Research in Social and Administrative Pharmacy xxx (2017) 1–5

Contents lists available at ScienceDirect

Research in Social and Administrative Pharmacy

journal homepage: www.rsap.org

Introducing a checking technician allows pharmacists to spend more time on patient focused activities

Patti Napier, Pauline Norris, PhD, Rhiannon Braund, PhD *

School of Pharmacy, University of Otago, P O Box 56, Dunedin 9054, New Zealand

ARTICLE INFO

Article history:
Received 20 April 2017
Received in revised form
4 May 2017
Accepted 4 May 2017

Keywords:
Pharmacy technician
Pharmacist roles
Clinical activities
Patient-focused activities
New Zealand

ABSTRACT

Background: Internationally there is an increasing focus on the clinical and cognitive services that pharmacists can provide. Lack of time has been identified as a barrier to pharmacists increasing their clinical activities. Within the pharmacy workplace there are many tasks that can only be performed by a pharmacist. The final accuracy check of a dispensed prescription is currently the sole responsibility of pharmacists in New Zealand. This takes up a significant amount of time during a pharmacist's work day. The introduction of a checking technician role has been suggested to allow pharmacists more time to do more patient focused work.

Aim/objective: To investigate the amount of time pharmacy staff spend on specific activities and to establish whether the introduction of a checking technician into twelve pilot sites increased the amount of time that the pharmacists could spend on patient focused activities.

Methods: This study utilised a self-reported work sampling technique in twelve pilot sites, selected from both the hospital and community settings. Work sampling using an electronic device was conducted at two time-points (before the implementation of a Pharmacy Accuracy Checking Technician (PACT) role and when the PACT was in place). Data was collected at 10 min intervals for the period of five days, a working week. Tasks were grouped into patient focused, dispensing and personal activities.

Results: The introduction of the PACT into the pilot sites saw a mean increase of 19% in pharmacists' patient focused activities and a mean 20% decrease in dispensing activities.

Conclusion: The introduction of a checking technician role into New Zealand pharmacies demonstrated the potential to provide pharmacists with more time to spend on patient focused activities.

1. Introduction

Internationally the role of the pharmacist has changed dramatically over the last few decades. In both the hospital and community settings there has been a progressive increase in the amount of time pharmacists spend with patients and on patient-focused activities. The introduction of proprietary products has seen a decrease in the manufacturing side of the pharmacists' role and there has been a shift to a more information focused role with an increase in patient-focused activities.[1]

Increasing contact with patients in the hospital setting has seen hospital pharmacists spending time on the wards advising both patients and clinicians, moving into areas of specialisation, such as oncology, cardiac care, intensive care and emergency care. The development of these clinical roles in the New Zealand (NZ) setting has mirrored international developments.[2] However, in the primary care and community areas, this has been slower. There have been many attempts in the last few decades to set up programmes for community pharmacies to develop pharmacists' clinical services. These include long-term chronic conditions, medicines use reviews, community pharmacy anticoagulation management services, and comprehensive medication management.[3] These programmes have not seen universal uptake by the profession and have been slow to take off on a national level with only some areas providing these services. The funding model and pharmacists' lack of time have been identified as reasons for this.[4,5]

A recent shift in the NZ community pharmacy remuneration has seen their contract change from a fee for service model to a combined fee for service and patient care funding. This encourages movement into a more clinically focused model, allowing for the potential to provide enhanced clinical services.[6]

Time, or the lack of it, has been identified as a barrier to

* Corresponding author.
E-mail address: Rhiannon.braund@otago.ac.nz (R. Braund).

http://dx.doi.org/10.1016/j.sapharm.2017.05.002
1551-7411/

increased clinical roles.[5,7,8] In both the hospital and community setting there are many demands on a pharmacist's time, as there are many tasks or roles that are exclusive to the pharmacist. Dispensing takes a significant amount of the pharmacists' day. Dispensing activities consist of assembling and checking prescription items. Assembling a prescription involves entering the details in the computer software, selecting and counting the corresponding product from stock bottles and labelling as appropriate. The checking process is an accuracy check that the final product matches the prescription.

Delegation of tasks that are not exclusive to a pharmacist was studied in NZ. The LEAN study, demonstrated that there are many ways to increase the amount of time that a pharmacist can dedicate to patient-focused activities.[16] This can be achieved by a redistribution of roles among the current staff in the dispensary. However, as with other studies, the LEAN study was unable to address the significant amount of time a pharmacist spends each day performing the final accuracy check of dispensed prescriptions.

As described by Koehler and Brown (2017), there is significant variation in the roles and responsibilities of technicians in different countries.[9] In NZ, the technicians take on the responsibility for many of the dispensary processes from data entry to stock control, however, these support roles occur under the supervision of the pharmacist.

The literature contains many examples of changing roles for technicians. These roles have included delegating mechanical or administrative tasks that do not require clinical input to technicians.[10] Other examples have seen the development of advanced roles that include; an increased manufacturing role, documentation of medication histories and specialised care roles.[11–13] Some of these roles have a more clinical focus, e.g., taking patient medication histories.[12] Alongside these examples has been the development of the checking role. The U.S. has seen the development of the tech-check-tech role, and the United Kingdom (UK) has seen the development of the accuracy checking technician role[14,15]. Both these roles allow a technician to take over a role previously performed solely by a pharmacist.

In NZ, the assembly portion of the dispensing process can be carried out by other dispensary staff, primarily pharmacy technicians, but the checking of a dispensing is currently the sole responsibility of a pharmacist. Therefore, in spite of the efforts to extend the services available, the need for the pharmacist to perform the final check of a dispensed prescription has resulted in the pharmacist being tied to the dispensary. This occurs in both the hospital and community settings. It has been suggested that the reallocation of the final accuracy check of a prescription to another staff member will allow pharmacists more time to be involved in increased patient-focused activities. The introduction of a checking technician to take over the final accuracy check of dispensed prescription items may be the key.

The checking technician (CT) role has been in place in the UK for approximately ten years. There is significant awareness of the role of a checking technician amongst New Zealand pharmacy staff, both pharmacists and technicians, and a number of staff in NZ have previous experience working alongside CTs in the UK.[17] The introduction of a checking technician role into NZ pharmacies has been supported in many pharmacy circles for some time, including the NZ Hospital Pharmacy Association (NZHPA).[18]

Given the increasing desire from the profession to extend clinical and cognitive services, Health Workforce New Zealand (HWNZ) instigated a pilot project. HWNZ is a government agency whose role is to monitor current and future staffing levels within the NZ health workforce. One of their aims "is to lead the development of a workforce that can respond to changes in how health services are accessed".[19] A key way to do this is "to support demonstration sites where new workforce roles, new models of care and new training programmes can be tested".[20] It was seen as timely to invest in the pilot of an introduced checking technician role and so this was initiated. The pilot was conducted at several hospital and community pharmacies across New Zealand. These sites would trial the introduction of a Pharmacy Accuracy Checking Technician (PACT), a checking technician role based on the UK model but specifically tailored to the NZ pharmacy setting.

1.1. What would a checking technician do in the pilot programme?

The checking technician would be responsible for the final *accuracy* check of a dispensed prescription. They would take responsibility for ensuring the medication dispensed and the label information corresponded to the prescription or other documentation. They would not be responsible for a *clinical* check of the appropriateness of the request, which would remain the responsibility of the pharmacist. An appropriateness check would be performed by the pharmacist prior to the prescription being released for filling/dispensing.

Time-and-motion studies have developed over the last seventy to eighty years as a tool for identifying the types of tasks performed by an employee and the amount of time these tasks take up in a work day. It is utilised in the healthcare sector to calculate both current and future staffing numbers. It is also a valuable tool to identify tasks that can be reallocated to different staff.[21–23]

Work sampling is a method of gaining time and motion data via a non-continuous process. Work sampling collects data at regular time intervals. Tippet, a statistician, realised that where the work performed was repetitious in nature, it was possible to gain a picture of activities using randomly spaced observations rather than continuous observation.[23] The repetitive nature of dispensing activities makes it possible to use this type of study technique. Tippet's model utilises a standardised set of categories determined prior to commencing observations.

The aim of this study was to investigate whether the introduction of a new role, specifically if a PACT would increase the amount of time available for a pharmacist to perform clinical activities, and whether pharmacists would use this time to perform these activities.

2. Methods

A Category B Human Ethics was approved by the School of Pharmacy under delegated authority from the University of Otago Ethics Committee, number D14/372.

Twelve pilot sites were included in the project: four hospital sites and eight community sites. These sites were selected from nearly 150 expressions of interest from a range of pharmacies around the country. While initially it was intended that there would be only one trainee at each site this was increased to two trainees at three of the sites, one hospital and two community sites. This resulted in twelve sites taking part in the project, consisting of twelve supervising pharmacists and fifteen trainee technicians.

Smart phones were employed to conduct a time-and-motion study. This was carried out utilising a self-reporting work sampling technique. Pre- and post-comparisons were used to detect any shift in the amount of time spent on specific activities. For this study Vodafone Smart 4 (an Android phone) and the TimeRecorder app were chosen. The communicating functions were removed from the phones, rendering them data collection devices only. All devices were provided by the study team.

Data were collected at two points, 1) prior to the initial training of the PACT, i.e. when the status quo was in place, 2) after completion of the PACT training and when this role was being

Please cite this article in press as: Napier P, et al., Introducing a checking technician allows pharmacists to spend more time on patient focused activities, Research in Social and Administrative Pharmacy (2017), http://dx.doi.org/10.1016/j.sapharm.2017.05.002