



Contents lists available at ScienceDirect

Research in Social and Administrative Pharmacy

journal homepage: www.rsap.org

The behaviors and experiences of the community pharmacy team on the provision of multi-compartment compliance aids

Derek Stewart ^{a,*}, Craig McDonald ^a, Joan MacLeod ^b, Katie MacLure ^a, Gwen Gray ^a, Trudi McIntosh ^a

^a School of Pharmacy and Life Sciences, Robert Gordon University, The Sir Ian Wood Building, Garthdee Road, Aberdeen, AB10 7GJ, UK

^b Aberdeen City Health & Social Care Partnership, Summerfield House, Eday Rd, Aberdeen, AB15 6RE, UK

ARTICLE INFO

Article history:

Received 1 February 2017

Received in revised form

19 March 2017

Accepted 7 April 2017

Keywords:

Multi-compartment compliance aids

Adherence

Expectations

Medicines

Survey

Scotland

ABSTRACT

Background: Multi-compartment compliance aids (MCAs) are repackaging systems for solid dosage form medicines. Acknowledging the lack of evidence that MCAs improve adherence or clinical outcomes, the Royal Pharmaceutical Society has expressed concern that MCAs have 'become regarded as a panacea for medicines use'.

Objectives: To determine the behaviors and experiences of the community pharmacy team around MCA provision.

Methods: A cross-sectional survey was conducted in 26 community pharmacies in the north east of Scotland. Survey items were grouped into: current activities in the provision of MCAs; potential influences on these activities; reports of patient experiences; and demographics. Data were analysed using descriptive and inferential statistics, and content analysis of responses to open questions. Principal component analysis (PCA) was performed on the items of potential influences on activities.

Results: Data were collected from 136 community team members (median 4, range 1–10 per pharmacy; 32.3% pharmacists). All were involved in some aspect of MCA provision and within the same pharmacy, several different staff positions were commonly involved in the same activity. PCA gave seven components; the lowest scores were obtained for the component of 'others expecting me to provide MCAs'. Participants agreed that GPs, patients and their families, and carers expected them to provide MCAs. Positive experiences of MCA provision were in themes of promoting patient adherence, reducing patient stress and enhancing patient monitoring. Further negative experiences were in of lack of shared patient decision making, worsening adherence and generation of medicines waste, and dealing with changing medicines. MCAs were not always considered to be the most appropriate solution.

Conclusion: While community pharmacy teams value MCAs, there may be issues around staff assignment to particular roles, expectations from others and reports of negative patient experiences. A systematic approach to MCA provision and monitoring involving the multidisciplinary health and social care team is warranted.

© 2017 Elsevier Inc. All rights reserved.

1. Introduction

Multi-compartment compliance aids (MCAs) are repackaging systems for solid dosage form medicines, such as tablets and capsules, where the medicines are removed from manufacturer's original packaging and repackaged into the MCA.¹ While these are

advocated widely as a solution to non-adherence, the Royal Pharmaceutical Society of Great Britain, the professional leadership body, states that pharmacy supplied MCAs have 'become regarded as a panacea for medicines use and often integrated into practice and service policy without giving due consideration to the alternatives'.¹

Despite their use, there is a dearth of evidence that MCAs improve medicines adherence. A systematic review of the effectiveness of reminder packaging for improving medicines adherence was reported by Mahtani et al. in 2011. Of the 12 randomised controlled trials comparing MCAs to no device, findings

* Corresponding author.

E-mail addresses: d.stewart@rgu.ac.uk (D. Stewart), c.a.mcdonald3@rgu.ac.uk (C. McDonald), joan.macleod@nhs.net (J. MacLeod), k.m.maclure@rgu.ac.uk (K. MacLure), g.m.gray@rgu.ac.uk (G. Gray), t.mcintosh@rgu.ac.uk (T. McIntosh).

demonstrated scant evidence of impact on medicines adherence or any clinical outcomes studied.² A further systematic review reported by Watson et al. in 2016 on the evidence for the efficacy, safety and costs relating to MCA use derived from 17 studies also concluded that the evidence was limited.³ In addition, they noted that studies were generally of poor quality and at high risk of bias. Both systematic reviews highlighted the difficulties of obtaining valid and reliable measures of adherence in those using MCAs. MCA use in older people has also been associated with lower patient knowledge of their medicines, an effect thought due to patients not recognising the different medicines within the MCA.⁴

Qualitative studies have also highlighted concerns over MCA use. Nunnery et al. conducted qualitative interviews with older people living independently in England and an unrelated sample of health professionals involved in MCA provision.⁵ Older people had mixed views on whether MCAs helped or hindered in maintaining independence and control over medicines. None of the older people reported that the MCA had aided adherence. Health professionals voiced that MCAs were often initiated without any systematic patient assessment. More recently, MacLure et al. reported a case study methodology of older residents of very sheltered housing in the north east of Scotland. Data were gathered from multiple perspectives of residents, carers and health professionals. While MCAs were valued by some, particularly the potential to improve medicines adherence, patient safety and independent living, the overwhelming finding was the absence of a clearly defined, effective and efficient approach to MCA provision and review.⁶

Several studies have also demonstrated that MCA use could perpetuate potentially inappropriate prescribing, which is perhaps due to the lack of clinical review of prescribed medicines prior to commencing the MCA. Two pharmacoepidemiology studies based on data derived from prescribing databases in Sweden demonstrated that MCA use was associated with increased potentially inappropriate prescribing and potentially clinically significant drug-drug interactions.^{7,8} Further Swedish data were reported by Belfrage et al. in a comparison of medicines related issues observed in 100 MCA patients to those in 100 non-MCA patients. Findings highlighted that MCA patients had a mean of an additional 0.77 potentially inappropriate medicines.⁹ More recently, Counter et al. provided further evidence that MCAs perpetuate potentially inappropriate prescribing. Data were collected from pharmacies in the north east of Scotland supplying up to 136 MCAs per week to 2060 non-care home residents. A total of 1977 potentially inappropriate medicines were identified affecting 58% of patients, a quarter of whom were prescribed ten or more medicines and just under half had potentially clinically significant drug-drug interactions.¹⁰

There are other related issues which may compromise patient safety through the use of MCAs. The preparation of MCAs requires that medicines are removed from their original packaging and placed either manually or automatically into the individual compartments of the MCA, increasing the opportunity for error.¹¹ Caruthers et al. audited MCA dispensing in Australia, reporting errors prevalent in 4.3% of MCAs, the most common being omitted medicines, supply of ceased medicines, wrong strength dispensed or incorrect dosage instructions.¹²

It is therefore evident that there is a need to review the patient care pathway leading to the provision and review of MCAs. Prior to developing such a pathway, the perspectives of those involved in any aspect of MCA provision should be described and understood. While studies have reported the perspectives of patients, health professionals and formal carers, the voices of the entire community pharmacy team are yet to be heard. The aim of the study was to determine the behaviors and experiences of the community pharmacy team around MCA provision.

2. Methods

2.1. Design

This study was a cross-sectional survey using a researcher administered data collection tool.

2.2. Setting

The study took place within community pharmacies in one city in the north east of Scotland.

2.3. Recruitment

An email was sent to all pharmacies in the city ($n = 51$) by a primary care lead pharmacist to raise awareness of the study and that during November and December 2015, researchers would be visiting pharmacies in Aberdeen to collect data from a convenience sample of available pharmacy staff. A participant information leaflet was attached to the email outlining: the purpose of the study; what was involved; likely benefits; and the confidentiality and anonymity of data. Potential participants were all members of the community pharmacy team who played a role in MCA provision. These were defined as pharmacists, pre-registration pharmacists, registered pharmacy technicians (accredited checking), registered pharmacy technicians, dispensing assistants, medicines counter assistants and delivery drivers. Prior to collecting data, the researchers confirmed that the information leaflet had been read and answered any questions. Participation in data collection was considered to be an indication of consent.

2.4. Data collection tool development and testing

A structured data collection tool was developed, and reviewed for face and content validity by pharmacist academics, and community and primary care pharmacists. Minor changes were made to the wording of several items.

Items were grouped into sections of: current activities in the provision of MCAs; potential influences on these activities; reports of patient experiences; and demographics. A structured list was used to capture each participant's involvement in various activities related to MCA provision (12 items, all answered yes, no) comprising: dispensing; completion of any documentation; assessment of patient suitability for MCA; clinical checking of MCA prescriptions; final accuracy checking of MCA dispensing; handing over of MCAs to patients or their representatives; delivery to patients' homes; collection of obsolete MCAs; liaising with GP surgeries over ordering; liaising with GP surgeries over any queries; liaising with the patients or their representatives; and monitoring benefit of MCA provision to patients.

These items were then repeated in relation to who the pharmacy staff member believed should ideally fulfil that role.

Items related to influences on behavior (32 items), answered on 5-point Likert scales, were based on the 14 domains of the Theoretical Domains Framework (TDF). The TDF includes constructs from 33 behavior change theories, and proposes that determinants of behavior are clustered into 14 domains of: knowledge; skills; social/professional role and identity; beliefs about capabilities; optimism; beliefs about consequences; reinforcement; intentions; goals; memory, attention and decision processes; environmental context and resources; social influences; emotions; and behavioral regulation.¹³ The TDF Determinants of Implementation Behavior Questionnaire was used as a basis for the development of the individual items.¹⁴

Three free text response items were included to collect

Download English Version:

<https://daneshyari.com/en/article/8521957>

Download Persian Version:

<https://daneshyari.com/article/8521957>

[Daneshyari.com](https://daneshyari.com)