

Standard Operating Protocols for Implementing Whiteboards to Assist with Multidisciplinary Communication on Medical Units

Prepared for

**AUSTRALIAN COMMISSION ON
SAFETY AND QUALITY IN HEALTHCARE**

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on behalf of
Griffith University
and
Murdoch University**

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Standard Operating Protocol for Whiteboard Communication

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Standard Operating Protocol for Whiteboard Communication

Whiteboard Communication

Clinical handover is defined as the transfer of responsibility and accountability for patient care from one provider or team of providers to another (Australian Medical Association, 2006). Clinical handover has been identified as a key initiative to improve patient safety (Australian Commission for Safety and Quality in Health Care, 2007; World Health Organization, 2007). There are many communication tools that can be used in the handover of patient care, one of which is the handwritten whiteboard. When utilized as a tool for communication, the whiteboard facilitates collaborative work between health care professionals in tracking and implementing quality patient care (Xiao et al, 2007). The whiteboard provides a medium of support to multidisciplinary team members in implementing and tracking safe and timely patient care.

The Standard Operating Protocols (SOPs) set out in this document are based on our research conducted in four wards of one hospital in 2007-2008 (Chaboyer et al, 2009). In this research we observed the use of the whiteboards for over 45 hours and undertook in-depth interviews with 11 staff members. These staff included physiotherapists, dieticians and nurses who undertook various roles such as clinical nurses, educators and managers. Our research shows that when a change management process is used, whiteboards can be successfully implemented in a variety of clinical situations. What appears to be key however, is involving the whole multidisciplinary team in the planning phase, where its function, structure and usage are determined. Also important is the recognition that the whiteboard can make multidisciplinary communication more efficient and effective. In fact, when successfully implemented, whiteboards were perceived to coordinate allied health referral and assist with timely patient discharge preparation. This, in turn, resulted in reduced length of stay and fewer post-discharge problems. A short summary of this research is provided in Appendix A.

Standard Operating Protocol for Whiteboard Communication

This document provides a set of SOPs for whiteboard communication and is meant to act as a resource for its implementation. These SOPs are presented in two parts because whiteboard use varies depending on the type of unit and the purpose of the whiteboard. These two parts are:

- 1) Whiteboard communication in short stay medical units where patients stay for less than a day – e.g. screening clinics, diagnostic clinics, emergency departments; and
- 2) Whiteboards communication in medium stay medical units where patients stay for two or more days - e.g. cardiac and oncology wards.

The standard operating protocols will be presented in the following format:

- Overview;
- Standard operating protocols; and
- Possible variations to protocol.

We have provided direct quotes from our research in “sidebars”, to show what staff members who use whiteboards to assist communication think about it. We use the ‘stars icon’ to highlight tips and use a tick to indicate particular issues that should be considered. Finally, boxes are used to display examples. These various symbols and their meanings are displayed below:



Direct quote from the research



Tips



Particular issue to be considered



Example

Overview of Whiteboard Communication Medium

Stay Medical Units

Figure 1 provides a schematic overview of the whiteboard communication process on medium stay medical units (i.e. a few days or more). Each of the five steps is detailed in the following section.

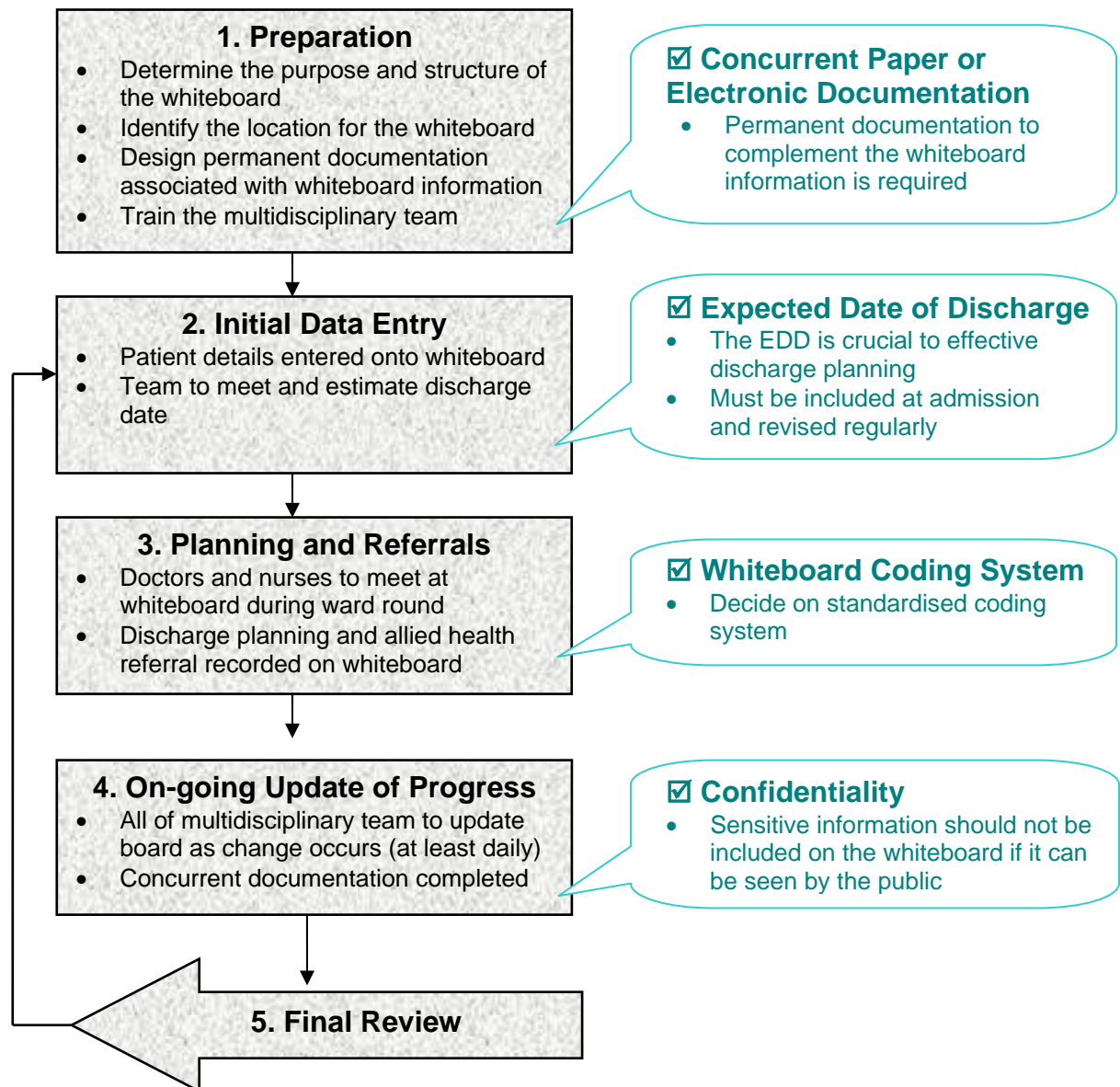


Figure 1: Schematic Overview of Whiteboard Communication in Medium Stay Medical Units

"It's a visual way of communicating with all the different allied health (staff) that we would easily see when we came on the ward"

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Detailed Description of Whiteboard

Communication in Medium Stay Medical Units

Preparing patients for discharge and ensuring all necessary supports are in place before they go home is a key responsibility of the multi-disciplinary team. Poor discharge preparation can lead to poor transition home and either delayed discharge or readmission (Parkes & Shepperd, 2001). Multidisciplinary communication that maximises co-ordination of the timely referral of patients to members of the multi-disciplinary team is key to safe and effective patient care and good practice in discharge planning (Dodek & Raboud, 2003; Plantinga et al, 2004).

In the research that underpins these standard operating protocols (Appendix A), many medical teams had to communicate with one nursing team (often divided into groups caring for 10-15 patients per shift), while the allied health professionals had responsibility for patients on a number of different units. This research indicated that while some variation in whiteboard structure and function is necessary, it should be kept to a minimum to assist the medical and allied health staff members who move from unit to unit.

The standard operating protocol provides a detailed description of how to undertake whiteboard communication and follows the schematic overview of whiteboard communication (Figure 1). The headings in the protocol follow the five steps in this overview including:

- 1) Preparation;
- 2) Initial data entry;
- 3) Planning and referrals;
- 4) On-going update of progress; and
- 5) Final review.

"I just think it's (...) better having a quick reference, rather than them flicking through the whole chart."

1. PREPARATION

There are four aspects to the preparation for whiteboard communication:

- 1) Determining the purpose and structure of the whiteboard;
- 2) Location of the whiteboard;
- 3) Design of permanent documentation to run concurrently; and
- 4) Training of multidisciplinary team.

1.1 Determine the Purpose and Structure of the Whiteboard

Whiteboard communication has been used successfully where the multidisciplinary team is focused on optimum patient discharge and transition. Each medical unit will have different allied health staff members to whom patients are referred and may also have specific discharge policies and procedures in place. The use of the whiteboard needs to be tailored to these local conditions. Each ward will have to determine how best to deal with patient bed moves. The purpose and structure of the whiteboard must be decided by the whole team if it is to be used successfully.

Possible purposes for whiteboard communication 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)

“The idea was we initially wanted to get 2 to 3 days visibility to projected discharge so we could make sure that the services were actually aligned to patient care and they were going home with appropriate services.”

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Possible structures for whiteboard communication include:

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



For whiteboards to accurately and consistently convey patient information, the professional groups contributing to it must take responsibility for their own contribution, therefore it is important that they all have input into the development of the whiteboard.

“It’s about trying to get discharges happening in a timely manner. There is a whole set of processes that also need to happen, not just the doctor part of it all, but all the additional services that have to kick in ahead of time in order for a patient to be discharged appropriately.”

1.2 Identify the Location for the Whiteboard

The whiteboard should be located in an area where there is easy access for all staff, preferably a high staff traffic area but a place where a number of staff congregating will not impede traffic flow. It must not be located in a staff relaxation area. Areas used by the public should be avoided if possible. The most important element is easy visibility to staff visiting the unit.



Location of the whiteboard will also be linked to what information is recorded. If the board is in an area that can be accessed by the public sensitive information should be omitted.

1.3 Design Permanent Documentation Associated with Whiteboard Information

The team members need to be clear how the information on the whiteboard relates to other documentation. When admitted to acute care hospitals patients may be transferred from ward to ward numerous times. It is imperative that the information about allied health referral is not lost when the patient moves ward. If staff determine that certain information

Standard Operating Protocol for Whiteboard Communication

must be available if patients are transferred, a simple one page referral form for each patient which tracks all allied health referral is recommended.

Concurrent Paper or Electronic Documentation

Each ward will have to determine the extent to which paper or electronic documents are used in conjunction with the whiteboard. Key considerations include:

- *Information that must become a permanent part of the patient's health record; and*
- *Information that is required to be transmitted when patients are transferred from ward to ward.*

"We use a referral form which is meant to go in the front of the chart so if the patient did move the information would still be documented there ... yes you might say that's a duplication, but it's a slight safety check."

1.4 Train the Multidisciplinary Team

All members of the multidisciplinary team who will use the whiteboard for communication need to be trained on its purpose, function and practicalities. The training needs to be on-going to accommodate new staff. Training of new staff needs to be conducted in a timely fashion. This training is essential for the whiteboard's success.



Team training and ownership of the whiteboard are key to its success. Staff members must understand their role in interacting with the whiteboard in order for it to be an effective tool to accurately and consistently transmit patient information.




2. INITIAL DATA ENTRY

When a patient is admitted to the ward, an initial entry is made onto the whiteboard, usually by the nurse admitting the patient. Once the initial patient medical assessment has been undertaken, some team members (at least one doctor and one nurse) should meet at the whiteboard to complete the columns for estimated date of discharge and allied health referrals.

☑ Expected Date of Discharge

- *The expected date of discharge (EDD) is a key to effective discharge planning*
- *Early in the patient's stay the team must meet and determine an EDD and the possible risks of variation.*
- *The actual EDD is then either recorded on the board or a traffic light system of magnets can be used to indicate EDD (see Box 1).*

Box 1: Example of a traffic light system for EDD

Magnet	Colour	Meaning
	Red	EDD today or tomorrow
	Amber	EDD three to six days
	Green	EDD a week or more

3. PLANNING AND REFERRALS

Whenever multidisciplinary patient-related decision making is undertaken the medical and nursing team should have some of their discussions in front of the board. Decisions made about estimated date of discharge, diagnostic tests, allied health referrals etc. should be recorded on the whiteboard.






All nurses and doctors taking responsibility for patient care and all allied health staff members referred to may write on the whiteboard but they should also communicate this information in written or verbal forms.

☑ Whiteboard Coding System

Two commonly used coding systems that reflect the extent to which referrals have been completed are a “triangle” and an “X” system.

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Box 2: The “triangle” system for communicating health professional referral

	Referral request has been made
	Referral accepted - patient is being assessed and/or treated
	Service or treatment complete

The “X” system is displayed in Box 3

Box 3: The “X” system for communicating health professional referral

\	Action Required
X	Action Completed

“It gives you a clear indication of what the referral process is and where things are located.”

4. ON-GOING UPDATE OF PROGRESS

All multidisciplinary team members update the whiteboard as change occurs. Some of this information may include patient referral accepted/completed, diet changes and tests completed. At the same time, concurrent documentation must be completed in the patient’s medical record in paper or electronic format.

“The pharmacist should be able to look at how forward visibility for discharge is on each of the wards to know whether or not they have everything in place for that patient to be able to be discharged.”

☑ Confidentiality

It is important to avoid recording sensitive information linked to identifying patient information on the board when the whiteboard can be seen by members of the public. Sensitive information may include:

- *Blood tests of a diagnostic nature (eg. HIV positive);*
- *Communicable disease information (eg. Hepatitis);*
- *Psychiatric issues (eg. suicidal, ethanol abuse)*
- *“Not for resuscitation” orders,*
- *Some family issues (eg. conflicts, domestic violence);*
- *Anything else patients identify they wish held in confidence.*

5. FINAL REVIEW

When the patient is ready for discharge the nurse discharging the patient should check the whiteboard and determine that the patient is ready for discharge and that all relevant patient paper or electronic documentation has been completed.

Components of the final check may include:

- All referrals have been completed.
- All preparations for discharge are completed.
- All documentation is completed.

“It’s important that staff take ownership of it instead of just leaving it for the senior staff to fill it in.”

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Overview of Whiteboard Communication Short Stay Medical Units

Figure 2 provides a schematic overview of the whiteboard communication process on short stay units (i.e. less than a day). Each of the five steps is detailed in the following section.

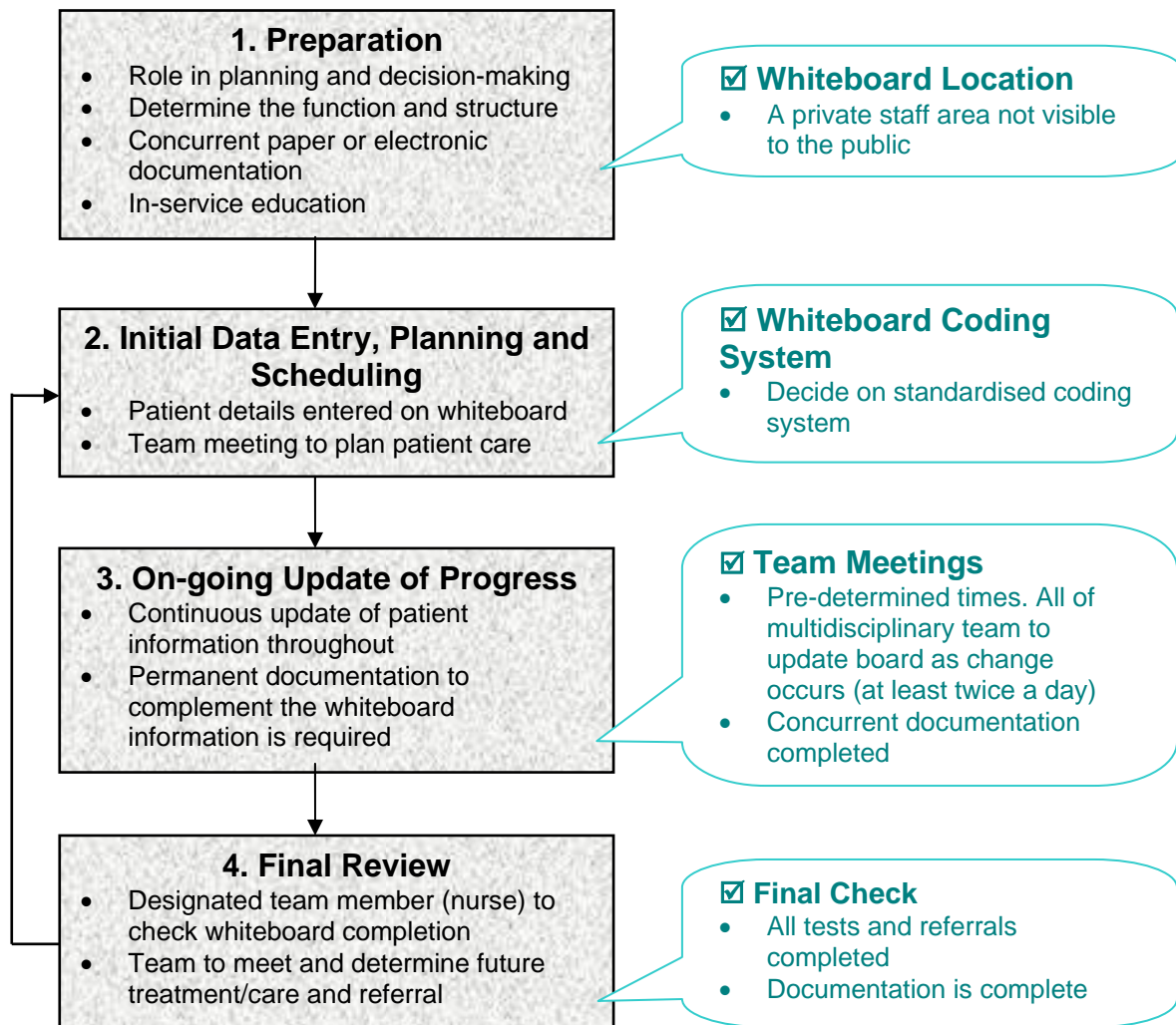


Figure 2: Schematic Overview of Whiteboard Assisted Communication

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Detailed Description of Whiteboard

Communication in Short Stay Medical Units

In short stay medical units such as diagnostic clinics or even in Emergency departments, whiteboards are used to assist the multidisciplinary team to schedule and sequence activity to track patient progress throughout their stay and to ensure all necessary tasks have been completed before the patient leaves that area.

This section provides a detailed description of how to use a whiteboard to assist communication between members of the multidisciplinary healthcare team in short stay medical units and follows the schematic overview of whiteboard communication (Figure 2). The headings in this section follow the four steps in this overview:

- 1) Preparation;
- 2) Initial data entry, planning and scheduling;
- 3) On-going update of progress; and
- 4) Final review.

I. PREPARATION

There are four aspects to the preparation whiteboard assisted communication:

- 1) Role in planning and decision-making;
- 2) Determine the function and structure;
- 3) Concurrent paper or electronic documentation; and
- 4) In-service education.

1.1 Role in Planning and Decision-making

Whiteboard communication is effective when the healthcare professionals and administration staff who develop the whiteboard are also key contributors to the information recorded on it. This facilitates members taking ownership of the whiteboard and enhances the likelihood of its

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quality and accuracy. When contributors to the whiteboard understand the communication needs in a collaborative patient setting, optimal design and implementation of the whiteboard is supported.

Within a variety of short stay units there are diverse patient populations who will have different scheduled diagnostic tests, interventions or health professional referral and consultation. The whiteboard design will need to meet the needs of each unique patient setting.



All contributors to the whiteboard should have input into the format, design and location of the whiteboard to ensure maximum utility.

1.2 Determine the Function and Structure of the Whiteboard

There must be consensus amongst contributors as to the function of the whiteboard for it to be a user-friendly communication tool. Whiteboards have been successfully used to assist with scheduling patients, to track patient progress through various treatments and consultations and for inter-professional communication. The amount of information from the whiteboard that also needs to be entered into the permanent health record must also be determined. The structure of the whiteboard should be designed to address the needs of the client population. Box 4 contains an example of some of the possible content that may be included on a whiteboard in a short stay medical unit.

Box 4: Example of information shared during whiteboard assisted communication between multidisciplinary teams in a short stay unit

1. Date and time of arrival	5. Treatment progression
2. Scheduled investigations, tests and procedures	6. Safety concerns
3. Check that patient consent has been obtained	7. Discharge planning/follow up
4. Consultation/referral and their status	8. Other comments

☑ Whiteboard Location

The location of the whiteboard is an important consideration.

- *It should be located in a high staff traffic area to allow for maximum visual prompting.*
- *It should be placed in a private staff area not visible to the public or patients, given it may contain confidential information.*
- *If it is visible to the public and patients, then some way to cover identifying patient information must be devised.*



An opaque 'shutter' could be hinged onto the whiteboard, which opens and closes to cover patient identifying patient information. Alternatively, some form of a 'curtain' could be mounted on the whiteboard that shields identifying patient information when not in use. However, it is important that the whiteboard is not completely obscured as its contents will be referred to by staff throughout the shift.

1.3 Concurrent Paper or Electronic Documentation

The need to develop concurrent paper or electronic documentation will depend on the structure and function of the whiteboard. If a permanent record of the information contained on the whiteboard is required, then the planning phase will have to encompass this need.

1.4 In-service Education

Whiteboards work best when all members of the multidisciplinary team who will use the information it contains understand the whiteboard's functions and the processes for recording and updating information. Key members of the team should be trained on these aspects of whiteboard use and then they can train other members of their professional group. Understanding the structures and processes of the whiteboard are essential for team members to understand their role in interacting with the whiteboard.

2. INITIAL DATA ENTRY, PLANNING AND SCHEDULING

2.1 Patient Details Entered on the Whiteboard







A designated staff member, generally the nurse, enters patient details on the whiteboard at the commencement of the shift. Each team will have to decide how to deal with clients who are not present. Boxes 5 and 6 offer two examples of whiteboard layouts for a short stay medical unit.




Box 5: Example of a whiteboard format

Time In 1/7/08	Patient Name	Mammogram	Ultrasound	Exam/ Consult	Procedure	Consent for procedure obtained	Comment	Review date	Time Out
0800	Mary Smith	X	(L) X	Dr Jones X	Biopsy /	X	Need to return for biopsy result	3/7/08	
0800	Jane Brown	X		Dr Jones X				1/7/09	0830
0900	Helena Tray	X	(R) X	Dr William /	? radiographic studies	/			
1100	Sarah Green	/							

*Legend: “ / ” = action required; “ X ” = action completed.

Box 6: Second example of a whiteboard format, using coloured magnets to represent various consultations




Date/ Time in	Patient	Request	Completed	Request	Completed	Request	Completed
0800	Jane Brown						
0900	Helena Tray						
1100	Mary Smith						

 = Physiotherapy  = Occupational Therapy  = Dietician

☑ Whiteboard Coding System

A coding system can be used to indicate activities planned and completed. There are variations in the types of coding system, for example the “Triangle System” (Box 7), the X system (Box 8) and coloured magnets (Box 6) to represent various consultations.

Box 7: Triangle system for communicating health professional referral

	Referral request has been made
	Referral accepted - patient is being assessed and/or treated
	Service or treatment complete

The “X” system is displayed in Box 8

Box 8: The “X” system for communicating health professional referral

\	Action Required
X	Action Completed

“If somebody hadn’t ticked something it would be very obvious, you know... If you knew something was missing you would very quickly question it, whereas previously maybe you didn’t capture it because you didn’t read through 20 pages of notes.”

2.2 Team Meetings to Plan Patient Care

All team members should meet at the whiteboard at the beginning of the shift to discuss each individual patient presentation. The whiteboard provides an at-a-glance visual display of the patients, the plan of activities for them during their stay and their progress. The team meeting at the board enables planning of patient care and allows safety checking and clarification by team members.

3. ON-GOING UPDATE OF PROGRESS

Once the initial data entry, planning and scheduling have been addressed, the whiteboards should be used as a means to exchange patient information on an ongoing basis and to convey additional plans for the patient. Continuous update of patient information on whiteboard throughout the episode of care is important. Impending tests and procedures may be entered onto the whiteboard so the team is able to track each patient's future treatment plan. Paper or electronic documentation may need to be undertaken concurrently to ensure provision of a permanent legal record.



The whiteboard's large size provides at-a-distance views and prompts to the patient's status.

"The ward clerk loves it because if the kitchen rings up, she doesn't have to find the nurse - she looks at the whiteboard to say 'no, they're on this diet'."

Whiteboards have a direct impact on communication among team members because they reveal a lot of information about the patient at a glance. The visibility of the whiteboard is a time-saving device as relevant information is provided without the need to peruse the patient's chart.

☑ Team Meetings

Team members meet at a designated time in the shift to discuss progress of the treatment plan. These times generally include the start, finish and at 1-2 mid points in the shift. A key to timely patient care is facilitated by tracking ordered and completed tests, treatments and consultations throughout the shift.

“It’s pretty much a tick and flick transfer summary.”

4. FINAL REVIEW

In order to ensure the patient has received all of the care ordered prior to their discharge, a collaborative review by all members of the multidisciplinary team should occur. In addition to checking on tests, treatments and consultations, this review should include other specific concerns, which acts as a safety check, providing the team with an opportunity to ensure all interventions have been completed.

☑ Final Check

- *All tests have been completed.*
- *All referrals and follow-up appointments have been made.*
- *All documentation is complete.*

“Whiteboards are a fabulous service-improvement process that actually has outcomes and it’s actually making sure that the patient is safe”

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Variations in Whiteboard Implementation

A number of variations may be adopted when undertaking whiteboard communication. While it is not possible to list all of these variations, some options include:

- Location variation – this can be on a wall near the nurses' station or in a handover room/tutorial room.
- Structure variation – there may be some ward-specific information that must be included as a specific column on the whiteboard. For example, most common allied health professional referrals may differ between oncology wards and rehabilitation units.
- Recording variation – different systems for coding information can be used so long as these are agreed to by all staff and all staff are trained in the coding system.

Summary

Effective communication amongst health professionals is key to ensuring quality care in clinical practice. The standard operating protocols for implementing whiteboard communication in medium stay and in short stay medical units described in this document provide a toolkit for those interested in adopting whiteboard communication. Whiteboard communication is one method to ensure good patient flow and continuity of care. The approach documented here has considered preparation, initial data entry, planning and referrals, on-going update of progress and final review. This toolkit is designed to provide guidance to nurses wanting to implement whiteboard communication.

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Appendix A

Summary of the Whiteboard Handover Research Project

M. Wallis, K. Wallen, W. Chaboyer, & A. McMurray

Introduction: The aim of this study was to describe the structures, processes and outcomes of whiteboard communication in medical units.

Methods: A case study method, incorporating five nested case studies, was used. Data were collected by observation, in-depth interviews and focus groups.

Results: Whiteboards in four wards were observed for a total of 45 hours and 12 health professionals were interviewed. For the medium stay units the most important content of the board was the inclusion of an expected date of discharge which could then be used by all staff to ensure the patient was fully prepared for discharge. The board was used as a communication tool by members of the multidisciplinary team to ensure appropriate referrals to allied health staff had been completed and treatment plans developed prior to discharge.

In the short stay units the whiteboard was used to track patient progress through the system and to coordinate and sequence healthcare activity. The structural and process components of whiteboard communication in acute medical units are presented in Table 1.

Table 1: Overview of Whiteboard Communication Structures and Processes

Structures	Description
Location	<ul style="list-style-type: none">• A strategic location situated in a high traffic area is required.• Near entrance to unit and close to administration area is useful.• Not to be placed in staff rest areas.
Layout	<ul style="list-style-type: none">• Having a large size provides 'at-a-distance' visual prompts of referral to patient care for very mobile health care workers.• Design has evolved over time to suit the patient population's needs.• 80% of the content needs to be fixed with less than 20% unit variation to allow consistency for medical and allied health professionals.
Patient charts	<ul style="list-style-type: none">• Linkage of communication between whiteboard and medical records required, which may involved concurrent paper or electronic records.
Tools	<ul style="list-style-type: none">• Magnets, coloured pens, legend and erasers all make the whiteboard easier to use.
Processes	
White board Interaction:	<ul style="list-style-type: none">• Multidisciplinary completion of whiteboard essential• Nursing staff visually inspect the board at commencement of shift• Allied health staff generally inspect and update twice a day• Medical staff inspect and update at ward round – also complete paper documentation for medical records at same time.• Constant updates generated by interventions of some allied health• Training of new staff on whiteboard specific to its utility and efficacy is necessary.
Handover/Ward rounds	<ul style="list-style-type: none">• Whiteboard used most effectively when incorporated into handover/ward rounds

Conclusion: Implementing whiteboard communication is a low technology but effective strategy to improve multidisciplinary team communication and optimise patient flow through acute medical units. Clinical leadership and staff education are two key elements for successful implementation of whiteboard communication.