Original Article

Barriers and Facilitators for the Use of NURSING Bedside Handovers: Implications for Evidence-Based Practice

Simon Malfait, PhD, MSc, RN iD ● Kristof Eeckloo, PhD, LLM ●
Wim Van Biesen, PhD, MD ● Ann Van Hecke, PhD, MSc, RN, FEANS

ABSTRACT

Background: Previous studies on bedside handovers have identified nurse-related barriers and facilitators for implementing bedside handovers, but have neglected the existing ward's nursing care system as an important influencing factor.

Aims: To determine the association between the existing nursing care system (i.e., decentralized, two-tier, or centralized) on a ward and the barriers and facilitators of the bedside handover.

Methods: Structured individual interviews ($N = 106$) on 14 nursing wards in eight hospitals were performed before implementation of bedside handovers. The structured interview guide was based on a narrative review. Direct content analysis was used to determine the nursing care system of a ward and the degree to which barriers and facilitators were present. Pearson's Chi-square analysis was used to determine whether there were associations between the nursing care systems concerning the presence of barriers and facilitators for implementing bedside handovers.

Results: Twelve barriers and facilitators were identified, of which three are new to literature: the possible loss of opportunities for socializing, collegiality, and overview; head nurse's role; and role of colleagues. The extent to which barriers and facilitators were present differed across nursing care systems, with the exception of breach of confidentiality (barrier), and an existing structured handover (facilitator). Overall, nurses working in decentralized nursing care systems report fewer barriers against and more facilitators in favor of using bedside handovers than nurses in two-tier or centralized systems.

Linking Evidence to Action: Before implementing bedside handovers, the context of the nursing care system may be considered to determine the most effective process to implement change. Based on these study findings, implementing bedside handovers could be more challenging on wards with a two-tier or centralized care system.

INTRODUCTION

A demand for more patient participation and safety was initiated in the beginning of this century (Institute of Medicine, 2001). Hospitals are therefore searching for methods to improve both. In nursing, bedside handover is an innovative method that is increasingly practiced in Anglo-Saxon countries (Ferguson & Howell, 2015) and is spreading across the European continent. Bedside handover is a process where the nurses' shift-to-shift report is delivered at the patient's bedside (Anderson & Mangino, 2006). The method is believed to improve nurse–nurse and nurse–patient communication by allowing the patient to participate during the handover and to improve patient- and nurses-related outcomes like patient satisfaction and team coherence (Gregory, Tan, Tilrico, Edwardson, &

Gamm, 2014). Although the handover is a critical process for ensuring patient safety, ineffective handovers are still common in nursing (Gregory et al., 2014). Due to the embedded routines in handovers and the traditions around it (Kitson, Muntlin Athlin, Elliott, & Cant, 2014), changing the handover remains difficult and many organizations fail in implementing new handover models.

Bedside handovers could potentially be a solution for increasing both patient participation and patient safety, but also their implementation is complex and difficult (Hagman, Oman, Kleiner, Johnson, & Nordhagen, 2013). Multiple barriers concerning the implementation of bedside handovers have previously been identified, of which time-use, change-discouraging environments, and breach of confidentiality are most common (Gregory et al., 2014).

It was recently suggested that the organizational setting of a ward can modify the implementation of bedside handover (Tobiano, Whitty, Bucknall, & Chaboyer, 2017) because handovers cannot be isolated from the structure and culture of a nursing ward (Anderson, Malone, Shanahan, & Manning, 2015). This organizational context shapes care processes, service provision, and day-to-day practices like the bedside handover and is influenced by the nursing care system used (Sjetne, Helgeland, & Stavem, 2010). Therefore, to better understand the nature of the barriers and facilitators for implementing bedside handover, further exploration in different organizational contexts is needed (Van Achterberg, 2013).

AIM

The aim of this study was to explore the association between the nursing care system on a ward and the barriers and facilitators of the bedside handover.

DESIGN

This study is part of a matched-controlled, longitudinal, multicentered study on the feasibility, appropriateness, meaningfulness and effectiveness of bedside handovers (Malfait, Eeckloo, Lust, Van Biesen, & Van Hecke, 2017). As part of a systematic implementation approach, structured diagnostic interviews identifying possible barriers and facilitators amongst nurses were conducted before the implementation of bedside handovers (Grol, Wensing, Eccles, & Davis, 2013).

This mixed methods study consisted of three sequential phases. First, a narrative review was conducted to identify barriers and facilitators for the use of bedside handovers in literature. Second, nurses were interviewed in order to identify whether these barriers and facilitators were present. Direct content analysis was used to analyze these interviews. Third, these responses were compared in relation to the different nursing care system.

METHODS

Phase 1: Narrative Review

In the first phase of the study, a narrative review was conducted to achieve an overview of the barriers and facilitators of bedside handovers already known in literature. Four systematic reviews on bedside handover (Anderson et al., 2015; Gregory et al., 2014; Mardis et al., 2016; Tobiano, Bucknall, Sladdin, Whitty, & Chaboyer, 2018) and one study which was published after the publication of the systematic reviews were considered (Tobiano et al., 2017). These identified barriers and facilitators (i.e., elements) were used to develop the structured interview guide to be used in the second phase of the study. In order to transform these elements into questions and structure the interview

guide, the contingency model was used (Van Linge, 2006). Due to the model's suitability for implementation projects, it proofed useful for this study. The model consists of four components to analyze the readiness of the context in which change (i.e., the introduction of bedside handovers) is to be anticipated: culture (e.g., is a good handover appreciated in the team), human resources (e.g., are people trained for effective communication), structure (e.g., how is the handover structured), and power relations (e.g., do nurses respect each other). The model assumes congruence between the requirements of the innovation and the characteristics of the context is essential for a successful implementation. By allocating the key elements, issues, and themes of the bedside handover identified in our narrative review to each of these components, it could be determined whether these elements were perceived as barriers or facilitators depending on the context. This characteristic of the contingency framework fitted with the goal of this study. However, by using the contingency model and results from previous studies, our interview guide could be in danger of being "leading." The interview guide can be found in Table S1. We retained the contingency model due to its possible merits for this study, but enhanced researcher's triangulation (see Table S3) and added open-ended questions to prevent possible bias.

Phase 2: Direct Content Analysis

All Flemish general and university hospitals ($N = 63$) were invited to participate in the study. After three workshops about the study in December 2015 (Malfait et al., 2017), hospitals could decide to participate. Fourteen nursing wards in eight hospitals participated. On each ward, the researchers purposively sampled a minimum of five nurses and a maximum of 10 nurses to include both supporters and opponents of bedside handovers. In total, 106 interviews were conducted and audiotaped. An overview of the participating wards, the numbers of interviews, and the duration of interviews can be found in Table S2.

The interviews had a double purpose. First, the interviews were used to identify barriers and facilitators of the bedside handover per nurse. To analyze the content of the interviews, direct content analysis (Hsieh & Shannon, 2005) using the model of Halcomb and Davidson (2006) was used. The model suggests six steps in the data analysis, but no verbatim trascription is used. Table S3 provides an overview of how these steps were incorporated in our study. Elements identified as thresholds, pitfalls, and concerns that made nurses less willing to implement bedside handover were designated as barriers. In contrast, elements that made nurses more willing to implement bedside handovers were labeled facilitators.

Second, the interviews were used to assess the nursing care system on the ward. To assess the system, the model of Adams, Bond, and Hale (1998) was used. This model describes three classifications of organizational

systems for nursing: (a) decentralized, (b) centralized, or (c) two-tier. In decentralized nursing systems, the focus of responsibility for care is firmly vested in the assigned, individual nurse. The assigned nurse is responsible for updating care plans, contacting other healthcare professionals, and mostly accompanying the physician during ward rounds. They are for instance individually responsible for the administration of oral medication and making reports about the patient individual progress. A formal daily wards report on all patients is often not present on these wards. In centralized nursing systems, the power and control are firmly centralized in the hands of the head nurse or charge nurse. These nurses have contact with other health professionals and accompany physicians during ward rounds. The administration of medicine is done in one round for all patients by one nurse to which the task is assigned. A formal daily briefing about all patients is given to all nurses. Two-tier nursing refers to the system in between, characterized by independent operating groups or teams in the nursing staff under strict supervision. Although patient care is a group or team responsibility, more hierarchical structures of control and supervision remain in two-tier systems in comparison with decentralized systems. In order to determine the care systems of the wards, a checklist of seven essential characteristics was used (Adams et al., 1998; Sjetne et al., 2010). These characteristics were primarily determined, based on homogeneity during the interviews. Afterward, they were also confirmed by a total of 40 unstructured observations on the wards. This "double-check" approach was used as previous research (Sjetne et al., 2010) has shown that self-reporting about nursing models can differ from the actual system used on the ward. The final assignment of the nursing care was, by use of a matrix, determined by two independent researchers. The checklist and matrix can be found in Table S4.

Phase 3: Statistical Analysis

All quantitative data were analyzed with SPPS V 25.0 (IBM Corp., Armonk, NY, USA). For each nurse, the presence of an element was nominally scored based on the content of the interview—barrier (= 1), not mentioned (= 2), facilitator (= 3)—and nurses were allocated to a nursing care system. Frequencies were used for the descriptive statistics. To determine the differences between nursing care systems, Pearson's chi-square analyses with post hoc Bonferroni correction was applied, meaning that a level of significance of 0.017 was used.

Ethical Approval

The study was approved by the central ethics committee of the Ghent University Hospital (B670201627044) and the local ethics committee of each participating hospital. Each nurse provided a written informed consent before the interviews.

RESULTS

Study Settings and Participants

The study setting consisted of three geriatric wards, one stroke unit, one midcare unit, four medical rehabilitation wards, and five surgical or internal medicine wards. Three wards were located in a university hospital (1,000 beds), and nine wards in general hospitals (300–1,000 beds). No differences in the presence or absence of elements could be found between the types of hospital, the local setting of the hospital, or the types of ward.

Identified Barriers and Facilitators

In total, 12 elements were identified that were barriers or facilitators for the use of bedside handovers, of which 3 were not previously reported in the literature (Table 1). The other nine elements were previously reported in literature (Table 2). These newly identified elements are further elaborated upon.

Loss of Socializing, Overview, and Collegiality Among Nurses

By using bedside handover, collective handovers disappear, and accountability for a single nurse for a selection of patients increases. According to nurses, this movement could lead to a loss of socializing ("talk with each other during the handover"), overview ("knowing all the patients"), and collegiality ("helping each other out during the shift").

For nurses, the handover is a rare possibility for a shared moment during which they can express their frustrations, emotions, and feelings. They admit topics during handover are not always patient-related, but contain also personal stories and family life shared. They designate the handover as the only moment without patient interaction, enabling them to speak freely. Nurses also indicate that basic information on all patients is essential for assisting each other. Without a collective moment, nurses think that colleagues will become self-centered and collegiality will disappear.

Head Nurse's Role

Nurses designate head nurses as the leaders to implement and support the method. But, according to the interviewed nurses, head nurses can also be a barrier for the implementation of bedside handovers in centralized or two-tier systems. When head nurses are the designated person to accompany physicians during their ward rounds, they often become a central point of knowledge on patient care. This position makes them indispensable during collective handovers. Therefore, by implementing bedside handovers, where the collective handovers are discarded, head nurses need to abandon the position of a central point of knowledge and designate the assigned nurse to accompany physician on their ward rounds. According to nurses, head nurses will find it difficult to have to abandon this position.

Table 1. Overview of the New Elements Identified in the Study

New elements	Exemplary quote (barrier)	Exemplary quote (facilitator)
Loss of socializing, collegiality and overview	"The overlap between the early shift and the late shift is the social moment of the day. It has always been this way. It will be very difficult for us to abandon this behavior and not to fall in old habits…It will certainly be missed"	[N/A]
Head nurse's role	"Our head nurse won't easily leave her position as clinical leader of daily care. The physicians demand that she is up-to-date on all patients, and to be honest…it makes my work more easy as well"	"On our ward, our head nurse supports us to be involved in decisions about the patients' health. If necessary, she relieves us from our task so we can change our behavior"
Role of colleagues	"In our team, this just won't work. We have to depend on each other to get through the shift. We can only do that by dividing and delegating task to each other. And, it is more fun to do things with two"	"We're used to nothing else than having my own patients. Colleagues should support each other to live up to this standard"

The role of the head nurse as a central point of knowledge is often endorsed by physicians who demand such a central contact and a single person to accompany them during their patient visits. But the position of head nurse as a central point of knowledge is also strengthened by head nurses who find it difficult to not be supervising clinical care or by nurses who want head nurses to be responsible for patient care. While on nursing wards with a decentralized system, head nurses mostly have a more facilitating and managing role, meaning that they are responsible for staff allocation and operational management, and are not involved in clinical supervision and the physician's ward round.

Role of Colleagues

A number of nurses expressed an eagerness and willingness to be individually responsible for a number of patients but felt restrained by their colleagues to work individually, which leads to a centralized handover discussing all patients. In their opinion, these colleagues felt more comfortable in a collective nursing team because they can pass tasks for which they do not possess the competencies. On other wards, nurses expressed a stronger confidence in the competences of their colleagues and explained this confidence is rooted in the fact that they have always worked individually.

Similarities Between Nursing Systems

A possible breach of privacy or confidentiality was regarded as a barrier by nurses in all nursing systems. In contrast, having a structured handover was deemed as a facilitator by nurses in all nursing systems. An overview of the data and statistical analysis can be found in Table 3.

Differences Between Nursing Systems

Centralized systems

Nurses in centralized systems showed a trend to report patient participation, the loss of socializing, collegiality and overview, the competence of the patients, their relation with the physician, handover duration, the role of colleagues, head nurse's role, and the perception toward bedside handovers more as barriers for using bedside handovers than their colleagues from decentralized or two-tier nursing systems. Nurses in centralized systems were also the only nurses that mentioned hospital processes as a barrier for using bedside handovers. An overview of the data and statistical analyses can be found in Table 2.

Two-tier systems

Nurses in two-tier systems showed a trend to experience patient participation, the loss of socializing, collegiality and overview, the role of colleagues, and the perception toward bedside handovers less as a barrier than nurses in centralized systems, but more than nurses in decentralized systems. Nurses from two-tier systems however did not think differently about the competence of patients in comparison with nurses from centralized nursing systems. Furthermore, there were no reported differences between two-tier and decentralized systems for nurse–physician

Table 2. Overview of the Elements Identified in the Narrative Literature Review and in This Study

Identified element (literature)	Identified element (study)	Description	Exemplary quote (barrier)	Exemplary quote (facilitator)
Time/resource intensive	Handover duration	Time needed to complete the handover	"The schedule for the handover time is already very tight. If patients also have their say, we will definitely will have to do overtime…I'm not looking forward to that"	"As I only have to hand over my own patients, there's no time pressure at all. Perhaps involving the patient will take a little longer, but that won't be an issue"
Lack of ability/skills to partner with patients/share power/ patient participation	Patient participation	Involving the patient in the handover	"It is impossible for me to take into account all the wishes and expectations of the patients in my planning of care. I just don't have the time to do this and I want to stay in control of my shift"	"The patient should be central during my shift. He's the only one that is present 24/7. His insights and feedback actually help me during my shift and prevent unnecessary or wrong actions, which speeds things up"
Confidentiality/Privacy	Confidentiality/ privacy	Safeguarding patient confidentiality during the handover	"We will have to be aware of what we will be saying at the bedside [...] and pay attention not to offend the patient or provide them with information they (or their neighbor) are not supposed to know"	[N/A]
Lack of confidence on medical knowledge[b]	Nurse–physician relation	Knowledge on what, how and when information was given to patients by physicians	"As a nurse we are not always aware about what our patient's already know [...] it's not our task to share medical information. We are not aware of what the physician already shared. It's not our task to share such information for the first time with patients, but I'm afraid of making a mistake"	Me and the physician have a very good contact…he knows when I'm available and I know when to expect him. We both do efforts to make seeing patients together and sharing information"
Patient's competence	Patient's competence	The abilities of the patient to participate in the handover	"Our patients won't be able to handle this kind of information. They will panic or become anxious"	"Our patients are definitely capable of speaking up. If they know something about their illness, they are easier to talk to and to be open with. They don't panic that fast and often are very strict in following treatment"
Changing handover[d]	Perception toward bedside handovers	The attitude toward changing the handover type	"If the majority of my colleagues are not convinced of bedside handover, it will be very difficult for me to keep on continuing with the bedside handover"	"It is just one more step towards putting the patient in the center…I'm totally fine with that"
Visiting times/family presence	[Not identified]	The presence of family during the handover	[N/A]	[N/A]

(Continues)

Table 2. (Continued)

Identified element (literature)	Identified element (study)	Description	Exemplary quote (barrier)	Exemplary quote (facilitator)
Contextual issues[e]	Hospital processes	Processes in and around the ward that interfere with the handover	[N/A]	"What the bedside handover expects is that we leave the nursing station during the handover. To be honest, that will be impossible. The nursing station is the central place for many activities that we, as nurses, have to take care off in the hospital and these activities do not stop during the handover"
Accurate reporting/ structure	Structured handover	The presence of a predefined, structured method to give handovers	[N/A]	"We have learned to give a structured handover by using SBAR, minimizing time loss and mistakes. This has made me feel more confident in giving handovers"

Note. N/A = not mentioned.
[a]Mardis et al. (2016);
[b]Gregory et al. (2014);
[c]Anderson et al. (2006);
[d]Tobiano et al. (2018);
[e]Tobiano et al. (2017).

relationship and handover duration. The head nurse's role was reported more as a facilitator by nurses in two-tier systems than nurses in decentralized systems. An overview of the data and statistical analysis can be found in Table 2.

Decentralized systems
Nurses in decentralized systems showed the tendency to perceive patient participation, the loss of socializing, collegiality and overview, and the perception toward bedside handovers less as a barrier than nurses from the other nursing care systems. The competence of patients, the nurse–physician relationship, and handover duration were also perceived less as a barrier than on centralized systems. The role of colleagues was reported more as a facilitator in decentralized systems than in two-tier systems, whereas the role of the head nurse as facilitating factor was reported less. An overview of the data and statistical analysis can be found in Table 2.

Study Limitations
The main limitations of the study that should be addressed are the conceptual model of the interview guide, the analyses with non-transcription, and the quantification of qualitative data.

As mentioned above, using the contingency model (Van Linge, 2006) and results from previous studies could endanger our interview guide as being "leading." By enhancing researcher's triangulation and adding open-ended questions, new barriers and facilitators were also found, showing that our strategy to prevent possible bias was effective. The use of a conceptual framework was perhaps not a limitation because we acknowledge that conceptual frameworks are however limited. The contingency model of Van Linge (2006) includes four factors, but research has shown that also history and social dynamics play an important role and that the influence of electronic aids and resources increases (Schultz & Kitson, 2010). Therefore, these identified elements cannot be seen as exhaustive.

Furthermore, the design and methods of this study did not fit a classic, more conservative qualitative paradigm (Malterud, 2001). The interviews were not transcribed verbatim, a central element to safeguarding qualitative data analysis (MacLean, Meyer, & Estable, 2004). Robust transcription is claimed to provide more objective data as grammar is corrected, white noise is removed, and nonstandard language can be transformed (Oliver, Serovich, & Mason, 2005). Also, it is less common to quantify qualitative data. Still, due to the number of interviews and the goal of the study, verbatim transcription was not feasible nor advisable and a flexible approach for analyzing text data was needed. The method of direct content analysis allowed such an approach and fitted the study setup (Hsieh & Shannon, 2005). How the choices for non-transcription and quantification are judged depends on the perspective of the beholder and on which side of the debate he or she stands. In either case,

Table 3. Difference Between the Percentages of Nurses in Each Nursing Care Systems Reporting Elements as Barriers and Facilitators

Element	Total, %			Decentralized (DC), %			Two-tier (TT), %			Centralized (C), %			p Values			
	Barrier	N/A	Facilitator	Barrier	N/A	Facilitator	Barrier	N/A	Facilitator	Barrier	N/A	Facilitator	Overall	C/TT	C/DC	TT/DC
Patient participation	70.8	24.5	4.7	44.8	55.2	–	82.1	5.1	12.8	78.9	21.1	–	<.001*	0.013*	0.004*	<0.001*
Loss of socializing, collegiality and overview	64.2	35.8	–	24.1	75.9	–	64.1	35.9	–	94.7	5.3	–	<.001*	0.001*	<0.001*	0.001*
Confidentiality	51.9	48.1	–	62.1	37.9	–	43.6	56.4	–	52.6	47.4	–	.319	0.427	0.440	0.132
Patient's competence	41.5	22.6	35.8	20.7	20.7	85.6	41.	20.5	38.5	50.0	41.7	15.8	.006*	0.081	0.001*	0.186
Nurse–physician relation	39.6	45.3	15.1	24.1	51.7	24.1	30.8	53.8	15.4	54.8	31.6	7.9	.017*	0.624	0.009*	0.032
Time for the handover	23.6	63.2	13.2	–	82.8	17.2	15.4	61.5	23.1	50.0	50.0	–	<.001*	<0.001*	<0.001*	0.55
Role of colleagues	20.8	74.5	4.7	–	82.8	17.2	12.8	87.2	–	44.7	55.3	–	<.001*	0.002*	<0.001*	0.005*
Head nurse's role	17.0	58.5	24.5	–	82.8	17.2	–	53.8	46.2	47.4	44.7	7.9	<.001*	<0.001*	<0.001*	0.013*
Hospital processes	16.0	84.0	–	–	100.0	–	–	100.0	–	44.7	55.3	–	<.001*	<0.001*	<0.001*	1.000
Perception toward bedside handovers	15.4	31.7	82.9	–	17.2	82.8	32.4	32.4	35.1	25.0	48.5	32.7	<.001*	0.068	0.008*	<0.001*
Structured handover	–	21.7	78.3	–	20.7	79.3	–	19.9	82.1	–	26.3	73.7	.665	0.376	0.593	0.776

*Significant at the .05 level.

reflecting on this choice is necessary as deviating from classic research paradigms can offer disruptive perspectives, and creates new insights and understandings but also endangers reliability (Morgan, 2014). To assure reliability, a model for analyzing non-transcribed interviews (Halcomb & Davidson, 2006) was used, which emphasizes the importance of concurrent audiotaping and note-taking followed by a reflexive, iterative process with multiple researchers listening to interviews in different phases. Furthermore, universal criteria to support rigor were used: self-reflexivity about the researcher's subjective values; transparency about the methods; and procedures that fit the stated goal (Tracy, 2010). By applying these criteria, we hope to have enabled the possibility of disruptive insights in a sound methodological manner.

DISCUSSION

This study adds three insights for nursing practice concerning bedside handovers. This study identified nine barriers and facilitators for the use of bedside handovers that have been reported in nursing literature before. With our study, the generalizability of these elements is (again) confirmed. This study also adds new barriers or facilitators to the knowledge on bedside handovers: (a) a possible loss of opportunities for socializing, collegiality, and overview; (b) head nurse's role; and (c) role of colleagues. These new elements show that changing to bedside handovers is more than changing the handover model, but could also affect the professional and social culture on a ward (Kitson et al., 2014). These changes may however be not always embraced by or in the benefit of nurses, which contrast with other evidence about the benefits of bedside handovers for nurses (Gregory et al., 2014).

Furthermore, this study identified an association between the barriers and facilitators for the use of bedside handovers and the nursing care system, as suggested before in literature (Anderson et al., 2015; Tobiano et al., 2017). Therefore, correctly identifying the care model on a ward is important when preparing for the implementation of bedside handover, to ensure congruency (Sjetne et al., 2010). Our study shows that such incongruences could result in an unexpected number of barriers when implementing bedside handover.

Nurses in all care systems referred to patient participation as a barrier, which is conflicting with the idea of patient participation as an essential element of bedside handovers (Anderson & Mangino, 2006). This attitude was also identified in previous studies (Spinks, Chaboyer, Bucknall, Tobiano, & Whitty, 2015; Tobiano et al., 2017). This could provide an explanation why devolved nursing systems could be more fertile for using bedside handovers. Our specific findings about patient competence, patient participation, and perceptions about the bedside handover suggest that a more patient-centered culture has a higher chance of being found in decentralized nursing systems.

In two-tier or centralized nursing care systems, team spirit is of significant importance to "get the job done." And responsibility and accountability levels for patients are much lower in such systems (Fairbrother, Jones, & Rivas, 2010).

These findings could also inform the implementation and use of interprofessional bedside rounds. During such rounds, the attending physician performs the ward rounds at the patient's bedside together with the other assigned healthcare workers, like nurses (Ratelle et al., 2018). Although not similar to bedside handovers, the same principles apply: informing, discussing, and involving the patient by relocating the ward round in proximity of the patient. As a consequence, many barriers reported in this study could also be present: reluctance to patient participation, a possible breach of patient confidentiality, questions about the patient's competence, the importance of a good nurse–physician relation, time constraints, and the interfering hospital processes. Because research on the barriers and facilitators of bedside interdisciplinary rounds is still in an early stage (Ratelle et al., 2018), these results could provide a deductive framework for further studies.

IMPLICATIONS FOR FUTURE RESEARCH

This study hypothesized that nursing systems could influence the success of implementing bedside handovers, and provides indications that a decentralized nursing care system has perhaps more chances for successfully implementing bedside handovers. However, it is too simplistic to link the success of changing the handover solely to the actually used nursing system. The traditional handover—where nurses sit together in the nursing station—has a tradition in nursing and has not changed drastically throughout the years (Kitson et al., 2014). Moreover, it is also related to the hospital's organization and the willingness of major players such as physicians to change (Anderson et al., 2015; Kitson et al., 2014; Tobiano et al., 2017). Therefore, it would be valuable to study the underlying motives for using one specific nursing care system. Several possible themes have surfaced in the results of this study, but these themes could benefit from further and specific analysis. Future research should look into topics like control, professionalism, responsibility, and accountability. Finally, as mentioned before, the impact of bedside handovers on nurses' well-being should be studied as its implementation does change social and professional culture on nursing wards.

CONCLUSIONS

The aim of this study was to determine whether there was an association between the nursing care system on a ward and the barriers and facilitators for bedside handover. This study adds three useful insights for those considering the implementation of bedside handovers in practice. First, this study reports barriers and facilitators for the use of

bedside handovers already known in international literature. Therefore, this study confirms the commonalities between countries. Second, this study identified three as yet not identified barriers for the implementation of bedside handovers: (a) loss of socializing, collegiality, and overview; (b) head nurse's role; and (c) role of colleagues. Third, this study showed that less barriers and more facilitators for the implementation of bedside handovers are present on wards with a decentralized nursing care system. This indicates that implementing bedside handover could potentially be more challenging on wards with a two-tier of centralized care system. **WVN**

🔗 LINKING EVIDENCE TO ACTION

- There are many barriers for implementing the bedside handover in practice. This study indicates that barriers for the use of bedside handovers are linked to a ward's nursing care system.

- Next to identifying new barriers for the use of bedside handover, this study suggests that nurses working in decentralized nursing care systems may encounter fewer barriers toward bedside handovers than nurses working in other systems.

- Next to reported trend of fewer barriers, nurses working in decentralized nursing care systems self-report more facilitators for using bedside handovers.

- Implementing bedside handover potentially is more challenging on wards with a two-tier of centralized care system.

Author information

Simon Malfait, Nursing Researcher, Ghent University Hospital, Ghent, Belgium; Department of Public Health, University Center for Nursing and Midwifery, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium; Kristof Eeckloo, Professor, Head of Strategic Policy Cell, Ghent University Hospital, Ghent, Belgium; Department of Public Health, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium; Wim Van Biesen, Professor, Head of the Renal Department, Chair of European Renal Best Practice, Ghent University Hospital, Ghent, Belgium; Department of Internal Medicine, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium; Ann Van Hecke, Professor, Staff Member of the Nursing Department, Ghent University Hospital, Ghent, Belgium; Department of Public Health, University Center for Nursing and Midwifery, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium;

Address correspondence to Dr. Simon Malfait, UZ Gent, K11, 2nd floor, C. Heymanslaan 10, Ghent B-9000, Belgium; Simon.Malfait@UZGent.be

References

Adams, A., Bond, S., & Hale, C. A. (1998). Nursing organizational practice and its relationship with other features of ward organization and job satisfaction. *Journal of Advanced Nursing*, 27(6), 1212–1222.

Anderson, C., & Mangino, R. (2006). Nurse shift report: Who says you can't talk in front of the patient? *Nursing Administration Quarterly*, 30(2), 112–122.

Anderson, J., Malone, L., Shanahan, K., & Manning, J. (2015). Nursing bedside clinical handover—An integrated review of issues and tools. *Journal of Clinical Nursing*, 24(5–6), 662–671. https://doi.org/10.1111/jocn.12706.

Fairbrother, G., Jones, A., & Rivas, K. (2010). Changing model of nursing care from individual patient allocation to team nursing in the acute inpatient environment. *Contemporary Nurse*, 35(2), 202–220. https://doi.org/10.5172/conu.2010.35.2.202.

Ferguson, T. D., & Howell, T. L. (2015). Bedside reporting: protocols for improving patient care. *Nursing Clinics*, 50(4), 735–747.

Gregory, S., Tan, D., Tilrico, M., Edwardson, N., & Gamm, L. (2014). Bedside shift reports: What does the evidence say? *Journal of Nursing Administration*, 44(10), 541–545. https://doi.org/10.1097/NNA.0000000000000115.

Grol, R., Wensing, M., Eccles, M., & Davis, D. (2013). *Improving patient care: The implementation of change in health care*. West Sussex, UK: Wiley.

Hagman, J., Oman, K., Kleiner, C., Johnson, E., & Nordhagen, J. (2013). Lessons learned from the implementation of a bedside handoff model. *Journal of Nursing Administration*, 43(6), 315–317. https://doi.org/10.1097/NNA.0b013e3182942afb.

Halcomb, E. J., & Davidson, P. M. (2006). Is verbatim transcription of interview data always necessary? *Applied Nursing Research*, 19(1), 38–42. https://doi.org/10.1016/j.apnr.2005.06.001.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. https://doi.org/10.1177/1049732305276687.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: Institute of Medicine (US) Committee on Quality of Health Care in America.

Kitson, A. L., Muntlin Athlin, A., Elliott, J., & Cant, M. L. (2014). What's my line? A narrative review and synthesis of the literature on registered nurses' communication behaviours between shifts. *Journal of Advanced Nursing*, 70(6), 1228–1242. https://doi.org/10.1111/jan.12321.

MacLean, L. M., Meyer, M., & Estable, A. (2004). Improving accuracy of transcripts in qualitative research. *Qualitative Health Research*, 14(1), 113–123. https://doi.org/10.1177/1049732303259804.

Malfait, S., Eeckloo, K., Lust, E., Van Biesen, W., & Van Hecke, A. (2017). Feasibility, appropriateness, meaningfulness and effectiveness of patient participation at bedside shift reporting: Mixed-method research protocol. *Journal of Advanced Nursing*, 73(2), 482–494. https://doi.org/10.1111/jan.13154.

Malterud, K. (2001). The art and science of clinical knowledge: Evidence beyond measures and numbers. *The Lancet*, 358(9279), 397–400.

Mardis, T., Mardis, M., Davis, J., Justice, E. M., Riley Holdinsky, S., Donnelly, J., Ragozine-Bush, H., & Riesenberg, L. A. (2016). Bedside shift-to-shift handoffs: A systematic review of the literature. *Journal of Nursing Care Quality*, 31(1), 54–60. https://doi.org/10.1097/NCQ.0000000000000142.

Morgan, D. L. (2014). Pragmatism as a paradigm for social research. *Qualitative Inquiry*, 20(8), 1045–1053. https://doi.org/10.1177/1077800413513733.

Oliver, D. G., Serovich, J. M., & Mason, T. L. (2005). Constraints and opportunities with interview transcription: Towards reflection in qualitative research. *Social Forces*, 84(2), 1273–1289.

Ratelle, J. T., Sawatsky, A. P., Kashiwagi, D. T., Schouten, W. M., Erwin, P. J., Gonzalo, J. D., Beckman, T. J., & West, C. P. (2018). Implementing bedside rounds to improve patient-centred outcomes: A systematic review. *BMJ Quality & Safety*. https://doi.org/10.1136/bmjqs-2017-007778.

Schultz, T. J., & Kitson, A. L. (2010). Measuring the context of care in an Australian acute care hospital: a nurse survey. *Implementation Science*, 5(1), 60. https://doi.org/10.1186/1748-5908-5-60.

Sjetne, I. S., Helgeland, J., & Stavem, K. (2010). Classifying nursing organization in wards in Norwegian hospitals: Self-identification versus observation. *BMC Nursing*, 9, 3. https://doi.org/10.1186/1472-6955-9-3.

Spinks, J., Chaboyer, W., Bucknall, T., Tobiano, G., & Whitty, J. A. (2015). Patient and nurse preferences for nurse handover-using preferences to inform policy: A discrete choice experiment protocol. *British Medical Journal Open*, 5(11), e008941. https://doi.org/10.1136/bmjopen-2015-008941.

Tobiano, G., Bucknall, T., Sladdin, I., Whitty, J. A., & Chaboyer, W. (2018). Patient participation in nursing bedside handover: A systematic mixed-methods review. *International Journal of Nursing Studies*, 77, 243–258. https://doi.org/10.1016/j.ijnurstu.2017.10.014.

Tobiano, G., Whitty, J. A., Bucknall, T., & Chaboyer, W. (2017). Nurses' perceived barriers to bedside handover and their implication for clinical practice. *Worldviews on Evidence-Based Nursing*, 14(5), 343–349. https://doi.org/10.1111/wvn.12241.

Tracy, S. J. (2010). Qualitative quality: Eight "Big-Tent" criteria for excellent qualitative research. *Qualitative Inquiry*, 16(10), 837–851. https://doi.org/10.1177/1077800410383121.

van Achterberg, T. (2013). Nursing implementation science: 10 ways forward. *International Journal of Nursing Studies*, 50(4), 445–447. https://doi.org/10.1016/j.ijnurstu.2013.02.004.

Van Linge R. (2006). *Innoveren in de gezondheidszorg: Theorie, praktijk en onderzoek* [Innovation in health care: Theory, practice and research]. Maarssen, Netherlands: Elsevier.

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article at the publisher's web site:

Table S1. Interview guide.
Table S2. An overview of the characteristics of the participating wards and the interviews conducted.
Table S3. Data management steps in phase 2 of the study.
Table S4. Questionnaire/checklist for determining the care system on a ward.