to pharmacy access included perceived discrimination by some pharmacy staff and difficulties traveling to pharmacies.

Introduction

Homelessness takes many forms including sleeping rough, living in derelict buildings, living in squats or sofa surfing. Homelessness provides challenges to health care including higher prevalence of long-term illnesses or disabilities and infectious diseases and hazards resulting from unstable living conditions.¹ Health care of the homeless has been under-researched. Hence the need for current evidence for the delivery of optimum healthcare to the homeless population has been emphasised by recent UK health policies.² The aim of the study was to explore homeless patients’ expectations, beliefs and behaviours towards their medicines.

Methods

Qualitative semi-structured, face to face, interviews were conducted with patients registered with Marywell homeless healthcare centre in Aberdeen, UK. Patients prescribed at least one medicine prior to the day of consultation and those assessed by their GPs as having good rapport with practice staff were included. Interviews were based on validated topic guide which covered participant expectations, belief and behaviours to prescribed medicines and factors associated with adherence to prescribed medicines. Interviews lasted a maximum of 30 minutes with trained researchers and were audio-recorded, transcribed verbatim and thematically analysed. Quantitative demographic information were also collected from participants. West of Scotland NHS Ethics Service provided ethical approval after proportionate review. NHS Grampian provided R&D permission.

Results

Twenty-five patients were interviewed, the majority of whom were male (n = 15) with drug (n = 15) or alcohol (n = 9) misuse indicated by participants as key factors leading to their homeless status. Mean age was 40.7 years (range: 28–54 years). Most participants rated their health as either fair (n = 10), bad/very bad (n = 9) and were unemployed and not currently looking for work (n = 19). Participants had been homeless for periods of less than six months (n = 4) to over five years (n = 3). Most participants were prescribed medicines for the management of mental health or opioid dependence. Several participants emphasised the benefits of methadone when asked about their beliefs and expectations of their medicines. They believed that methadone was helping them lead a ‘normal’ life, enabling them to feel ‘stable’, ‘confident’ and keeping them away from illicit drug addiction and its subsequent consequences including crime.

Although most participants were aware of the consequences of suboptimal adherence to prescribed medicines, several challenges were cited in achieving adherence. These included medicines being stolen and the lack of secure storage. A few participants emphasized that obtaining food was a higher priority than medicines while being homeless: ‘when you are homeless, you are not thinking about your medication; but your food, shelter or heat for the night’ (28 years old female). Doctors were the preferred source for medicines information with pharmacists rarely utilised as a source. While some accounts of positive pharmacy interactions were mentioned, barriers to pharmacy access included lack of means to travel to pharmacies, perceived discrimination by pharmacy staff and other life priorities such as seeking shelter preventing timely attendance at appointments.

Discussion

Results from this study has provided a unique perspective on this vulnerable and under-researched group of patients. Results suggest that there is scope for greater pharmacy involvement as well as integration between health and social care services to enable homeless patients to retain, manage and derive most benefit from their medicines. Further research needs to be undertaken to explore health outcomes including patient satisfaction amongst homeless patients with pharmacy services.

References


0005

The Medicines Advice Service Evaluation (MASE): a randomised controlled trial of an intervention to improve medication adherence in a mail-order pharmacy population

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Focal points

• Non-adherence to long-term medicines is one of the most significant challenges facing health care systems, but remains resistant to being addressed.
• There is evidence to suggest that pharmacists are well placed to provide adherence interventions.
• This randomised controlled trial showed that it is feasible, effective and acceptable to patients to provide tailored adherence support, using a combination of telephone consultations and written information.
• The findings provide support for the enhanced role of pharmacists in supporting and advising patients with their medicines to improve adherence outcomes.

Introduction

Non-adherence to medicines for long-term conditions is a complex and prevalent phenomenon, with significant clinical and economic consequences for patients and health providers.
worldwide. Simple effective solutions have eluded researchers over many decades. Pharmacists in the UK are increasingly involved in the provision of a wide variety of interventions to support medication taking and there is a small but growing body of research evaluating their role in this domain. This study aimed to test the effectiveness of a pharmacist-led intervention to improve medication adherence, in the context of a mail-order pharmacy. The intervention was adapted and refined from an existing intervention subsequently adopted as the NHS-funded New Medicine Service.

Methods
A parallel-group randomised controlled trial was conducted. 677 patients prescribed at least one oral medication for type 2 diabetes mellitus and/or lipid regulation were recruited from a UK mail-order pharmacy between Nov 2012 and Sept 2013. Participants were randomised equally between the intervention and control group, in blocks of four, using a computer generated random number sequence (340 intervention, 337 control). Groups were similar in terms of all socio-demographic, clinical and medication-related variables measured at baseline.

The intervention was delivered by a pharmacist and was patient-centred, comprising of three main components:
- Two telephone consultations with a pharmacist, four to six weeks apart.
- A written summary of the discussion.
- A medicines reminder chart.

All elements of the intervention were tailored to the individuals’ needs.

The primary outcome was self-reported adherence to medication at four-week follow up, measured using the Diagnostic Adherence to Medication Scale (DAMS). Preliminary validation suggests adherence ratings using the DAMS correlate with other validated self-report measures. Binary logistic regression was conducted according to the intention-to-treat principle. Multiple imputation was used to deal with missing data (78 participants lost to follow up) and all 677 participants were included in the primary analysis. Patient satisfaction with the intervention was a secondary outcome. The study was approved by the London Brent Research Ethics Committee (Ref: 12/LO/1657).

Results
More than 90% of the intervention group completed the intervention. Initial consultation calls lasted a median of 17 minutes; follow-up calls 7 minutes, and the median length of time between calls was 35 days. Patients who received the intervention had more than twice the adjusted odds of being adherent (defined as ≥ 90% of medication taken in the past seven days) at four week follow up, compared to the control group (OR 2.20 95%CI 1.33 to 3.65, p = .002). Satisfaction with the intervention was high, with 91.8% (n = 245) agreeing that they were satisfied overall, and just four participants (1.5%) expressing any dissatisfaction.

Discussion
The high number of satisfied patients who completed the intervention shows that it is acceptable to patients. The intervention, led by a pharmacist and tailored to the individuals’ needs, significantly improved medication adherence in patients with long-term conditions. It comprised both spoken and written information, including a reminder chart. The findings provide further support for the enhanced role of pharmacists in supporting and advising patients with their medicines, and improving adherence outcomes. Data has also been collected at six months and is currently being analysed.

References

0006 Developing a telepharmacy service: exploring the views of local residents
Frances Notman, Christine Bond, Jackie Inch on behalf of the Telepharmacy Project Team
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Focal points
- Prior to implementing a remote tele-pharmacy service in a rural area, the objectives of this study were to explore the opinions of local residents to this innovation.
- Most participants would access the tele-pharmacy service for medicines and advice.
- The study findings have highlighted some key issues to address during implementation to maximise use of the service.

Introduction
Many remote areas have limited access to community pharmacy services. Recent advances in technology have facilitated novel approaches to healthcare delivery such as tele-medicine. The pharmacy equivalent is tele-pharmacy. An example is a new service using video-linkage technology, and a medicines supply robot, to provide pharmaceutical care (e.g. a repeat prescription service, healthcare advice, the minor ailments service and the sale of GSL medicines) to patients in rural settings without a pharmacy. The objective of the work reported here was to describe the opinions of the local population prior to the service launch. The North of Scotland Research Ethics Committee approved the study.

Methods
A cross sectional postal questionnaire survey was conducted. The final questionnaire content was based on the literature, and study objectives and included respondent demography, current use of prescription and non-prescription medicines, services/
advice participants would like to access through the remote pharmacy, preferred opening hours and a validated tool to measure expectations of service quality. Using the edited electoral role to identify the sample, a pilot of 100 households was undertaken, followed by the main distribution to all households in the immediate area and a random sample from a neighbouring location (total 400). Reminders were sent to non-responders one and two months after the first mailing. Data was stored and analysed in SPSS (descriptive frequencies).

Results
The response rate was 40% (156 completed questionnaires, 13 not deliverable). Respondents were: mostly female (61.5%); aged 50–69 years (38%); employed (57%); retired (32.1%); and had qualifications beyond secondary school (34%). The majority (74%) rated their health as good to excellent, and received regular prescriptions (80%), over half (51%) receiving a prescription monthly or more frequently of which a large majority (83.3%) were dispensed by a community pharmacy, were sent directly from the GP surgery (52.6%) and were collected by the participant themselves (70.5%). Twenty-eight percent of participants claimed to use non-prescription medicines every two months or more frequently, obtained from the supermarket (42.3%) and community pharmacies (39%). More than one third of participants were aware of the minor ailment scheme (37.8%) and almost 60% of these were registered on the scheme. The most common self-treated ailments were coughs/colds/sore throat (54.5%); gastro intestinal tract disorders (20%) and pain (20%). Services that participants would access through the tele-pharmacy were: prescription dispensing service (61.5%); purchase of non-prescription medicines (59%) and the minor ailments service (50.6%). Participants would seek advice through the robotic pharmacy on: prescribed medicine (52.6%); minor illnesses (48.7%); pharmacy and OTC medicines (46.8%) and foreign travel (24.4%). 16.9% would not access any of the services and 18.8% would not seek any advice, using the tele-pharmacy service.

Discussion
Remotely delivering pharmacy services to a rural community would be welcomed by most residents, and the majority would use at least one of the services. The issues arising using this new technology will be investigated from the perspectives of the patients and the health care professionals in the remainder of this study.

References

Research Session 2: Primary care and community practice

0007
Community pharmacy vaccination services: customers’ perceptions of pharmacist access to GP records

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Focal points
• A survey to pharmacy customers investigated their views of pharmacist access to GP records.
• The results from this study indicate that 80% of customers would be happy for pharmacists to have access to their GP records for a pharmacy led vaccination service.
• Safety, trust in the pharmacist and continuity of care were reasons given for allowing access, whilst confidentiality was the main concern for not allowing access.
• The wider roll out of pharmacist access to GP records should be continued.

Introduction
Community pharmacists have been campaigning for access to patient general practitioner (GP) records in order to provide the safest possible care; whilst hospital pharmacists already have access to summary care records (SCR). Recently, a proof-of-concept project has been launched in which 127 pharmacies across five regions in the UK have access to the SCR. Some GPs and patients have been resistant to pharmacist access due to concerns around confidentiality, with some questioning the need for pharmacists to have access to GP records. The aim of this study was to investigate customers’ willingness to allow pharmacist access to their GP record as part of a larger study investigating customer attitudes to community pharmacy.

Methods
82 fourth-year pharmacy students carried out researcher administered surveys over a four-week period in 31 pharmacies to understand patient views of community pharmacy services. Students were allocated to individual pharmacies, mostly three, but some had fewer. All pharmacy customers aged 18 and over were eligible to take part. Data were entered into PharmOutcomes® and 30% were verified for accuracy. Data analysis using SPSS 22 consisted frequency counts with percentages and chi-squared tests to investigate associations between allowing access and reported pharmacy use and trust. The study was reviewed and approved by the University’s School of Pharmacy Research Ethics committee.

Results
7154 questionnaires were completed, 49% response, 62% (n = 4419) were female, 38% (n = 2725) aged under 50 years.