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Abstract

Background and/or rationale: Bedside handover during the change of shift allows nurses to visualise patients and facilitate patient participation, both purported to improve patient safety. But, bedside handover does not always occur and when it does, it may not involve the patient.

Aims: To elicit nurses’ perceived barriers to enact bedside handovers, in order to better understand the determinants impacting on uptake of bedside handover recommendations for practice.

Methods: A cross-sectional survey was administered to 200 nurses working on medical wards, recruited from two Australian hospitals, one private and one public. As part of a survey, there was one open-ended question asking about perceived barriers to bedside handover. Content analysis was used to analyse data. Further, barriers were assessed using a determinant framework.

Results: The open-ended question was answered by 176 (88%) participants. Three categories were identified. First, censoring the message, showed nurses were concerned about patients and third-parties hearing sensitive information. In the second category, disrupting the communication flow, nurses perceived patients, family members, other nurses and external sources, interrupted the flow of handover and increased its duration. Finally, inhibiting characteristics demonstrated that individual patient and nurse views or capabilities hindered bedside handover. Using a determinant framework allowed identification of the underlying behavioural determinants, which were largely individual patient and nurse factors.

Linking evidence to action: Nurses were concerned with how to deal with confidential information, how to protect the flow of communication and nurse and patient views and capabilities. Considering these barriers within a determinant framework suggests strategies that address nurses’ misconceptions, values and attitudes may enhance uptake of bedside
handover and patient-centred care recommendations. Educational approaches could enhance nurses’ confidence in maintain patient confidentiality. Patient training and standardised handover may enable patient involvement in handover.

Key words: Patient participation, bedside handover, confidentiality, patient-centred care, bedside handoff, communication, nursing, nurse perceptions, patient safety, survey.
BACKGROUND AND SIGNIFICANCE

Nursing change of shift handover, also known as handoff and end of shift report, is a risky activity, impacting on patient safety and continuity of care (Wong, Yee, & Turner, 2008). During transition of one shift of nurses to the next, the oncoming nurse receives a handover and is updated with patient information (Kitson, Muntlin Athlin, Elliott, & Cant, 2014). This activity can occur up to three times per day, involving different nurses on each shift (World Health Organization, 2007), with each handover presenting an opportunity for miscommunication (Wong et al., 2008). The importance of improving handover communication has been affirmed internationally, most notably in by the World Health Organization (2007), in their Nine Patient Safety Solutions.

The shift-to-shift nursing handover process can be undertaken in various ways, such as verbal face-to-face handovers in offices or at the bedside or audio-recorded handovers. Bedside handover is increasingly recognised as a process to decrease handover risks related to misunderstandings and inaccurate or unclear information (Sherman, Sand-Jecklin, & Johnson, 2013). For instance, a review identified bedside handover improves transfer of information affecting areas of safety, such as fall rates, as well as improve the process of handover through decreased handover time, overtime and associated costs (Mardis et al., 2016). Further, as found in a second review, nurses report improved efficiency, accountability and information accuracy, while patients may experience improved satisfaction, and feel better informed and engaged through bedside handover (Sherman et al., 2013).

Bedside handover may not only improve patient safety and limit communication breakdowns, but it also promotes a patient-centred approach to care (Chaboyer, McMurray, & Wallis, 2010). Bedside handover provides an opportunity for patient participation in
clinical communication, allowing their needs, concerns and preferences to be better understood, ultimately enabling a patient-centred care approach (Tobiano, Marshall, Bucknall, & Chaboyer, 2015). Nurses who promote patient involvement in bedside handover display this patient-centeredness by treating patients with respect as individuals, planning care around the patient’s preferences and addressing patient needs (Kitson, Marshall, Bassett, & Zeitz, 2013).

Despite international and national recommendations for bedside handover with patient involvement (Australian Commission on Safety and Quality in Health Care, 2012; World Health Organization, 2007), its practice is variable. Handover processes differ between settings, with Australian nurses reporting 21-42% of handovers were verbally at the bedside (Street et al., 2011). Many Australian researchers have investigated the frequency of patient participation in bedside handover, and in one study only 45% of 532 handovers were observed to include active patient involvement (Chaboyer et al., 2010). On the other handover, a US study showed over 60% of patients always experienced bedside handover and had perceived the process in a positive way (Ford, Heyman, & Chapman, 2014). Nurses have been described as the gate-keepers of handover, controlling the handover process (Holly & Poletick, 2014). Thus, understanding barriers that influence nurses’ use (or otherwise) for bedside handover is instrumental in understanding why it does not consistently occur in practice.

There are a range of barriers that can influence nurses’ uptake of recommendations like the implementation of bedside handover, including individual, ward or organisational level influences (Nilsen, 2015). Identifying and understanding barriers is an important step in successful implementation of recommendations, evident in many implementation frameworks such as the ‘Knowledge-to-Action (KTA)’ framework and the ‘Promoting Action on Research Implementation in Health Services (PARiHS)’ framework (Rycroft-Malone &
Bucknall, 2010). Many small-scaled, predominately qualitative studies suggest barriers to bedside handover, which may be idiosyncratic (Anderson, Malone, Shanahan, & Manning, 2015), as clinical contexts may differ due to the complexities of culture, leadership and evaluation practices (McCormack et al., 2002). Understanding a range of contexts and barriers provides one foundation for both clinicians and researchers to consider in their particular situation. Further, barriers uncovered can be linked to determinants, allowing targeted strategies to be tailored to increase the uptake of bedside handover recommendations in practice.

AIMS

To elicit nurses’ perceived barriers to enact bedside handover, in order to better understand the determinants impacting on uptake of bedside handover recommendations for practice. Determinants can be linked to barriers to understand the underlying behavioural influences (Flottorp et al., 2013).

METHODS

DESIGN

A cross-sectional survey was conducted from February 2015 to June 2015. As part of this survey, each participant was presented with an open-ended question asking them to indicate what, in their opinion, were the barriers to undertaking handover at the bedside. The question was preceded by a discrete choice experiment that quantified nurses’ preferences for various characteristics of bedside handover.

SETTING AND SAMPLE

The target population consisted of hospital nurses working in acute medical wards. Registered and enrolled nurses were eligible to participate if they regularly worked on one of
five medical wards at a public hospital in Queensland or one of six medical wards at a private hospital in Victoria, Australia. The medical ward specialties included cardiology, general medicine (n=4), haematology and oncology (n=2), mixed surgical and medical, neurology and stroke, renal and respiratory. Both hospitals were tertiary referral hospitals, ranging from around 500-750 beds. Consistent with national hospital standards (Australian Commission on Safety and Quality in Health Care, 2012), bedside handover was practiced on the wards. The sample size of 200 nurses was designed to meet requirements of the discrete choice experiment design, and was deemed adequate for the descriptive nature of the open-ended question. Nurses were approached consecutively until 100 surveys were completed at each hospital. Research assistants informed nurses of the study, confirmed eligibility and obtained written consent.

**METHODS AND JUSTIFICATION**

The survey was pilot tested on 10 nurses. Surveys were then administered on an electronic tablet by two trained research assistants. Research assistants remained present, however provided nurses with adequate personal space and privacy during survey completion. Nurses used the electronic tablet keypad to type responses to the question. “In your opinion, what are the barriers to undertaking handover at the bedside?” Demographic data were also collected.

**ETHICAL ISSUES AND APPROVAL**

Ethics approval was given by the hospitals and university Human Research Ethics Committees. All data were collected anonymously. It was not compulsory to provide demographic data or to answer the open-ended question.

**DATA ANALYSIS**
The analysis process involved two steps; inductive and then deductive content analysis. Responses to open-ended questions were analysed using inductive content analysis methods (Elo & Kyngäs, 2008). First, open-ended responses were extracted from the total data pool and placed into data management software. These responses were treated as the unit of analysis (Elo & Kyngäs, 2008). The researchers read raw data repeatedly to become immersed in it. Next, the researchers undertook open coding, where words were used to describe the meaning of each response. Participants with longer responses had each sentence openly coded. These codes were grouped together based on which codes ‘belonged’ together (Elo & Kyngäs, 2008). These groups of codes were collapsed into subcategories and then categories based on researcher interpretation. Two researchers analysed data independently and then compared findings, resolving minor discrepancies by returning to raw data. Throughout the analysis process, thoughts, ideas and decisions were documented as analytical memos.

In the second analysis step, the categories were sorted into Flottorp et al.’s (2013) determinants framework. The framework by Flottorp et al. (2013) was selected because it provided a current and comprehensive checklist to conceptualise the categories and identify determinants. This framework consists of seven influencing factors including individual health professional factors, patient factors, professional interactions, incentives and resources, capacity for organisational change and social, political and legal factors (Flottorp et al., 2013). Using tables, each category was mapped to determinants in Flottorp et al.’s (2013) framework. This was conducted by one researcher and then the team confirmed and questioned these determinants until consensus was met. Understanding the underlying determinants allowed targeted strategies to be suggested, based on Flottorp et al.’s (2013) suggestions and wider implementation strategies suggested in previous studies.

RESULTS
Barriers to bedside handover were suggested by 176 (88%) participants, with the other participants either not answering the question (n=19, 9.5%) or stating they did not perceive any barriers to bedside handover (n=5, 2.5%). Most participants were female, registered nurses, who had worked for approximately 6 years and had similar characteristics to those who completed the rest of the survey (Table 1). Slightly more public hospital nurses responded to the open-ended question.

Three categories were revealed from the open-ended responses, including censoring the message, disrupting the communication flow and inhibiting characteristics (Table 2). Each category had subcategories.

**Censoring the message.** Almost two-thirds of nurses were concerned about sharing handover aloud. Some viewed the content as private; only for the other nurses to hear and too sensitive for patients: ‘Sensitive information regarding patient diagnosis, behaviour, social, family and prognosis cannot always be discussed at the bedside.’ A minority of nurses detailed tactics they used to securely pass these sensitive messages to only the receiver they intended such as sharing information ‘...away from patients.’, ‘...in a more private environment.’ or ‘...just outside the room...’. Nurses were aware of their surroundings, realising there were many potential receivers who could hear their broadcasted message - the patient, other patients in the room and family members: ‘...the patient might not like some people that are present in the room to hear about their condition/care.’ Nurses did not feel comfortable involving these receivers due to confidentiality concerns, hindering patient and family participation.

**Disrupting the communication flow.** Almost half of the nurses perceived interferences that disrupted the flow of the message being transmitted, which appeared to increase concerns for time. External interferences could include environmental noise and both nurses involved and not involved in handover being disruptive, especially if many nurses were present during handover. Further, nurses were concerned about the presence of many nurses during
handover and how this impacted on patients’ willingness to contribute to mutual communication, as it was ‘…too daunting for patient to speak up which I see as important’.

However, most commonly, nurses perceived patient and family participation as disrupting efficient communication: ‘…length of handover increased when family and patient involved in every aspect of handover’. Patients’ and family members’ questions during handover were sometimes seen as inappropriate and not related to handover content: ‘Getting distracted by questions by either family members (or) patients (especially when unrelated)’. Overall, time was a frequently perceived barrier to bedside handover, often due to the reasons stated above.

A smaller portion of nurses raised concerns about having inadequate set time to conduct handover and enable patient participation ‘… (I) feel (the) most important aspect is including the patient in planning but time constraints don't permit …’.

**Inhibiting characteristics.** Less than half of nurses outlined individual patient and nurse characteristics that hindered effective handover, including certain capabilities and views.

Nurses voiced concerns about patients’ ability to participate in handover due to their medical condition, whether they were asleep/awake, but most commonly confusion was reported: ‘Patients with dementia or cognitive deficits may not be able to participate effectively (in) a bedside handover with staff’. In terms of views, nurses perceived that some patients preferred handover away from the bedside, because it may cause unpleasant reactions for the patient such as feeling ‘anxious’, ‘bothered’, ‘distress(ed)’, ‘disrupt(ed)’, ‘intrusive(ness)’, ‘upset’ or ‘uncomfortable’. Nurses raised concerns about other nurses’ ability to share handover content, desiring an accurate handover: ‘Things incorrectly get said and passed on in front of patient’, requiring a balance between ‘thoroughness’ and no ‘unnecessary’ information.

Some nurses explained nurses’ as being unwilling and unmotivated to undertake handover at the bedside: ‘Nurses that aren’t cooperating all the time in bedside handover. Nurses that only want to handover at the nurses’ station away from the patient’s bedside’.
Determinants influencing uptake of recommendations. The barriers identified in this study were mapped to Flottorp et al.’s (2013) framework. As shown in Figure 1, four determinants affected nurses’ uptake of bedside handover recommendations, including individual nurse factors, patient factors, guidelines recommendations and social, political and legal factors. The remaining three determinants in Flottorp et al.’s (2013) framework were not reflected in the barriers identified in this study.

DISCUSSION

Bedside handover is an opportunity to improve handover communication and involve the patient. However, our study shows barriers like nurses censoring the message, perceiving disruptions to communication flow and individual inhibiting characteristics are likely to influence the success of this recommended practice. Linking these barriers to a determinant framework provides deeper understanding of barriers and helps tailor solutions to the barriers identified (Table 3).

For instance, nurses appeared to lack confidence, with few nurses detailing strategies for dealing with sensitive information. Researchers have demonstrated that privacy issues are perceived as easily managed by some nurses by asking patients for permission prior to handing over in front of family members, discussing sensitive information discreetly away from the bedside (Johnson & Cowin, 2013) or pointing to sensitive information written on paper (Kerr, Lu, & McKinlay, 2014). Thus, our findings may suggest that nurses require interventions that enhance their self-efficacy in using similar strategies. Active educational approaches such as simulation and drama could be utilised to enhance nurses’ skills, critical thinking and confidence for managing sensitive information (Arveklev, Wigert, Berg, Burton, & Lepp, 2015; Jeffries, 2005). Scenarios could focus on varying types of sensitive information, with activities to promote nurse consensus on appropriate strategies for individual settings.
Further, nurses were worried about consequences and possibly malpractice liability, due to their concerns around sharing information in common spaces, highlighting education requirements. For instance, nurses could be informed about misconceptions they may hold relating to patients’ concerns for sharing information. Although patients have expressed mixed levels of concerns for confidentiality issues during bedside handover (Anderson et al., 2015), most patients appear to see this as a minor issue (Jeffs et al., 2014; McMurray, Chaboyer, Wallis, Johnson, & Gehrke, 2011; Tobiano, Bucknall, Marshall, Guinane, & Chaboyer, 2015b). Educational approaches aligning patient and nurse evidence may heighten nurses’ enthusiasm for sharing information with patients during bedside handover. For example, a group of nurses who found confidential information easy to deal with, demonstrated awareness of patients’ preferences for bedside handover and patients’ ‘lesser’ concerns for treatment of confidential information (Johnson & Cowin, 2013). Nurses’ fears for misconduct suggest they may need to be kept abreast of safe information-practices, such as privacy acts and codes of conduct, which often highlight the ability to share information with patients. For instance, researchers were successful in addressing nurses’ worries about sensitive information, by involving the hospital’s risk management committee to review bedside handover process and detailing explicit guidelines for nurses so they knew how to safely share information with patients (Evans, Grunawalt, McClish, Wood, & Friese, 2012). Above all, informing nurses of the importance of gaining patient consent for sharing their information in public spaces endorses patient-centred care (Starr, 2014).

Patient and family member participation was seen to hinder effective communication, highlighting issues with patients’ knowledge and beliefs. This is consistent with previous findings, where nurses perceived patient participation as bothersome, due to the type of information requested at handover being ‘unimportant’, meaning nurses impeded patient engagement (Drach-Zahavy & Shilman, 2015). Patients and nurses have identified the need
for patients to understand their role in bedside handover to heighten their opportunity to participate (Herbst, Friesen, & Speroni, 2013; Kerr et al., 2014) implying patient participation needs to be predictable (Chaboyer at al 2015). These findings suggest patient training may ensure patient and nurses have similar expectations for handover content. Resources like leaflets and media campaigns within hospital (Coulter & Ellins, 2007), or education by nurses on admission (Caruso, 2007) could enhance patient understanding of their participatory role. In addition, rounding before handover provides an opportunity to address patients’ needs and discuss content not appropriate for handover (Spanke & Thomas, 2010), further nurses can inform patients of the impending bedside handover and their role in it and preference for it. Finally, using standardised scripts for handover, where the patient’s role is made explicit during the handover process has been shown to enhance understanding of how patients participate (Dufault et al., 2010; Evans et al., 2012). Feasibly, the use of scripts may also address nurses concerns about the content handed over by nurses (Riesenberg, Leisch, & Cunningham, 2010).

In our study, many nurses were concerned that increased time was an expected outcome of bedside handover. Other nurses perceive bedside handover as time intensive (Anderson et al., 2015; Johnson & Cowin, 2013), which may be a misconception, as nurse overtime data does not support this belief (Sand-Jecklin & Sherman, 2014). Thus, convincing nurses of the efficiency of bedside handover, through activities like audit and feedback (Flottorp et al., 2013), could address this barrier.

Our study highlights contextual issues around the feasibility of handover. Nurses expressed concerns about interruptions and presence of large numbers of nurses, possibly impacting time and hindering opportunities to effectively enact a patient-centred handover. Overall, the context needs to be considered to ensure bedside handover is a set and respected task. As Riesenberg et al. (2010) concluded, there are many environmental strategies for
effective handovers, including allowing sufficient time and tactics to limit interruptions and
distractions. Setting these boundaries for bedside handover may be required from those in
leadership positions, to ‘protect’ this nursing activity.

For nurses, their intentions, motivation and/or attitudes towards recommendations
may be determinants of their uptake of practice. Nurses have expressed mixed preferences for
bedside handover (Johnson & Cowin, 2013; Tobiano, Bucknall, Marshall, Guinane, &
Chaboyer, 2015a). Approaches like reflection may be an effective way to motivate nurses to
question their current approach towards bedside handover and patient involvement. Tutton
(2005) showed the benefit of using reflective diaries to increases nurses’ appreciation for
patient participation in nursing activities.

Patients were perceived as determining the success of bedside handover due to their
behaviours, preferences and/or motivations. To address patient preference and behaviour,
bedside handover needs to be individualised, consistent with a patient-centred approach
(Scholl, Zill, Harter, & Dirmaier, 2014). Thus, nurses require value for patient-centred care
practices like having meaningful and open dialogue with patients, which aids understanding
of their needs and preferences (Kitson et al., 2013; Scholl et al., 2014). One strategy could be
sharing patient stories about handover, which has been shown to help nurses reflect and
embrace a more patient-centred approach towards patients (Blickem & Priyadharshini, 2007).
If nurses use intentional communication to understand their patients, they can appropriately
tailor handovers based on preferences and capabilities.

**STUDY LIMITATIONS**

Utilising surveys to collect data for an open-ended question may have limited our
ability to probe for a more in-depth understanding of participants’ answers. Further, the
barriers identified could have been triggered by the presentation of the discrete choice
experiment questions preceding the open ended question. Nevertheless, the discrete choice experiment questions were based on patients’ and nurses’ perceptions, a review of the literature, and were selected through panel discussion, allowing us to identify which features of handover would be most important for patients and nurses. Therefore, we consider it more likely that these questions may have acted as a warm up exercise for participants to think about possible barriers to bedside handover.

We identified fewer ward and organisational level barriers. Further assessment of these influences would be beneficial to understand uptake of bedside handover recommendations (Rycroft-Malone & Bucknall, 2010). However, individuals may choose to diverge from ward/organisational practice (Chaboyer et al., 2016), thus our study highlights important individual patient and nurse factors to consider. We realise our list of determinants is not exhaustive, however we have identified the most common perceived barriers to lack of bedside handover across 2 hospitals (organisation level), including 11 ward cultures (ward level) and 176 nurses (individual level), and linked appropriate strategies to the barriers.

**LINKING EVIDENCE TO ACTION**

- Active educational approaches and understanding of supportive guidelines may increase nurses’ confidence in managing sensitive information and ensuring patient confidentiality.
- Enhancing nurses’ value for patient-centred practices could enhance uptake of bedside handover, promoting tailoring of handover to each unique patient.
- Addressing possible misconceptions related to patient preferences for information sharing and time intensity of handover could improve bedside handover practices.
- Patient training, reinforced by a standardised role in handover, could ensure patients effectively and actively engage in handover.
- Strategies that address the context around handover could ensure it is a set and protected activity improving the exchange of communication during handovers.

CONCLUSIONS

Our study showed nurses thought privacy issues, inefficient flow of communication and individual patient and nurse characteristics frequently hindered bedside handover. We have demonstrated the benefits of using a determinant framework when devising strategies for achieving practice recommendations. In the study, many individual nurse and patient determinants were identified. We suggest targeting nurses to improve their value for bedside handover and patient-centred care, which includes many approaches like addressing misconceptions related to time constraints. Additionally, education related to dealing with sensitive information and how to maintain patient confidentiality is suggested. Further, we propose that patients require strategies like patient training to address nurses’ concerns. From here, these suggested approaches need to be implemented and evaluated in practice.
REFERENCE LIST


