Griffith UNIVERSITY

**Research Centre for Clinical and Community Practice Innovation**

# Bedside Nursing Handover and Multidisciplinary Whiteboard Assisted Communication

## Public Report on Pilot Study
**as part of the**
## National Clinical Handover Initiative

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**Provided by the Research Centre for Clinical and Community Practice Innovation Griffith University for:**

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

**September 2008**
**RFT 376/0607**

**Acknowledgements:**

This research has benefited from the assistance of the following organisations:

- The Australian Commission on Safety and Quality in Health Care
- Ipswich Hospital, Queensland
- Peel Health Campus, Western Australia
- Gold Coast Health Service District, Queensland
- Health care practitioners from:
  - Ipswich Hospital
  - Peel Health Campus,
  - Gold Coast Hospital

**Suggested citation:**

Chaboyer, W. McMurray, A. & Wallis, M. (2008). Bedside nursing handover and multidisciplinary whiteboard assisted communication- public report on pilot study. Brisbane: Research Centre for Clinical and Community Practice Innovation, Griffith University.

**Disclaimer:**

This pilot study was funded by the Australian Commission on Safety and Quality in Health Care (ACSQHC) as part of the National Clinical Handover Initiative. Each study within the Initiative aimed to design transferable improvement tools and solutions for handover that could be localised to different contexts. This Public Report provides a summary of the pilot study undertaken; for additional details please contact the Commission.

The Commission acknowledges that the information contained in this one-year study presents initial developments and supports longer-term research and evaluation. The information presented here does not necessarily reflect the views of the Commission, nor can its accuracy be guaranteed.

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## ABSTRACT

Communication of patient information, both within and between professional groups is key to ensuring patient safety and continuity of care. The aims of this project were to describe the structures, processes and outcomes of bedside nursing handover and whiteboard assisted communication as two strategies to improve the type and accuracy of information communicated among health professionals. A total of 532 structured observations and 34 in-depth interviews in six wards in two hospitals were conducted to identify the structures, processes and outcomes of bedside nursing handover. A total of 45 hours of structured observation and 11 in-depth interviews were conducted at another hospital to identify the structures, processes and outcomes of the use of whiteboards to assist multidisciplinary communication.

Structural components of bedside handover included the staff, the patients, the handover sheet and the bedside chart. Process components focused on preparing the patient for the handover and updating the handover sheet, how the handover was actually conducted and what occurred after the handover, when staff started at variable times and thus missed the bedside handover. A number of outcomes emerged from the in-depth interviews. These have been categorised as improving accuracy, promoting patient centred care, and service delivery improvements.

In terms of the whiteboard assisted communication, the structural components involved the physical features of the whiteboard and the staff who used it. The processes used to assist communication were dependent on the type of ward that was studied and were also dependent on the degree to which the multidisciplinary group had input into the planning for the use of the whiteboard. When successfully implemented, whiteboards were perceived to be useful prompts for referral and timely discharge preparation for patients, resulting in reduced length of stay and fewer estimated post-discharge problems. Unsuccessfully implemented, it was seen as an imposition of management and a cause of conflict between members of the multidisciplinary team.

# EXECUTIVE SUMMARY

## Project Aims

The aims of this project were to analyse bedside nursing handover and whiteboard assisted communication as two strategies to improve the type and accuracy of information communicated among health professionals. This included: describing the core aspects of the Bedside Handover and Whiteboard Assisted Communication, such as their structures, processes and outcomes; assessing nurses' perceptions of the influences on the accuracy of bedside handover; and providing recommendations for Bedside Handover and Whiteboard Assisted Communication in the form of Standard Operating Protocols (SOPs).

## Major Findings

### Bedside Nursing Handover

A total of 532 bedside handover cases were observed at two hospitals: Ipswich Hospital, QLD (n = 263) and Peel Health Campus, WA (n = 269). Each handover took on average 76 (±51) sec. A formal structure for the handover - Situation, Background Assessment and Recommendations (SBAR) - was only used at Ipswich Hospital, and was not used consistently, with this information being provided 45% - 65% of the time. Overall, almost half of the handovers actively involved patients.

A total of 34 in-depth interviews were undertaken with nursing staff who had experience in using bedside handover and the analysis was underpinned by the Structure – Process – Outcome (Donabedian 1980) model of quality care. Structural components explored in the interviews included: staff; patients; the handover sheet; and the bedside chart. Process components were considered in relation to what occurred prior to, during and after handover. Prior to handover, patient allocation was completed and the handover sheet was updated and printed for staff. Patients were also informed that the handover would commence shortly and visitors (other than family) were asked to wait in the lounge until the handover was completed. During handover, the outgoing staff introduced the patient to oncoming staff, and provided a report of the patient's progress, at times using the SBAR format. Led by the oncoming staff, a safety scan was conducted and the medication bedside chart was checked. Sensitive information was conveyed away from the bedside. After the handover, staff who started at variable times were assigned to established teams and the handover sheet was used as a guide. They received a short handover from the team leader and undertook tasks within their team until the next handover occurred. A number of outcomes were identified in the in-depth interviews. These have been categorised as improving accuracy, promoting patient-centred care, and service delivery improvements.

### Whiteboard Assisted Communication

Structured observation of whiteboard assisted communication occurred on four wards at Gold Coast Hospital, QLD, for a total of 45 hours over 2 months. Examination of all the whiteboards in use at the hospital and informal discussions with staff were held. In-depth interviews with 11 staff were undertaken and this analysis also used the Structure - Process - Outcome model of quality care.

Structural components involved the actual whiteboard and the staff. All whiteboards were located in a strategic position situated in a high traffic area to allow mobile health care workers easy view and access. Tools such as magnets, coloured pens, a legend, and erasers were available to be used on the whiteboards. Some form of concurrent permanent documentation, either paper or electronic, was also developed to ensure that valuable information was not lost when patients were transferred to other units. Members of the multidisciplinary health team used the whiteboard to varying degrees.

In terms of the processes used, where the whiteboards were successfully integrated as a team communication tool, nurses and allied health staff inspected the whiteboards at the commencement and completion of the shift, and at times during the shift as well. These staff periodically updated the information on the whiteboard. Expected date of discharge was noted on the whiteboards to facilitate the referral processes necessary to support timely discharge. Team communication and coordination of care varied according to settings. In the acute day setting the whiteboard was constantly inspected, with staff mapping and planning the patient's care until discharge. Ward rounds were physically located at the whiteboard in the acute day setting and facilitated coordination of the flow of patient care. Some whiteboards were not integrated at all into team meetings. In these instances, there was no set time of day when the whiteboard was referred to or updated. It appears that the whiteboard as a communication tool was dependent on the contribution of individual staff members and their use of time.

In terms of outcomes, when successfully implemented, whiteboards were perceived to be useful prompts for referral and timely discharge preparation for patients resulting in reduced length of stay and fewer estimated post-discharge problems. Unsuccessfully implemented, it was seen as an imposition of management and a cause of conflict between members of the multidisciplinary team.

## BACKGROUND

This research focused on two types of communication: 1) Bedside Nursing Handover; and 2) Whiteboard Assisted Communication. A recent literature review on clinical handover has been published (Wong et al. 2008). Both bedside nursing handover and whiteboard assisted communication are currently used in some Australian hospitals and both have the potential to achieve significant, sustained and measurable reductions in communication gaps, and facilitate continuity of care. The project team analysed and reported on bedside nursing handover and whiteboard assisted communication, including their core structural and process aspects, contextual and personnel variations and outcomes as perceived by the research participants. The findings of the project were used to determine standardized operating protocols (SOPs) for these activities.

## AIMS

The aims of this project were to analyse bedside nursing handover and whiteboard assisted communication as two strategies to improve the type and accuracy of information communicated among health professionals. Specifically the objectives of this project were to:

1. Describe the core aspects of the Bedside Handover and Whiteboard Assisted Communication including their structures and processes;

2. Identify contextual and personnel variations in Bedside Handover and Whiteboard Assisted Communication;
3. Assess nurses' perceptions of the influences on the accuracy of Bedside Handover;
4. Evaluate the improvements made by Bedside Handover and Whiteboard Assisted Communication in terms of patient outcomes and staff perceptions of the accuracy and adequacy of communication; and
5. Provide recommendations for Bedside Handover and Whiteboard Assisted Communication in the form of Standard Operating Protocols (SOPs).

## CONCEPTUAL FRAMEWORK & METHOD

The Nursing Role Effectiveness Model (Pringle & Doran, 2003), which is underpinned by the Donabedian (1980) Structure – Process - Outcome model of quality care provides the foundation to this project. Figure 1 illustrates how this project applied the model for bedside nursing handover. This model provided focus and direction for data collection, analysis and structuring the findings.

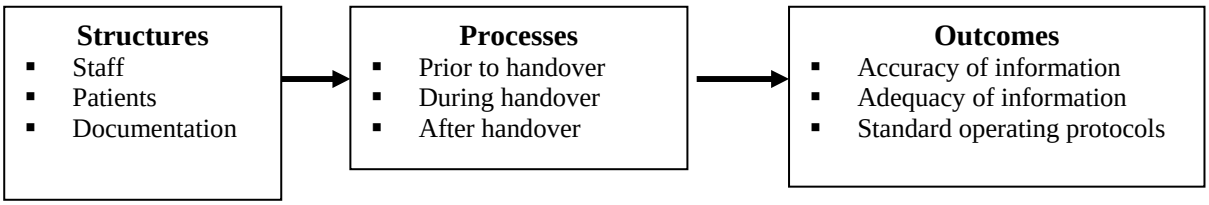


Figure 1: Conceptual Model for the Project

Case Study Method

Case studies in three hospitals were used. At two hospitals, Ipswich (QLD) and Peel Health Campus (WA), the focus of the case studies was bedside handover. At Gold Coast Hospital (QLD), the focus was on whiteboard assisted communication.

Three wards at the Ipswich Hospital and three wards at Peel Health Campus were recruited to participate in the bedside handover component of the study. In each of these six wards, five days of structured observation of bedside handover was undertaken (30 days in total) and in-depth interviews with 34 nursing staff were conducted. Importantly, at Ipswich Hospital, bedside handover had been in place for almost two years, whereas at Peel Health, it had only recently been adopted as a demonstration project. While our study did not involve retrospective analysis of the implementation phase, we did gain an understanding of some implementation issues. An Expert Advisory Panel (EAP) panel at each hospital assisted the project team in implementing the project, interpreting the findings and in developing the SOPs. The EAP members also assisted our understanding of issues surrounding implementation.

Structured observation of whiteboard assisted communication occurred on four wards at Gold Coast Hospital, for a total of 45 hours over 2 months. All the whiteboards in use at the hospital were examined and informal discussions with staff were held. 12 staff were interviewed in-depth regarding their use and views about the effectiveness of whiteboard assisted communication.

Prior to the main study, pilot studies were undertaken at all sites to assess the feasibility of the proposed data collection and refine the data collection instrument and interview questions.

## BEDSIDE NURSING HANDOVER FINDINGS

Ipswich Hospital

Structured observation of the afternoon handover process over five days was completed in the three study wards (one rehabilitation and two medical wards). A total of 263 bedside handovers were observed and in-depth interviews with 15 nursing staff were undertaken.

At Ipswich Hospital, prior to implementing bedside handover, the Nursing Director undertook a review of strategies to improve nursing handover as part of a broader agenda to improve nursing service delivery. Next, the nursing leadership team, consisting of the Nursing Director and the Nurse Unit Managers (NUMs), developed a plan to initiate bedside handover. These plans used Lewin's 3-Step Model for Change: unfreezing, moving and refreezing (Burns, 2004). This historical review of bedside handover has been published elsewhere (Chaboyer et al, 2009). Importantly, almost two years after its implementation, both observational and interview data demonstrated that that staff were committed to bedside handover. It is likely that this commitment has influenced our research findings.

Peel Health Campus

Structured observation of the afternoon handover process on three wards over five days was completed. A total of 269 bedside handovers were observed and in-depth interviews with 19 nursing staff were undertaken. Bedside handover was only temporarily used at Peel Health Campus.

The bedside handover findings are divided into two sections: firstly, the structured observations and secondly, the interview findings are presented using the Structure - Process - Outcome framework.

### 1) Structured Observations

Table 1 provides an overview of the bedside handover structured observations. A total of 532 cases had been observed at two hospitals during the handover, which included Ipswich Hospital (n = 263) and Peel Health Campus (n = 269). These took on average 76 (±51) sec. A formal structure for the handover: Situation - Background Assessment - Recommendations (SBAR), was only used at Ipswich, and was not used consistently, with this information being provided 45% - 65% of the time.

From interviews and EAP discussion, we identified that SBAR was more likely to be used when staff had not previously cared for the patient or if the patients' condition changed. That is, because nurses often work consecutive days, SBAR would be used on the first and second day, but by the third day, a less structured approach was used, with general 'updates' given. Overall, almost half of the handovers actively involved patients. Interview participants and EAP members described situations when the patient would not actively participate. Some of these situations included when the patient was asleep or comatose, when the patient was hard of hearing and when the patient had difficulty understanding or speaking English.

Table 1: Characteristics of Bedside Handover

| | **Ipswich Hospital** Frequency (%) n = 263 | **Peel Health Campus** Frequency (%) n = 269 | **Total** Frequency (%) n = 532 |
|---|---|---|---|
| **Type of Ward** | | | |
| Medical | 186 (71%) | 103 (38%) | 289 (54%) |
| Surgical | N/A | 93 (35%) | 93 (17%) |
| Combined | N/A | 73 (27%) | 73 (14%) |
| Rehabilitation | 77 (29%) | Not applicable | 77 (14%) |
| **Report Content** | | | |
| Situation | 171 (65%) | Not used | Not applicable |
| Background | 148 (56%) | Not used | Not applicable |
| Assessment | 118 (45%) | Not used | Not applicable |
| Recommendations | 156 (59%) | Not used | Not applicable |
| **Active patient interactions** | 85 (32%) | 154 (57%) | 239 (45%) |
| | Mean (SD) | Mean (SD) | Mean (SD) |
| **Number of staff at the bedside** | 4.0 (1.23) | 3.7 (1.17) | 3.8 (1.2) |
| **Time for Handover** | 1.30 (0.75) min 78 (45) sec | 1.23 (0.95) min 74 (57) sec | 1.26 (0.86) min 76 (51) sec |

Team nursing was practised on all wards: the staff present at the bedside for handover included the team leader from the outgoing staff and all members of the oncoming team. At Peel Health Campus, some nurses wanted to be present at all patient handovers, not only the ones to which their team was assigned. This proved to be unmanageable, because when it was trialled, it extended the time it took to complete the handover and increased the number of staff at each bedside to an impractical size. Table 2 details the number of participants involved in bedside handover observations. For the Ipswich Hospital sample, the oncoming team was mostly comprised of both RNs and ENs. The outgoing staff were mostly RNs. For the Peel Health sample, the oncoming coordinators most frequently attended the handover, and the majority of outgoing staff who attended were RNs and coordinators. Interestingly, in over 10% of the handovers at Peel Health, ENs were the only outgoing staff who attended, indicating that they provided the handover themselves.

Table 2: Bedside Handover Participants (observations)

| Staff at Bedside During Handover | Ipswich Hospital n (%) | Peel Health n (%) |
|---|---|---|
| **Cases** | 263 | 269 |
| **Outgoing staff** | | |
| Coordinator only | 0 | 9 (3.3%) |
| Coordinator + other | 0 | 87 (32.3%) |
| Coordinator + other + SN | 0 | 13 (4.8%) |
| RN only | 144 (54.8%) | 88 (32.7%) |
| EN only | 2(0.8%) | 32 (11.9%) |
| RN + EN | 9 (3.4%) | 0 |
| RN + EN + SN | 28 (10.6%) | 0 |
| RN + other | 18 (6.8%) | 0 |
| RN+SN+other | 0 | 0 |
| RN + EN+other | 8 (3.0%) | 27 (10.0%) |
| Student only | | 6 (2.2%) |
| Missing data | 21 (8.0%) | 7 (2.6%) |
| **Oncoming staff** | | |
| Coordinator | 0 | 57 (21.2%) |
| Coordinator + other | 20 (7.6%) | 122 (45.4%) |
| Coordinator + other + student | 2 (0.8%) | 63 (23.4%) |
| RN only | 39 (14.8%) | 9 (3.3%) |
| EN only | 8 (3.0%) | 6 (2.2%) |
| RN + EN | 78 (29.1%) | 0 |
| RN + EN + Student Nurse (SN) | 14 (5.3%) | 0 |
| RN + other | 72 (27.4%) | 0 |
| RN+SN+other | 4 (1.5%) | 0 |
| RN + EN+other | 26 (9.9%) | 6 (2.2%) |

## 2) In-Depth Interviews

A total of 34 in-depth interviews with nursing staff who had experience in using bedside handover were undertaken. The Nursing Role Effectiveness Model was used as a guiding framework to analyse the data. The research findings are presented next using this Structure - Process - Outcome framework.

## ***Structures***

Staff

In the wards studied, a team nursing model was used with 2-3 teams of nursing staff per ward. Handover occurred between these smaller teams and not as a 'whole of ward' handover. The team leader of the outgoing staff provided handover, which limited the number of people at the bedside. All of the oncoming team attended the handover. The shift co-ordinator (charge nurse) attended some of the smaller team handovers and received a short report from the oncoming team leaders in teams where bedside handover was missed. At other times, a shift co-ordinator to shift co-ordinator report occurred. For successful implementation on wards that use primary nursing as a model for patient care, it is likely that some sort of general handover where all staff attendance would be required, however this proposition was not examined in our research.

Patients

Patients were encouraged to participate in the handover unless they were asleep, hard of hearing or if their medical condition precluded participation, such as those who were confused, comatose or in isolation, or those with sensitive issues (e.g. attempted suicide).

Handover Sheet

A computer generated handover sheet containing information about all patients on the ward was used and appears to be a key tool for successful bedside handover. This sheet contained information such as age, gender, admitting diagnosis and medical history, social history, discharge planning, any high priority clinical changes in condition, and sensitive information such as HIV status. It was updated by team members or the charge nurse at intermittent intervals, the most recent being just prior to handover, and distributed to oncoming staff. From the interview data and EAP comments, it is likely that one individual, such as the team leader (not the charge person), should be assigned to complete this task.

Bedside chart

Components of the health record, consisting of the observation record (VS etc), medication record, fluid balance sheet and risk assessment forms (falls, pressure ulcers) were at the bedside for use during the handover. The bedside chart appeared to be another key tool in bedside handover, and its review was an aspect of the safety scan (described in the next section).

## ***Processes***

Figure 2 provides an overview of the processes used for bedside handover. Process findings are presented sequentially: prior to, during and after handover. It is important to note that these processes specifically focus on the handover of patient information at the bedside. There is other information, not related to patients, that is often shared during handover, such as sick calls and bed availability. This other information is generally handed over from the outgoing shift coordinator to the oncoming shift coordinator prior to bedside handover.

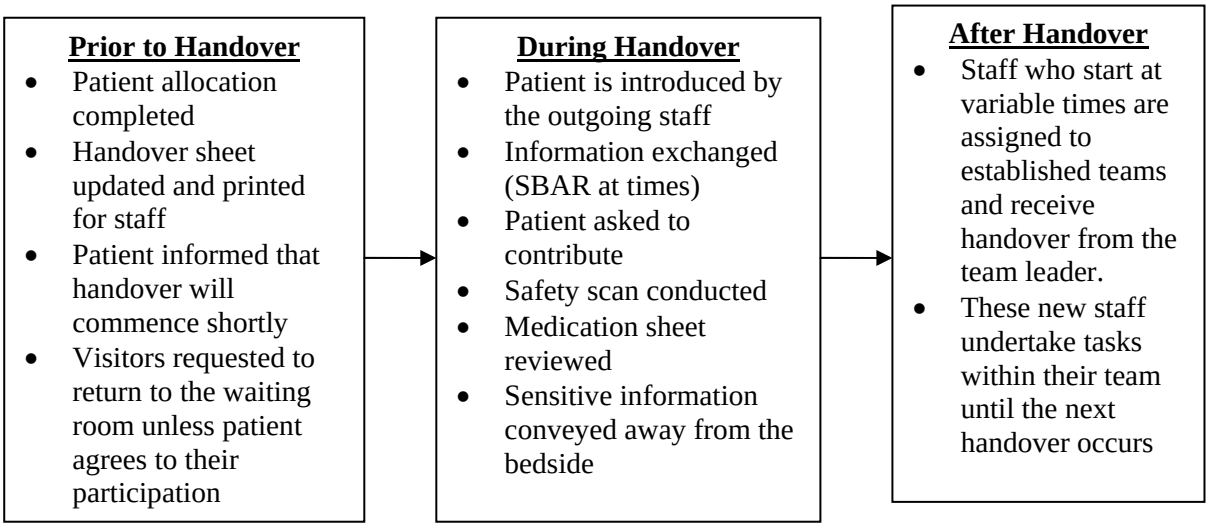


Figure 2: Summary of the Bedside Handover Process

Prior to Handover

Patient allocation was completed using a computerised system at both hospitals, which also generated a handover sheet. The patient was informed about the shift change and that the handover would occur at the patient's bedside. Visitors were requested to wait in the lounge area during handover, but family members were allowed to stay at the bedside with the patient's permission.

During Handover

The patient was introduced to oncoming staff by the outgoing staff. The following information was provided by the outgoing staff during the handover: date and reason for admission, medical history, tests and other investigations, treatments (such as physiotherapy), activities of daily living, nursing care plan (needs, problems, responses to nursing interventions, discharge planning), changes in the patient's condition, and any pending tests or specimen collections due on the upcoming shift. The patient's presence acted as a visual prompt for outgoing nurses to remember information to report and for oncoming nurses to pose questions. Oncoming staff asked questions of outgoing staff and of patients. Patients were also invited to comment or ask questions. Medical jargon was kept to the minimum required. Sensitive information was either handed over in a private location following completion of the bedside handover, or staff were directed to the handover sheet or chart for this information. During the bedside handover, oncoming staff undertook a safety check of equipment (call bell in reach, suction and oxygen equipment, dressings, drains, intravenous sites, infusions and pumps) and a medication record check.

After Handover

Staff who started at variable times were assigned to a team. They received a short handover from their team leader. They used the handover sheet as a guide and were assigned 'tasks' until the next handover occurred. It was apparent that bedside handover was difficult when a large proportion of staff did not start at a common time. It appears that bedside handover can accommodate one staff member, in a team of three to four, starting at a different time, but with more than one staff member starting at a different time, inefficient duplication of the handover may occur.

***Outcomes***

A number of outcomes emerged from the in-depth interviews. They have been categorised as improving accuracy, promoting patient centred care, and service delivery improvements. A description and exemplars of nurses' comments are provided in Table 3:

Table 3: Nurses' Perceptions of the Outcomes of Bedside Handover

| Outcome | Description | Exemplar |
|---|---|---|
| Improving accuracy | • A visual view of the patient prompts recall throughout the shift.<br>• Observational data is more precise – visualising intravenous fluids, drains, assessment of patient breathing, skin colour etc.<br>• Bedside handover strengthens accountability for accurate information<br>• Improves communication – staff tend to stick to relevant information in front of patients. | • We get more accurate information and have a better understanding of our patients.<br>• It improves our communication as it forces you to focus on what you're supposed to be doing for the patient, and explaining it in a professional manner |
| Promoting patient-centred care | • Patients are made to feel they are part of the process of care. | • It is an opportunity for real patient engagement. |
| Service delivery improvements | • Continuity of care is improved.<br>• Care is more holistic as it is informed by input from the patient.<br>• Improves communication – staff tend to stick to relevant information in front of patients.<br>• Clinical knowledge is more consistent and transparent, which provides a basis for teaching junior staff and students<br>• Better preparation for handover – staff try to appear prepared and efficient, which improves patient confidence in caregivers | • We are happy because handover is quicker<br>• There are more opportunities for teaching |

Implementation Issues

- The move to bedside handover needs to be driven from management, with strong leadership and rationalisation of the change and the way it will be achieved but frontline staff must also be involved.
- Numerous start times make implementation difficult.
- On-going staff training and up-skilling of new staff is necessary.

## WHITEBOARD ASSISTED COMMUNICATION FINDINGS

Structured observation of Whiteboard Assisted Communication occurred on four wards at Gold Coast Hospital for a total of 45 hours of observation over 2 months. All the whiteboards in use at the hospital were examined and informal discussions with staff were held. 12 staff were interviewed in-depth regarding their use and views about the effectiveness of whiteboard assisted communication. The analysis in this part of the study also used the Structure - Process - Outcome framework. Findings from this research have been published (Chaboyer et al, 2009).

### ***Structures***

Whiteboard

All whiteboards were the same size dimensions 280cm horizontally by 200cm vertically. The layout varied in each setting depending on the speciality of the ward. The whiteboards generally were divided into columns for contributions from nursing and allied health team members. All whiteboards were located in a strategic position situated in a high traffic area to allow mobile health care workers easy view and access. The large size provides "at a distance" visual prompt for referral and for tracking of discharge preparation progress. Tools such as magnets, coloured pens, legend, and eraser were available to be used on the whiteboards. Some form of concurrent permanent documentation, either paper or electronic, was also developed to ensure that valuable information was not lost when patients were transferred to other units.

Staff

Members of the multidisciplinary health team use the whiteboard. These professional groups included: nursing staff, physiotherapist, dietician, radiographer, medical staff and quality improvement staff.

### ***Processes***

The observations and interviews demonstrated that there were two distinct processes; preparation for the use of the whiteboards and its actual implementation and use. Participation in this planning from all members of the multidisciplinary team who were expected to use the whiteboard to assist communication appeared to be key for its successful implementation and use. In terms of the preparation, the purpose and structure of the whiteboard content had to be determined. Possible purposes include:

- Coordination of diagnostic testing and health professional referral
- Coordination of discharge planning
- Ensuring patient readiness for discharge
- Quick and easy visual communication of allied health referral
- Visual cue for patients at high risk of adverse events (e.g. falls)

Possible structures include:

- Rows: each bed number
- Columns: patient name, consultant doctor, expected date of discharge (EDD), common allied health referral, diagnostic test bookings, patient risk factors, discharge medications

Other aspects of this preparation included identifying the location for the whiteboard, development of concurrent permanent patient documentation and training of staff. We found that whiteboards should be located in an area where there is easy access for all staff, preferably a high staff traffic area but also somewhere where a number of staff congregating will not impede traffic flow. It should not be located in a staff relaxation area or areas used by the public. In terms of permanent documentation, the teams determined what information was also required to be contained in the patient's record, which primarily seemed to be related to potential patient transfers to other units. The team members considered how the information on the whiteboard related to other documentation and whether this information would be lost if the patient was transferred and its only record was on the whiteboard. A simple one page referral form for each patient which tracked all allied health referral was used by the wards that successfully implemented the whiteboards. The final aspect of preparation involved training staff. Where the whiteboards were integrated into the ward and functioned successfully, all members of the multidisciplinary team who used the whiteboard were trained on its purposes, function and practicalities in a timely fashion.

In terms of its implementation and use, where the whiteboards were successfully integrated as a team communication tool, nurses and allied health staff inspected the whiteboards at the commencement and completion of the shift, and during the shift as well. These staff periodically updated the information on the whiteboard. Expected date of discharge was noted on the whiteboards to facilitate the referral processes necessary to support timely discharge. Team communication and coordination of care varied according to settings. In the acute day setting the white board was constantly inspected with staff mapping and planning the patient's care until discharge. Ward rounds were physically located at the whiteboard in the acute day setting and it facilitated coordination of the flow of patient care. On some wards, the whiteboards were not integrated into normal ward routine and thus appeared to have limited utility. In these instances, there was no set time of day when the whiteboard was to be updated or referred to. It appears that the whiteboard as a communication tool was dependent on the individual staff contributor and their use of time. Further, when the team members were not involved in planning for the use of the whiteboard, there was limited local 'ownership' and limited use of the whiteboard. The contrasts of successful and less successful integration into ward routine are highlighted in our recent publication (Chaboyer et al, 2009).

***Outcomes***

When successfully implemented, whiteboards were perceived to be useful prompts for referral and timely discharge preparation for patients resulting in reduced length of stay further estimated fewer post-discharge problems. Unsuccessfully implemented, it was seen as an imposition of management and a cause of conflict between members of the multidisciplinary team.

Implementation Issues

- The decision to use whiteboards must be made collaboratively, with ward staff understanding and involved in the change. Once this has been achieved, a structured plan for the change must be implemented.
- Whiteboards can result in duplication of information, increasing workload.
- Staff need to develop a 'trust' that the information contained on the whiteboard is accurate.
- Patient confidentiality is an important issue, thus the location and content of the whiteboard has to be carefully considered and incorporated in the rollout of the whiteboard.
- Ownership of the whiteboard by all users is essential for successful implementation.

## RECOMMENDATIONS

Wards considering adopting bedside nursing handover or whiteboard assisted communication should carefully consider the following requirements.

**Bedside Nursing Handover:**

1. Documented evidence of the need to improve nursing handover such as prolonged handover time, staff dissatisfaction with this type of handover, inaccurate or missing information and lack of patient participation.

2. Careful consideration of issues surrounding patient privacy and sharing sensitive information with the need to hand over this information verbally away from the bedside or in written form.

3. Creation of an electronic handover sheet is crucial to the accuracy of information. It will be used by staff to become familiar with patients for whom they do not receive handover.

4. Development of an evaluation plan including outcome indicators such as length of time to complete handover, staff and patient satisfaction with handover, and efficiency indicators such as the timeliness of patient care and the frequency of having to contact staff at home to clarify information or to repeat handover information for those not in attendance.

5. Adoption of a formal change management process such as Lewin's 3-Step Model for Change; unfreezing; moving; and refreezing (Burns, 2004).

6. Adoption of on-going staff training and competence testing program.

**Whiteboard Assisted Communication:**

1. Documented evidence of the need to improve multidisciplinary communication, such as prolonged patient stay due to a lack of discharge planning or untimely referrals.

2. Careful consideration of issues surrounding patient privacy and sharing sensitive information with the need to locate the whiteboard in an area not accessible to the public.

3. Development of concurrent permanent records that remain on the patient's record, irrespective of transfers from one ward to another. That is, some of the content of the whiteboards may need to be recorded permanently in the patient's medical record.

4. Development of an evaluation plan including outcome indicators such as accuracy of predicted discharge date and efficiency processes.

5. Adoption of a formal change management process such as Lewin's 3-Step Model for Change; unfreezing; moving; and refreezing (Burnes, 2004).

Wider Dissemination and Evaluation of the Standard Operating Protocols (SOPs)

This project has identified a number of areas for further evaluation and research:

1. A formal evaluation of the SOPs in a wider variety of settings such as oncology, surgery, maternity, and other specialist areas as well as general areas is required.

2. Greater clarification of the barriers to implementing bedside handover or whiteboard assisted communication in a variety of settings.

3. There is a need to understand the patient's and their family's perceptions of bedside handover, given the potential contribution patients and families can make to ensure accurate information is communicated.

4. There is a need to examine bedside handover in the context of smaller, regional settings, where patients are more likely to be previously acquainted with other patients sharing the same room.

## Directions for Further Study

This project has identified a number of areas for further evaluation and research:

1. A formal evaluation of the SOPs in a wider variety of settings such as oncology, surgery, maternity, and other specialist areas as well as general areas is required. While our research included one surgical ward, this ward only used bedside nursing handover for a short period of time, for a number of reasons. It is likely that bedside handover will have to be tailored for the specific context and patient population. That is, various clinical settings may require slight variations to the SOPs. Identifying the range of variations will provide more comprehensive information to inform quality and safety measures.

2. There is a need to understand patients' and their family's perceptions of bedside handover. Our literature review showed very little evidence of this understanding, yet given the potential contribution patients and families can make to ensure accurate information is communicated and given issues surrounding sensitive information and patient privacy, this perspective is clearly required.

3. There is a need to examine bedside handover in the context of smaller, regional settings, where patients are more likely to be previously acquainted with other patients sharing the same room. While both of our study sites were relatively large metropolitan hospitals, our Expert Advisory Panel members discussed this issue suggesting that both nursing staff and patients in smaller regional settings may feel uncomfortable or uneasy about confidentiality issues during bedside handover.

4. Greater clarification of the barriers to implementation in a variety of settings.

The following are relevant process, impact or other evaluation information which would be useful to others seeking to replicate, implement or build on previous work.

Potential process indicators of **bedside nursing handover** include:

- Time taken for the handover;
- Phone calls made to staff who have completed their shift to follow-up on issues not handed over;
- Staff satisfaction with handover;
- Patient satisfaction with handover; and
- Active patient participation in handover.

Potential process indicators of **whiteboard assisted communication** include:

- Accuracy of expected date of discharge (predicted versus actual);
- Timeliness of referrals (referrals made and completed);
- Staff satisfaction related to their contribution to the whiteboard;
- Time spent at the whiteboard;
- Number of professional groups who contribute to whiteboard content; and
- Frequency of updating whiteboard content.

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