
CRITICAL ANALYSIS OF THE DISPENSING PROCESS AT MATER DEI HOSPITAL

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ABSTRACT

OBJECTIVE To identify strengths and weaknesses within the present out-patient dispensing system at Mater Dei Hospital and to suggest alternative processes for a more user-friendly system.

METHOD Standard operating procedures (SOPs) were reviewed to obtain a better understanding of dispensing activities. Dispensing practices were observed and compared to SOPs. Strengths, weaknesses, opportunities and threats (SWOT) analysis was undertaken. Areas for improvement were evaluated through discussions with pharmacists and pharmacy technicians. Review of SOPs was undertaken to minimise non-conformance to SOPs and improve user-friendliness of the system.

KEY FINDINGS The dispensing process is influenced by both internal and external factors in the pharmacy setting. Strengths from within the pharmacy setting are the availability of IT systems for record keeping and stock control and access to reference sources for medical and clinical information. Limitations to the dispensing process which should be considered include an environment where patient-pharmacist relationship and patient confidentiality are not supported due to large workloads, low staff levels and patient overcrowding. Whilst trying to encourage rational and safe use of medicines, the current system has an overload of bureaucratic procedures to the extent that these were perceived to limit pharmacists' professional discretion. Current technological developments offer opportunities to improve pharmaceutical services, through bar coding and the integration of patient medication records from different health care settings.

CONCLUSION The potential contribution of the pharmacists to public healthcare has yet to be maximised, through the introduction of some flexibility of protocols to allow pharmacist professional judgement during the dispensing process.

KEYWORDS Dispensing process, hospital pharmacy, critical analysis.

INTRODUCTION

The dispensing process incorporates all activities from when a prescription is presented at the pharmacy until the medicine is collected by the patient or his/her representative. Dispensing is a duty of the pharmacist and he or she must assume responsibility for its quality and outcomes.¹ The dispensing process is often underestimated, although the consequences of process failure may be significant.

Mater Dei Hospital (MDH), Malta's major public general hospital, hosts one of the main pharmacies on the island. On an out-patient basis, patients who suffer from any chronic condition listed on the 'Fifth Schedule' of the Social Security Act or have been granted a 'Schedule II' card after being 'means tested' by the 'Department of Social Security', can collect prescribed medicines free of charge. On average, 400 prescriptions are filled daily from MDH Out-Patient Pharmacy.

The aims of the study were to analyse the current dispensing process at MDH Out-Patient Pharmacy by reviewing current strengths, weaknesses, opportunities and threats (SWOT) influencing existing dispensing operating procedures and recommend improvements to the process, so as to enhance the quality and safety of service provision to patients.

METHOD

Approval to conduct the study was obtained from the hospital's Chief Executive Officer and the Head of the Pharmacy Department. No ethical approval was necessary since the study did not involve collection of patient data. The study involved an action research and a qualitative approach.

A comprehensive literature review of available material relating to free medicine entitlement criteria and dispensing procedures within the Maltese National Health Service (NHS) was undertaken. These included dispensing standard operating procedures (SOPs), circulars and policies followed at MDH.

Dispensing of medicines from the out-patient pharmacy was observed and compared to the steps outlined in the SOPs. Methods of documentation, manual and electronic, used for monitoring and tracking of stocks were also evaluated. Any non-conformance to written SOPs in actual practice was recorded by means of a 'Deviation Report Form' which



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was developed for this study. Deviation reports were kept anonymous. The 'Deviation Report Form' recorded the deviation from SOPs and reasons why standard procedures were not followed. This provided information which enabled the researcher to identify areas for improvement in the current system.

A SWOT analysis of the dispensing process was carried out. Discussions with all pharmacists (n=5) and pharmacy technicians (n=6) working at the out-patient pharmacy were held to identify all strengths, weaknesses, opportunities and threats that influence their dispensing practices and obtain a complete picture of the current situation.

The feedback obtained through discussions and deviation reporting suggested that SOPs related to dispensing which were commonly non-adhered to required review. The SOPs were reviewed and an updated copy of these SOPs was submitted to the pharmacy's quality assurance section. Recommendations for an improved, safer and more user-friendly system were put forward.

RESULTS

All pharmacists (n=5) and pharmacy technicians (n=6) working at the out-patient pharmacy participated in the study. Feedback was collected over an 8-month period. Nine different dispensing processes were identified at the out-patient pharmacy, as outlined in Table 1.

SWOT analysis showed that both internal and external factors to the pharmacy environment influence the dispensing process. Internal factors could be classified as either strengths or weaknesses. Strengths include: availability of Information Technology (IT) systems for record keeping and stock control; access to latest medical and clinical information; access to online medicine approval databases; requirement of a new prescription every 3 months which promotes review of therapy; promotion of a no blame, fair incident report culture which acknowledges human unreliability but importantly seeks to establish clear expectations of responsibility and does not unfairly or routinely blame or penalise those who make errors; modern, large, organised premises which promote safety and efficiency, and adoption of SOPs for all activities carried out at the pharmacy to obtain uniformity across the service and ensure standards are adhered to.

Weaknesses within the dispensing process include; an environment where patient-pharmacist relationship and patient confidentiality are not supported due to large workloads, low staff levels and overcrowding of patients. Dispensers engage in multi-tasking to meet demands from patients. This is likely to have a negative impact on pharmacists, pharmacy technicians, and possibly the services they provide. It also emerged that whilst trying to encourage rational and safe use of medicines, the current system has an overload of bureaucratic procedures to the extent that these were perceived to limit pharmacists' professional discretion.

External factors which could influence the dispensing system were classified as either opportunities or threats. The use of IT systems was classified as an opportunity for the development of the service.

Threats to the current dispensing process at MDH Pharmacy could be mainly attributed to the use of a manual prescription system. Threats range from illegible prescriptions, poor prescriber identification, no patient contact details and non-availability of prescribed medicine on the NHS. Low staff levels make the involvement of more than one person during the dispensing process unpractical, thus reducing efficiency of the dispensing process when it is known that counterchecking by a second dispenser improves detection and correction of an error before it reaches the patient.²

Patients' attitude may also be a threat to the dispensing process. At MDH pharmacy, due to the large number of patients attending for service at the pharmacy, patients frequently demand immediate attention and anxiously crowd near dispensing cubicles adding stress on the dispenser and increasing risk for dispensing errors. At that point in time the responsibility for the well-being of the patient is in the hands of the dispenser and consequently, accuracy during the dispensing process is more important than speed. Queuing systems should be enforced, so that patients are kept waiting in the waiting room and order maintained.

As a result of this study, 5 dispensing SOPs were reviewed namely; 'General Dispensing', 'Dispensing specific items', 'Entitlement and accuracy checking before dispensing', 'Charge and registration (Sales Section)', 'Dispensing medicines approved on a named-patient basis'.

Item Category	Description
Formulary Items	Items listed on the latest government formulary
Protocol Regulated Items	Items which are listed on the latest government formulary but in addition to an entitlement card, a permit issued by the 'Medicine Approval Section' is required for dispensing
Named Patient Items	Medicines which are not on the government formulary, however stock is purchased for specific patients
Unlicensed Medicines	Medicines which have no Marketing Authorisations to be placed on the local market. However under Article 5 (1) of Directive 2001/83, EU Member States are permitted to implement national arrangements to allow an authorised healthcare professional to order the importation of an unlicensed medicinal product to meet the special needs of an individual patient under her/his direct personal responsibility
Fridge items	Items requiring cold storage between 2 and 8°C
Ostomy/CAPD Items	Patients having a stoma or are on Continuous Ambulatory Peritoneal Dialysis are dispensed medicine from a designated area of the pharmacy called the 'Support Room'
Extemporaneous preparations	Formulations which have been prepared at the pharmacy following rigid preparation processes, outside the normal manufacturing places and are specially prepared to suit a patient's particular needs
DDAs	Drugs of Dependence and Abuse
Sales	Sale of medicines which are not available from community pharmacies to departments and private entities, health care professionals and patients (for personal use)

Table 1: Categories of medicinal products requiring different dispensing procedures



DISCUSSION

The SWOT analysis identified strengths within the system that included a culture of attention to possibility of human errors and responsibility whilst at the same time not seeking to penalise the staff.³ At the same time the workload and pressure that is being faced by the staff is a major threat to a safe and effective dispensing process. This is of concern since it indicates that skilled support staff, supportive management and appropriate resources are required to maintain high quality services when facing increasing pharmacy workloads.⁴

The introduction of IT systems is a key trend in pharmacy practice providing an opportunity to manage electronic ordering processes for improved stock management and to integrate dispensing software programs. These databases when used in conjunction with pharmacists' expertise can improve safety and accuracy of the dispensing process. Barcoding is another opportunity in pharmacy, where when combined with an appropriate IT system, enables real-time accuracy checking. The recent introduction within the local NHS of myHealth, an online portal for access to health records by patients and doctors can be further developed to introduce electronic prescribing. Electronic prescribing leads to the improvement in the overall quality of care provided, through the elimination of illegible hand-written prescriptions, warning and alert systems at the point of prescribing, reduction of phone calls to prescribers, better formulary adherence and increased patient convenience.^{5,6}

Benefits from this analysis include the pharmacy identifying and making use of its strengths to take advantage of the opportunities that arise, while at the same time using its resources to avoid threats. This would ensure that a high quality service is provided to patients.

CONCLUSION

Pharmacists have the responsibility to ensure that good dispensing practices are always adhered to. Pharmacists are recognised as experts in medicine management and use and their role in the supply of medicine has moved away from being product centred toward being patient oriented. Their expertise and potential contribution to public health care has yet to be maximised by allowing flexibility of protocols to permit pharmacist discretion during the dispensing process.

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