Available online at www.sciencedirect.com
ScienceDirect
Research in Social and Administrative Pharmacy 10 (2014) 679–692
RESEARCH IN SOCIAL & ADMINISTRATIVE PHARMACY

Original Research

Can a redesign of emergency pharmacist roles improve medication management? A prospective study in three Australian hospitals

Greg R. Weeks, B.Pharm., M.Pharm., M.H.A., F.S.H.P.[a,b,*],
Lisa Ciabotti, B.Pharm. (Hons.), M.Pharm.Prac.[c],
Erin Gorman, B.Pharm.[d],
Leonie Abbott, B.Pharm. (Hons.), Grad. Cert. Pharm. Prac., M.P.H.[b],
Jennifer L. Marriott, B.Pharm., Ph.D., G.C.H.E.[a],
Johnson George, B.Pharm., M.Pharm., Ph.D.[a]

[a]*Centre for Medicine Use and Safety, Department of Pharmacy Practice, Faculty of Pharmacy and Pharmaceutical Sciences, Monash University, Melbourne, Australia*
[b]*Pharmacy Department, Barwon Health, Geelong, Australia*
[c]*Pharmacy Department, Southern Health, Melbourne, Australia*
[d]*St Vincent's Hospital, Melbourne, Australia*

Abstract

Background: Emergency departments (EDs) face increasing service demands and the imposition of treatment targets which has led to continual process redesign and changes in staff skill mix and functions.
Objective: To identify extended ED pharmacist roles that could improve medication management and to implement and evaluate one such role change.
Methods: A focus group of clinicians sought to redesign processes around ED medication management. Preparation of medication charts for patients admitted from ED was selected. Baseline data were obtained to define elements of existing medication charting processes. Suitably trained ED pharmacists' trialled the effectiveness of making therapeutic suggestions on a medication chart 'sticker' or by direct 'consultation' with medical staff. At the conclusion of the study focus groups at each site evaluated clinical staff perceptions of the change.
Results: Focus group participants thought that ED pharmacists could undertake extended roles in analgesia, nausea control, antibiotic cover, addiction management and preparation of medication charts for admitted patients. In the pre-intervention audit ($n = 140$), 74% required at least one intervention by the ward pharmacists to address medication discrepancies. Ward pharmacists detected 292 medication discrepancies (median 1, IQR 0–3). In the 'sticker' intervention the ED pharmacist made 84 therapeutic suggestions of which 66 (78.6%) were accepted by medical staff. In the 'consultation' intervention 230 therapeutic suggestions were made of which 219 (95.2%) were accepted. The qualitative evaluation

* Corresponding author. Pharmacy Department, Barwon Health, Ryrie St., Geelong, Victoria 3220, Australia. Tel.: +61 3 4215 1591; fax: +61 4215 1614.
E-mail address: greg@barwonhealth.org.au, gregory.weeks@monash.edu (G.R. Weeks).

1551-7411/$ - see front matter
http://dx.doi.org/10.1016/j.sapharm.2013.10.001

found that pharmacist-prepared medication charts within the processes established were deemed safe, timely, accurate, complete and legible.
Conclusion: Support exists for ED pharmacists to expand their medication-related roles. ED pharmacists can safely prepare medication charts in a timely fashion and their therapeutic suggestions within a 'consultative' framework are more beneficial than written advice. However, issues relating to resourcing, hours of service, service focus, statutory restrictions and training support for extended roles require resolution.

Keywords: Emergency pharmacist role; Collaborative prescribing; Medication safety

Introduction

The complexity of managing a rising demand for emergency department (ED) care is driving service innovation and reform to both safely manage the demand and meet Government-imposed treatment targets and quality indicators.[1] Government concern that patients are waiting in ED longer than is clinically recommended has led to the imposition of national treatment targets in Australia through the National Health and Hospitals Network.[2] Four-hour access target for patients to be admitted, referred for treatment or discharged from ED will be phased in over the 2011–2015 period on the basis of focusing on the most urgent triage categories first.[3] The UK Government introduced similar targets in 2004, but these were replaced by a set of quality indicators in April 2011 due to concerns that focusing on targets may compromise emergency care and that measures of time, quality and the patient experience would drive better patient care.[4] In the UK, the deployment of pharmacists in ED is encouraged as they support changes in skill mix that reduce junior doctors' workload and facilitate the admission process.[5] Likewise in the US, the Committee on the Future of Emergency Care has recommended pharmacists be included in a team approach to improve medication safety and cost effectiveness.[6] Support also comes from the Joint Commission's medication management standard which recommends pharmacist review of non-urgent medication orders in ED.[7] The pharmacist's role in ED benefits patient care and is valued by ED staff.[6,8–11] In the US, ED pharmacist's roles have developed to include participation in trauma teams, arrest resuscitation and management of antimicrobial regimens.[12,13] However within Australia, ED pharmacists have continued more traditional roles of medication reconciliation, protocol development, liaison and provision of medicine information, education, and supply.[14] The medication reconciliation process within Australian hospitals involves pharmacists gathering information and recording it on a medication reconciliation form (MRF). The MRF is then used by medical staff to transcribe medicines onto the patient's medication chart.[15] If a patient's regular medications are not the reason for their admission to ED, they assume a lower priority, often being left for admitting medical staff to prescribe later in the admission process. If ED medical staff take an incomplete medication history this may result in medication discrepancies not being picked up or resolved during the patient's stay in hospital or on discharge.[16] Delays in charting important medications (e.g. in Parkinson's disease) may increase the length of stay in ED. While there is evidence that pharmacists take a more accurate and complete medication history than medical staff,[17,18] a pharmacist completed MRF may not prevent medication discrepancies being carried through the admission and discharge process.[19] Besides the medication safety risk, medications not correctly prescribed until later in an admission leads to inefficiencies and duplication of work as ward pharmacists and other clinical staff repeat processes to establish the correct medication profile. Prior to a ward admission, adjustments may be required to regular medication in ED. This provides an opportunity for ED pharmacists to consult with medical staff, make therapeutic suggestions and directly prepare the medication chart. The absence of a legislative framework for pharmacist prescribing in Australia has limited transcribing activities even though doubt exits as to whether transcribing medication onto a medication chart for a nurse to administer constitutes 'prescribing.'[20] It has been generally held that a doctor's signature is required to validate an order.

Approaches to meeting the challenges confronting the ED have included process redesign, changes in skill mix and expanded roles for non-medical health professionals.[5,21] However studies