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Review

Barriers to reporting medication errors and near misses among nurses: A systematic review

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ABSTRACT

Objective: To explore barriers to nurses' reporting of medication errors and near misses in hospital settings.
Design: Systematic review.
Data sources: Medline, CINAHL, PubMed and Cochrane Library in addition to Google and Google Scholar and reference lists of relevant studies published in English between January 1981 and April 2015 were searched for relevant qualitative, quantitative or mixed methods empirical studies or unpublished PhD theses. Papers with a primary focus on barriers to reporting medication errors and near misses in nursing were included.
Review methods: The titles and abstracts of the search results were assessed for eligibility and relevance by one of the authors. After retrieval of the full texts, two of the authors independently made decisions concerning the final inclusion and these were validated by the third reviewer. Three authors independently assessed methodological quality of studies. Relevant data were extracted and findings were synthesised using thematic synthesis.
Results: From 4038 identified records, 38 studies were included in the synthesis. Findings suggest that organizational barriers such as culture, the reporting system and management behaviour in addition to personal and professional barriers such as fear, accountability and characteristics of nurses are barriers to reporting medication errors.
Conclusions: To overcome reported barriers it is necessary to develop a non-blaming, non-punitive and non-fearful learning culture at unit and organizational level. Anonymous, effective, uncomplicated and efficient reporting systems and supportive management behaviour that provides open feedback to nurses is needed. Nurses are accountable for patients' safety, so they need to be educated and skilled in error management. Lack of research into barriers to reporting of near misses' and low awareness of reporting suggests the need for further research and development of educational and management approaches to overcome these barriers.

What is already known about the topic?

- Open and honest disclosure of medication errors and near misses is critical to patient safety and optimisation of quality nursing care.
- Medication errors and near misses are underreported.
- Knowledge of the barriers to medication error and near miss reporting is important to improve medication safety.

What this paper adds

- Culture, the reporting system and management behaviour are organizational barriers that inhibit the reporting of medication errors.
- Fear, accountability and characteristics of nurses have been identified as personal and professional barriers that influence reporting of medication errors.
- There are a lack of studies specifically exploring the barriers to reporting near misses in relation to medication management in nursing.

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1. Introduction

Nurses have an important role in the medication management process as they are primarily involved in the preparation and administration of medications (Hughes and Blegen, 2008; Parry et al., 2015). All nurses receive training to ensure the safe administration of medications but as acknowledged by the Institute of Medicine (1999), to err is human, and this is certainly applicable to the area of medication management. A medication error is defined as an "act of commission (doing something wrong) or omission (failing to do the right thing) that leads to an undesirable outcome or significant potential for such an outcome", whereas a near miss can be defined as "an event or situation that did not produce patient injury, but only because of chance" (Agency for Healthcare Research and Quality, AHRQ PSNet, 2014). A near miss is a medication error that does not cause any harm to the patient because it is intercepted and corrected before reaching the patient (Hughes and Blegen, 2008). Medication errors are a significant cause of morbidity and mortality in hospitalized patients and can result in prolonged hospital stay, thereby indicating the major risk posed to patient safety on a local, national and international level, with this issue attracting global attention (Berdot et al., 2016; Brady et al., 2009; Parry et al., 2015).

Medication management guidance for nurses indicates that all medication errors and near misses should be reported in order to improve this process and optimise the quality of patient care (Brady et al., 2009; Harrison et al., 2014; Haw et al., 2014). However, reporting of medication errors by nurses occurs in only 37.4%–67% of cases, which is challenging, as underreporting makes it impossible to analyse the process behind all medication errors and near misses (Hajibabaee et al., 2014; Haw et al., 2014; Maiden, 2008; Mayo and Duncan 2004; Mrayyan and Al-Atiyyat, 2011; Stratton et al., 2004; Wakefield et al., 1999). This indicates that the current body of knowledge in this area is not fully informed and there is insufficient evidence that the health care team will be able to learn from errors (Brady et al., 2009; Levinson, 2009).

Numerous authors have investigated the reasons for medication errors and found that they are the result of multiple system factors and also individual factors (Brady et al., 2009; Keers et al., 2013; Parry et al., 2015). Knowing and understanding the causes has resulted in numerous interventions that have been developed to prevent or reduce medication errors, such as nurse training and education, automated delivery systems and barcode assisted medication administration systems. However, there is still a lack of evidence that they effectively decrease medication errors (Berdot et al., 2016). Medication errors still occur, particularly in hospital settings (Institute of Medicine, 1999). Blegen and Hughes (2008) reported errors in hospitals occurring in at least one and possibly three doses out of ten. Failure to report or under-reporting errors is a major limitation to patient safety.

The initial step to address this is the identification of barriers to reporting medication errors and near misses by nurses. Although numerous single studies have investigated this, they have not yet been systematically examined and synopsised to gain a more comprehensive understanding of issues that have been studied.

1.1. Aim

The aim of this systematic review was to identify and examine the barriers hindering nurses' disclosure of medication errors and near misses in hospital settings.

2. Method

The eight-stage QESISAES framework: Question, Eligibility, Source, Identification, Selection, Appraisal, Extract, Synthesis was used in the present review (Pluye et al., 2013).

2.1. Research question

The research question of this review was:
What are the barriers to nurses' reporting medication errors or near misses in hospital settings?

2.2. Eligibility criteria

Predefined inclusion and exclusion criteria were utilised as outlined in Table 1.

2.3. Search strategy

A systematic mixed method review was conducted to identify relevant literature. Initially, a limited search in CINAHL was undertaken in collaboration with librarians to identify key words and key studies. Following this, a systematic search was conducted using Medline, CINAHL, PubMed and Cochrane Library. Key word combinations used included medication error; medicine error; medicament error; drug error; near miss; nurse attitudes; truth disclosure; whistle blowing; incident report; voluntary reporting; report (See Supplementary data 1 for an example of a search strategy used in CINAHL). In addition Google and Google Scholar were searched for relevant studies and unpublished PhD theses. Reference lists of identified studies were considered for inclusion in this review and were manually searched.

2.4. Study identification and selection

Studies published in English and unpublished PhD theses in English between January 1981 and April 2015 were considered for inclusion in the review, as no studies prior to 1981 were identified

Table 1
Inclusion and exclusion criteria.

Inclusion criteria	
Topic	Primary focus on barriers to reporting medication errors or near misses in nursing
Population	Nurses working in hospital settings
Type of study	Qualitative, quantitative or mixed methods empirical studies, unpublished PhDs
Language	English
Time frame	Studies published between January 1981 and April 2015
Exclusion criteria	
	Studies not on the topic and not meeting inclusion criteria (primary focus on other medical and nursing errors, other professional working in hospital setting), reviews, editorials, notes, commentary pieces, conference papers, books, news
	Duplicates