Strategies For Improving Medication Safety In Nursing Practice

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Abstract

Medication-related issues have been discovered from several sources in the literature. Some examples of this include healthcare personnel reporting incidents, legal cases related to medical issues and patient complaints, and the methodical identification of an organization's structure. Only a limited number of studies provide information on how clinicians perceive medication security in nursing homes and the difficulties they encounter in implementing medication safety programs in their workplace. The primary objective of the present research is to identify the challenges associated with reporting medication errors in community nursing and provide ways to enhance drug safety. Healthcare practitioners have highlighted many obstacles that impede drug safety in primary care. These include cultural disparities between community and hospital settings, political factors within the healthcare system, ambiguity around the duties of nurses, and inadequate reporting of errors. Participants identified other causes of mistakes, including workers inside the organization lacking clarity or understanding of the protocols and procedures for reporting pharmaceutical events. Inadequate knowledge about drug safety, as well as the challenges related to reporting and recordkeeping is also major obstacles.

Keywords: Medication safety, nurses, primary care, strategies, community nursing.

1. Introduction

Medication-related issues have been identified through multiple sources in the literature, such as incident reports from healthcare professionals, legal cases, patient complaints, and systematic analysis of organizational structure (Tsang et al., 2013; Wallace et al., 2013). Adverse drug-related difficulties may cause serious damage to patients, such as illness, hospitalization, higher healthcare expenses, and in rare cases, death (Andel et al., 2012). In 2008, the yearly cost of drug mistakes in the USA was estimated to be \$US 19.5 billion. This cost does not include the expenditures linked to the use of the healthcare system, such as hospital admissions. It was estimated to be \$US 177.4 billion annually in 2001 (Andel et al., 2012). Consequently, governments have prioritized pharmaceutical safety and implemented several programs to tackle the issue of prescription mistakes. Some examples of these attempts to ensure pharmaceutical safety include the implementation of training packages, the establishment of appropriate organisational structures, and the implementation of policy changes. These efforts varied in their success rates (Nguyen et al., 2010; Hartnell et al., 2012; Stuijt et al., 2013; Roshanov et al., 2013).

Given that the majority of prescription occurs in general practice (GP), recent initiatives have mostly targeted primary care in order to tackle the problem of drug safety. Prescribing prescription mistakes were prevalent in primary care settings in the USA and other nations. Additional frequent mistakes include communication and diagnosis, as shown by Kostopoulou and Delaney (2007) and Kuo et al. (2008). This information is applicable to both general practitioners and nurse practitioners who have the authority to prescribe drugs in Australia.

Patients who are taking many drugs and the elderly population are more likely to have the greatest incidence of medication mistakes. The causes of these errors have been extensively studied in recent years. It has been found that both individual factors, such as knowledge about medication and lapses in attention, and organizational factors, including poor communication, work structure, workload, training, and supervision, play a significant role in influencing these errors (Pearson and Aromataris, 2009; Lainer et al., 2015).

One additional aspect that contributes to pharmaceutical safety in primary care is the challenge of coordinating and managing the clinical information for each patient (Pearson and Aromataris, 2009; Lainer et al., 2015). A research conducted by Smith et al. on primary care general practitioners revealed that around 13.5% of the visits made by these practitioners had missing information. Smith et al. (2005) identified many instances of missing information, such as test results, correspondence, prescription details, and paperwork pertaining to radiology and physical examination.

Community nursing encompasses a wide array of duties, such as providing medical treatment and care to those recovering at home after hospitalization, promoting health and preventing sickness, developing policies, advocating for patients, and fostering community development. The challenges faced by nurses in rural and remote communities encompass a variety of factors, such as dealing with a diverse range of clients with different clinical conditions, traveling long distances, encountering inconsistent organizational structures for allied health services, and limited access to high-quality information technology and communication systems (Paliadelis et al., 2012; Wong et al., 2017).

Although numerous studies have provided information on the various types of negative incidents and the frequency of mistakes (Pearson and Aromataris, 2009; Rosser et al., 2005), only a limited number of studies have focused on the perspectives of healthcare professionals regarding medication safety in community nursing and the obstacles they encounter in implementing initiatives to enhance medication safety in their work environment. A recent investigation on the classifications and origins of pharmaceuticals, as seen by nurses, has shown that 65% of the mistakes stem from the acts of nurses. The predominant mistakes were attributable to a deficiency of knowledge (Cheragi et al., 2013).

Acquiring this kind of information is essential for identifying opportunities to enhance patient safety and suggesting strategies to improve the existing healthcare procedures. By identifying obstacles and enablers to drug safety in community care, organizations may develop educational initiatives to enhance practice. This research investigates the perspectives of nurses about obstacles, enablers, and methods for enhancing drug safety.

2. Medication Safety Programs

The use of medicine is a multifaceted procedure that encompasses the prescription of medication, the processing of

orders, the dispensing of medication, the administration of medication, and the monitoring of medication. Any failure in this procedure will result in a compromise in the pharmaceutical safety process. The research revealed that nurses employed in a community environment encounter a distinctive array of difficulties, as shown in Table 4. Firstly, there are significant cultural disparities both among and within a community context and the physicians who operate within it. The study identified cultural differences between working in a community setting and a hospital setting. One challenge encountered was the limited access and difficulty in communicating with other health professionals, such as general practitioners (GPs).

In a community setting, it was found that these professionals were not as readily available as the on-site doctors in a hospital. According to a study conducted by Loeb, Bayliss, Candrian, and Binswanger (2016), inadequate clinical assistance, difficulties in interacting with other healthcare professionals, and high productivity expectations are significant variables that contribute to medication mistakes in the community. In a study conducted by McInnes, Peters, Bonney, and Halcomb (2015), it was discovered that several factors hinder the ability to work in primary care and contribute to a perception of hierarchical limitations in the workplace. These barriers include uncertainty regarding the scope of practice for nurses, hierarchical structures, territorialism, legal obligations related to medical practice, and ineffective communication.

Community nurses expressed a dislike for medication administration aids due to their association with mistakes and a lack of information about the identification of the drugs contained inside them. According to a study conducted by Paterson, Kinnear, Bond, & McKinstry (2017), there is insufficient evidence to support the effectiveness of medication administration aids in enhancing patients' adherence to their prescribed prescriptions. The findings were compromised by the credibility of the evidence and the limited number of research included in the evaluation. The systemwide issues included the use of prepackaged medicine, documentation protocols, logistical complexities associated with community care, absence of explicit community-specific recommendations, and limited accessibility to staff training opportunities. Individually, individuals said that a lack of

personal accountability contributed to prescription mistakes, as well as mentioning heavy workloads.

Hartnell et al. (2012) conducted a research which revealed that both individual and systemwide variables play significant roles in the occurrence of pharmaceutical mistakes. Instances of this include nurses who are burdened with excessive workloads and a deficiency in proper record-keeping. Furthermore, the present research aligns with the fact that participants said that insufficient time spent with each patient and excessive workloads were factors that led to prescription mistakes. Another repercussion of excessive workloads was the absence of incentive to complete an incident report at the conclusion of the workday. The ambiguity about the party legally accountable in the event of a drug mistake resulted in a loss of confidence.

Bradley et al. (2008) emphasized the significance of trust among healthcare practitioners, describing it as a crucial element for fostering collaboration in their work. The study participants indicated that medication prescribing often involved errors, such as incorrect dosage or missing information. They also faced difficulties in reaching out to general practitioners (GPs) to discuss prescription changes. Additionally, there was a lack of clarity regarding the legal responsibility in case of an error. This underscored the obstacles encountered in community work and the intricacy of reaching out to other healthcare practitioners, such as general practitioners and pharmacists, due to their unavailability. Nurses feared being held accountable for any complications stemming from dispensing mistakes, leading to significant strain in the relationship between nurses and general practitioners and a breakdown in confidence.

Taran (2011) emphasized the significance of good communication in patient care and the need of clear organizational rules in defining the channels of communication among different healthcare providers. In addition, the request for education to enhance skills and the opportunity for study leave were denied because of a lack of available personnel. Inadequate knowledge about pharmaceutical safety, reporting procedures, and the ethical challenges related to reporting and documenting are all major obstacles. According to Loeb et al. (2016), inadequate clinical support, difficulties in interacting with other healthcare providers and high productivity expectations are significant variables that contribute to

medication mistakes in the community. Participants expressed their belief that in order to attend training courses, they were had to go to urban locations. They also felt that community work did not provide the same level of clinical care as a hospital environment.

This research has highlighted many obstacles that nurses encounter when working in the community, as well as the factors that prevent them from reporting prescription mistakes. Participants said that the procedure is laborious and lacks user-friendliness, resulting in physicians often opting not to report in order to avoid using the system. Hartnell et al. (2012) found that the burden on reporters, the reporting procedure, the additional time and effort it entailed, and the unfavorable features of the incident report form all acted as obstacles to reporting. Hartnell's research demonstrated that elements like as processes and management had a role in medication mishaps. The research concluded that the process of reporting should be optimized for simplicity and accessibility, using forms that are simple to understand and use. The research conducted by Loeb et al. (2016) emphasized the need of providing individuals with current knowledge about every component of the procedure for reporting drug errors at their institution.

The research found that primary care nurses were less likely to report incidents due to defensiveness and fear. The research conducted by Phipps et al. (2009) focused on the difficulties that community pharmacists have in ensuring pharmaceutical safety. The authors mentioned that a hindrance to reporting is the potential outcomes of reporting, such as legal and medical ramifications (Phipps et al., 2009). The present research revealed that nurses often refrain from reporting mistakes due to fear of losing their registration and facing negative repercussions, which is a reflection of their anxiety and concern associated with reporting. Both occupations have parallels in terms of working alone with little oversight and being responsible for managing their own risk.

Nevertheless, the nurses were cognizant of the potential repercussions of failing to disclose. In a research conducted by Birdwood and Kainer (2015), it was shown that nurses are obligated to handle risk by adhering to professional standards that prioritize patient care and professional responsibility. However, these protocols do not always include unforeseeable and hazardous situations that may arise in their daily practice.

This is because professional procedures are unable to foresee every possible situation that may arise in clinical practice, which leads to nurses feeling apprehensive about facing professional consequences.

Phipps et al. (2009) identify moral conflict as a significant obstacle for pharmacists when it comes to reporting mistakes. In the present research, nurses often described their feelings as defensiveness and dread. They had a moral quandary, as they had to balance the ethical responsibility towards the patient, adhering to legal constraints, and avoiding conflicts with colleagues. The ramifications of a dearth of transparent culture in relation to reporting incidents have been extensively examined in prior scholarly works (Phipps et al., 2009). The comments expressed by participants in this research align with the results of other studies and reinforce the idea that a culture of fear and blame in the workplace hinders the reporting of drug mistakes and the ability to learn from adverse occurrences in healthcare. Staff refrain from reporting due to their aversion to dispute and apprehension about the potential repercussions, resulting in negative nonreporting. Furthermore, the research indicates that the effectiveness of reporting methods is uncertain and should be used as a teaching tool for the nurses involved.

3. Conclusion

Our research indicates that the problems related to reporting pharmaceutical errors are influenced by several factors, are intricate, and are typically distinctive to each institution. Researchers saw the need for enhancements in the existing medication safety system and the reporting of medication mistakes in primary care. Specifically, they emphasized the need of having explicit rules that outline the roles and duties of nurses in administering medicine in the community. The rules will serve as a means of support for their tasks and a legally binding document, in the event that any unforeseen mistake occurs in the community, leading to damage to patients.

The results of this research align with the criteria highlighted in the literature review conducted for the Australian Commission on Safety and Quality in Health Care, which focuses on patient safety in primary care. Several essential variables have been identified as vital to guarantee patient safety. The authors emphasized the need of

establishing comprehensive mistake reporting systems at a nationwide level. They also highlighted the importance of implementing patient safety improvement approaches from the grassroots level to mitigate any hazards found via reporting. Additional suggestions include educating healthcare workers, using system tools like computers to enhance efficiency, enhancing communication, developing community-specific rules for medicine administration, and fostering better care coordination among different healthcare providers. The writers have emphasized that assigning blame and engaging in litigation are harmful to the progress of patient safety (Pearson & Aromataris, 2009; Khalil and Lee, 2018).

Our investigation has revealed many obstacles regarding pharmaceutical safety in basic care. These factors include cultural disparities between the community and hospital environments, political dynamics within the healthcare system, ambiguity over the duties and obligations of nurses, and deficiencies in mistake reporting. In order to enhance drug safety in primary care, it is crucial to implement multimodal treatments that target multiple obstacles, since many of the identified barriers are interconnected.

The findings of this research brought attention to many concerns in community nursing that have an impact on the safety of medicine. The cultural differences between hospitals and communities, particularly in terms of language use and staff expectations regarding medication administration and supervision, contribute to medication errors. These errors are often caused by staff complacency and a significant fear of negative consequences for reporting. To address these issues, strategies for improvement focus on clarifying roles and responsibilities through the use of guidelines.

To address the reporting issue, effective strategies include providing explicit instructions on the reporting process and fostering a supportive environment that encourages the reporting of mistakes, with a focus on education and enhancing knowledge. Moreover, it is crucial for healthcare organizations to implement effective pharmaceutical safety programs to address the concerns stated by participants and provide legal help in lawsuit instances. Illustrations of such endeavors include drug safety protocols, medication safety committees, and unambiguous policies established by management.

References

- Andel, C., Davidow, S. L., Hollander, M., & Moreno, D. A. (2012). The economics of health care quality and medical errors. *Journal of Health Care Finance*, 39(1), 39.
- Barbour, R. S. (2001). Checklists for improving rigour in qualitative research: A case of the tail wagging the dog? *British Medical Journal*, 322(7294), 1115.
- 3. Beardwood, B. A., & Kainer, J. M. (2015). Exploring risk in professional nursing practice: An analysis of work refusal and professional risk. *Nursing Inquiry*, **22**(1), 50–63.
- Bradley, F., Elvey, R., Ashcroft, D. M., Hassell, K., Kendall, J., Sibbald, B., & Noyce, P. (2008). The challenge of integrating community pharmacists into the primary health care team: A case study of local pharmaceutical services (LPS) pilots and interprofessional collaboration. *Journal of Interprofessional Care*, 22(4), 387–398.
- 5. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, **3**(2), 77–101.
- Cheragi, M. A., Manoocheri, H., Mohammadnejad, E., & Ehsani, S. R. (2013). Types and causes of medication errors from nurse's viewpoint. *Iranian Journal of Nursing* and Midwifery Research, 18(3), 228.
- 7. Department of Health (2000). *An organisation with a memory*. London: HMSO.
- Hartnell, N., MacKinnon, N., Sketris, I., & Fleming, M. (2012). Identifying, understanding and overcoming barriers to medication error reporting in hospitals: A focus group study. BMJ Quality & Safety, 21(5), 361–368.
- Khalil, H., & Lee, S. (2018). The implementation of a successful medication safety program in a primary care. *Journal of Evaluation in Clinical Practice*, 24(2), 403– 407. https://doi.org/10.1111/jep.12870
- Kostopoulou, O., & Delaney, B. (2007). Confidential reporting of patient safety events in primary care: Results from a multilevel classification of cognitive and system factors. Quality and Safety in Health Care, 16(2), 95–100.
- Kuo, G. M., Phillips, R. L., Graham, D., & Hickner, J. M. (2008). Medication errors reported by US family physicians and their office staff. *Quality and Safety in Health Care*, 17(4), 286–290.
- Lainer, M., Vögele, A., Wensing, M., & Sönnichsen, A. (2015). Improving medication safety in primary care. A review and consensus procedure by the LINNEAUS collaboration on patient safety in primary care. *European Journal of General Practice*, 21(sup1), 14–18.
- Loeb, D. F., Bayliss, E. A., Candrian, C., & Binswanger, I. A. (2016). Primary care providers' experiences caring for complex patients in primary care: A qualitative study. BMC Family Practice, 17(1), 34.

- McInnes, S., Peters, K., Bonney, A., & Halcomb, E. (2015). An integrative review of facilitators and barriers influencing collaboration and teamwork between general practitioners and nurses working in general practice. *Journal of advanced nursing*, 71(9), 1973–1985.
- Morse, J. M. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing research*, 40(2), 120– 123.
- 16. Nguyen, E. E., Connolly, Ρ. M., & Wong, V. (2010). Medication safety initiative in reducing medication errors. Journal of nursing care quality, **25**(3), 224–230.
- Paliadelis, P. S., Parmenter, G., Parker, V., Giles, M., & Higgins, I. (2012). The challenges confronting clinicians in rural acute care settings: A participatory research project. *Rural and Remote Health*, 12(2), 1–12.
- Paterson, M., Kinnear, M., Bond, C., & McKinstry,
 B. (2017). A systematic review of electronic multicompartment medication devices with reminder systems for improving adherence to self-administered medications. *International Journal of Pharmacy Practice*, 25(3), 185–194.
- 19. Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, CA: Sage.
- 20. Pearson, A., & Aromataris, E. (2009). *Patient safety in primary healthcare: A review of the literature*. Adelaide, SA: Australian Commission on Safety and Quality in Health Care.
- Phipps, D. L., Noyce, P. R., Parker, D., & Ashcroft, D. M. (2009). Medication safety in community pharmacy: A qualitative study of the sociotechnical context. *BMC Health Services Research*, 9(1), 158.
- 22. Reason, J. (1995). Understanding adverse events: Human factors. *Quality and Safety in Health Care*, **4**(2), 80–89.
- Roshanov, P. S., Fernandes, N., Wilczynski, J. M., Hemens, B. J., You, J. J., Handler, S. M., ... Garg, A. X. (2013). Features of effective computerised clinical decision support systems: Meta-regression of 162 randomised trials. *BMJ*, 346, f657.
- Rosser, W., Dovey, S., Bordman, R., White, D., Crighton, E.,
 Drummond, N. (2005). Medical errors in primary care: results of an international study of family practice. *Canadian Family Physician*, 51(3), 386–387.
- 25. Sandelowski, M. (1995). Sample size in qualitative research. *Research in nursing & health*, **18**(2), 179–183.
- Smith, P. C., Araya-Guerra, R., Bublitz, C., Parnes, B., Dickinson, L. M., Van Vorst, R., & Pace, W. D. (2005). Missing clinical information during primary care visits. *JAMA*, 293(5), 565–571.
- 27. Stuijt, C., Klopotowska, J. E., Driel, C. K., Le, N., Binnekade, J., Kleij, B., & Bemt, P. (2013). Improving medication

- administration in nursing home residents with swallowing difficulties: Sustainability of the effect of a multifaceted medication safety programme. *Pharmacoepidemiology and drug safety*, **22**(4), 423–429.
- 28. Taran, S. (2011). An examination of the factors contributing to poor communication outside the physician-patient sphere. *McGill Journal of Medicine*, **13**(1), 86.
- Tsang, C., Bottle, A., Majeed, A., & Aylin, P. (2013). Adverse events recorded in English primary care: Observational study using the General Practice Research Database. *British Journal of General Practice*, 63(613), e534–e542.
- Wallace, E., Lowry, J., Smith, S. M., & Fahey, T. (2013). The epidemiology of malpractice claims in primary care: A systematic review. *British Medical Journal Open*, 3(7), e002929.
- 31. Wong, A. K. S., Ong, S. F., Matchar, D. B., Lie, D., Ng, R., Yoon, K. E., & Wong, C. H. (2017). Complexities and challenges of Singapore nurses providing postacute home care in multicultural communities: A grounded theory study. *Journal of Transcultural*

Nursing. https://doi.org/10.1177/1043659617736884.