



ROYAL HOBART HOSPITAL

Nursing and Medical Handover in General Surgery, Emergency Medicine and General Medicine at the Royal Hobart Hospital

Public Report on Pilot Study

Submitted to

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

as part of the

National Clinical Handover Initiative

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Clinical Handover is one of ACSQHC's priority programs and aims to identify, develop and improve clinical handover communication through developing and implementing more consistent and reliable approaches to clinical handover.

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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 ACSQHC.

ACSQHC 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 ACSQHC, nor can its accuracy be guaranteed

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1 Abstract

This project has developed transferable standardised operating protocols incorporating minimum data sets for medical and nursing shift-to-shift handover in General Medicine, General Surgery and Emergency Medicine at the Royal Hobart Hospital, along with the associated manuals and training workshops. The project utilised a holistic socio-technical approach to understand and improve clinical handover. This approach integrated clinical and information systems expertise with qualitative field techniques and user-centred education and training in an iterative feedback loop to support continuous improvement. Significantly, this approach supported the development of an over-arching minimum data set and over-arching standardised operating protocol to provide a coherent framework for supporting transferability of clinical handover improvement initiatives in different clinical settings. The project's outputs are structured into four major deliverables: 1) Stakeholder engagement protocol; 2) Minimum data sets for clinical handover; 3) Standardised Operating Protocols (SOPs) and 4) Training material for implementation of SOPs.

2 Executive Summary

The Australian Commission on Quality and Safety in Health Care (ACSQHC) identified clinical handover as one of its top priorities for work in 2007-2008. This priority was in the context of Australia taking a lead role in producing a standardised operating protocol for clinical handover as part of its participation in the World Health Organisation's 'High Fives' initiative.

This clinical handover project funded by the ACSQHC was conducted at the Royal Hobart Hospital (RHH), Tasmania during the period (September 2007 – September 2008). The project leveraged existing multi-disciplinary expertise at the RHH on clinical, technical and socio-organisational aspects of clinical handover and focused on the development of transferable standardised operating protocols incorporating minimum data sets for medical and nursing shift-to-shift handover in General Medicine, General Surgery and Emergency Medicine along with associated manuals and training workshops.

The project's outputs are structured into four major deliverables:

1. **Stakeholder engagement protocol:** This is a "How to" booklet to assist the process of engaging appropriate stakeholders in clinical handover improvement initiatives. This protocol has been generated using the feedback loop and leveraging analysis and interpretation, as promoted in this project.
2. **Minimum data sets for clinical handover:** This refers to the minimum information required to be transferred between shifts for effective handover to take place. These have been developed for:
 - o Department of Surgery (Medical and Nursing)
 - o Department of Emergency Medicine (Medical and Nursing)
 - o Department of General Medicine (Medical and Nursing)
 - o Over-arching Minimum Data Set
3. **Standardised Operating Protocols (SOPs):** Refers to the structure for conducting clinical handovers and incorporates the minimum data sets. These have been developed for:
 - o Department of Surgery (Medical and Nursing)
 - o Department of Emergency Medicine (Medical and Nursing)
 - o Department of General Medicine (Medical and Nursing)
 - o Over-arching Standardised Operating Protocol
4. **Training material for implementation of SOPs:** Training manuals and formal presentational materials for training workshops have been developed for the implementation of the SOPs for the following areas:
 - o Junior Medical Officers Shift-to-Shift Training
 - o Department of Surgery (Nursing)
 - o Department of Emergency Medicine (Nursing)
 - o Department of General Medicine (Nursing)

The project utilised a holistic socio-technical approach to understand and improve clinical handover. This approach integrated clinical and information systems expertise with qualitative field techniques and user-centred education and training in an iterative feedback loop to support continuous improvement. Significantly, this approach supported the development of an over-arching minimum data set and over-arching standardised operating protocol to provide a coherent framework for supporting transferability of clinical handover improvement initiatives in different clinical settings.

The over-arching minimum data set (MDS) emerged from a detailed analysis of similarities and differences across the six individual MDSs produced for medical and nursing handover in the 3 areas. The over-arching MDS achieves a standardisation of minimum content for the transfer of information, responsibility and accountability during shift-to-shift clinical handover. The MDS is structured in five sections:

1. Environmental awareness
2. Patient identification and demographic details
3. History, evaluation and management

4. Responsibility, risk management and action plan
5. Accountability to ensure patient safety

The over-arching standardised operating protocol (SOP) was generated from an analysis of data from six areas: medical & nursing shift-to-shift clinical handover for General Medicine, General Surgery and Emergency Medicine, and was further validated in these six areas to provide an evidence-based guide for standardisation. This SOP may be applicable to other scenarios but the evidence for its utilisation was limited to medical and nursing shift-to-shift handover. However, this SOP was designed to provide an inclusive framework to support future expansion and although it currently does not cater for multi-disciplinary handovers, it is anticipated that its inclusive framework builds the platform necessary for the future development and implementation of multi-disciplinary handover.

This SOP was developed in recognition of the need for solutions that are transferable at national and potentially international levels. Importantly, however, this SOP was also developed in a manner that recognised the fact that any standardised solution will also require the capacity to be adapted to local circumstances in order to ensure integration to achieve safer clinical care. Critically the 'flexible standardisation' of this over-arching SOP aims to achieve the following objectives:

- A standardised solution which allows seamless integration into the local clinical context to improve clinical handover.
- A standardised solution which will provide tools to clinicians and managers interested in the area of clinical handover to implement clinical handover improvement initiatives within their local clinical services.
- A standardised solution which will reduce communication gaps for patient care.
- A standardised framework which allows for national learning from local adaptation and implementation of the standardised operating protocol.
- A standardised framework which will enable evaluation of information tools and communication processes for patient safety.

To achieve these objectives, the SOP is comprised of five phases: Preparation; Design; Implementation; Evaluation; and Maintenance. Each phase has a number of individual steps described in terms of background issues, objectives, framework, local considerations and tools & guidance. It is recommended that all five phases be considered by individuals or groups who are interested in improving the clinical handover processes.

The outputs from this project have been successfully disseminated both internally at the Royal Hobart Hospital where the MDSs and SOPs are in use along with the associated manuals and training workshops, and externally through engagement with ACSQHC in national handover workshops. ACSQHC has also subsequently invited the Tasmanian Project team to engage in further work on the branding, marketing and extension of the over-arching MDS and over-arching SOP.

This on-going work has now been developed into two separate sets of SOPs to cater for the separate needs of healthcare professionals and healthcare managers. A five-step SOP to design, implement, evaluate and maintain clinical handover improvement initiatives from the perspective of healthcare managers has been developed and uses the mnemonic acronym 'OSSIE' guide. A separate working SOP and MDS for healthcare professionals to improve clinical handover during routine clinical practice has been developed and uses the mnemonic acronym 'HAND ME AN ISOBAR'.

3 Project Scope

3.1 Project Background

The Australian Commission on Quality and Safety in Health Care (ACSQHC) identified clinical handover as one of its top priorities for work in 2007-2008. This priority was in the context of Australia taking a lead role in producing a standardised operating protocol for clinical handover as part of its participation in the World Health Organisation's 'High Fives' initiative. The ACSQHC's focus in this priority program aims to achieve:

1. Significant, sustained and measurable reduction in communication gaps in the continuity of care delivery;
2. Reliable measures of impact on patient outcomes focusing on the information systems and communication processes that support handover;
3. National learning on handover by enabling sharing of transferable and sustainable handover solutions;
4. Standardised operating solutions for handover communication that will contribute to Australia's participation in the 'High Fives' initiative.

This program was structured in 3 key stages. This project is specifically related to Stage 1 that involved:

- Identifying current Australian clinical handover initiatives that have the potential for national applicability to achieve the four outcomes above; and
- Developing these identified clinical handover initiatives into transferable standardised solutions (involving protocols, tools and strategies).

This project focused on specific handover processes and leveraged work into understanding and supporting improvement in clinical handover conducted at the Royal Hobart Hospital (RHH), Tasmania. This RHH work, initially started in 2004, has led to the development of significant multi-disciplinary expertise on clinical, technical and socio-organisational elements that need to be addressed to improve clinical handover. This project aimed to enhance and extend RHH clinical handover initiatives to medical and nursing shift-to-shift handover in three medical areas: General Surgery, Emergency Medicine and General Medicine.

3.2 Clinical Handover: Shift-to-Shift

"The challenge of patient safety is not only clinical, but also organisational. To succeed, patient safety initiatives must be designed and executed using change management principles such as congruent changes targeting multiple components, specific change management roles for different participants in the care-delivery process, implementation through dedicated support structures and multiple tactics, and institutionalisation through enhanced workforce capabilities and opportunities for continuous learning."

(Ramanujam et al, 2005)

"Standardise. What is standardisable? Hospital leaders often complain that our physicians won't accept any standardisation of practices. But when you look at what the hospital is trying to get physicians to do, you find that they're being asked to follow detailed protocols These pathways attempt to standardise too much, are too complicated, and are legitimately resisted by physicians as 'cookbook medicine' in many instances."

(Reinertsen et al, 2007)

Clinical handover is defined by the Australian Medical Association as the process of “transfer of responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis.” (AMA, 2006). Due to

changing work conditions within the hospital setting, clinical handover has become an increasingly important task (Junior Doctors Committee, 2004). Good handovers do not happen by chance - it requires significant structural and organisational efforts (AMA, 2006). There needs to be leadership, time commitment, human resource commitment and proper structures in place for effective clinical handover to occur (AMA, 2006).

One of the high-risk areas where improved clinical handover solutions are urgently required is in shift-to-shift medical and nursing handover (WHO, 2007). A major factor inhibiting improvements are issues related to the lack of basic understanding of the clinical handover process and the lack of common structure for clinical handover (WHO, 2007).

The University of Chicago Hospital has recently developed a model for adoption of a standardised clinical handover process, that includes four steps: process, contents, implementation and monitoring (Arora & Johnson, 2006). They acknowledge however that there remain significant difficulties with the development and implementation of such standardised clinical handover solution in healthcare practices. These difficulties relate to the complexity of the healthcare systems and the complicated socio-cultural aspects of clinical practices within each individual organisation (Yee et al, 2006b). A successful standardised operating protocol for clinical handover, which is adaptable and transferable to other organisations, will need to have the flexibility to incorporate these socio-cultural, organisational and environmental factors.

Clinical handover is clearly a highly complex process affected by many different factors. Some of the factors, affecting the effectiveness and efficiency of the clinical handover process, have recently been identified and discussed by some of the key personnel involved in this project (Yee et al, 2006; Turner et al, 2006; Wong & Yee, 2006). Significantly, the utility of clinical process mapping methods for understanding and improving the clinical handover process have been described independently by teams at the University of Chicago (Arora & Johnson, 2006) and the RHH clinical handover team in Tasmania (Wong & Yee, 2007).

3.3 Objective(s)

Based on the project team’s experience and expertise in this area, the primary aim of this project was to deliver robust and replicable comprehensive clinical handover solutions that incorporate standardised clinical handover protocols for nursing and medical staff. Associated training programs for the implementation of these handover protocols were also developed.

This project had the following objectives:

- Understand the approach to engage stakeholders for clinical handover improvement processes.
- Understand the complexity of clinical handover, especially socio-cultural, personal and organisational factors to develop the framework required for clinical handover solutions.
- Develop minimum data sets for the standardised operating protocols, in order to reduce the communication gaps and discontinuity of patient care for shift-to-shift nursing and medical handover.
- Develop standardised operating protocols incorporating minimum data sets complemented by flexible components for clinical handover processes for shift-to-shift, medical and nursing handover.
- Develop an approach to incorporate standardised operating protocols into local settings to improve clinical handover and patient safety.
- Develop training manuals and workshops to enable transfer of skills for implementation and sustainability of standardised operating protocols.
- Understand the barriers to, and activators for, the adaptation and implementation of standardised operating protocols for clinical handovers.

3.4 Methodological Approach

The over-riding methodological framework deployed a holistic socio-technical approach to understanding and improving clinical handover. This approach integrates clinical and information systems expertise with qualitative field techniques and user-centred education and training in an iterative feedback loop to support continuous improvement. This approach relies on the benefits and synergies of these interactions to optimise transferability and sustainability (see Figure 1).

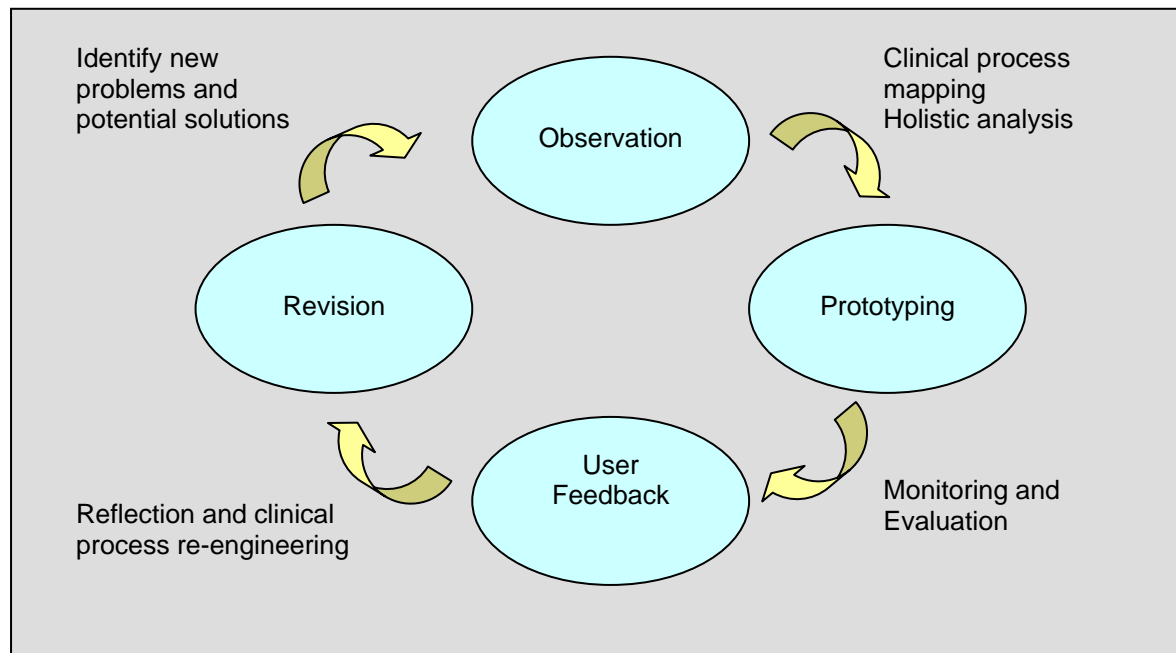


Figure 1 Holistic Socio-Technical Approach

Given the complexity of the clinical handover process, a triangulation of methods was used. Qualitative field techniques including observation sessions and interviews (individual/group) across three medical and three nursing areas (General Surgery, Emergency Medicine, General Medicine) were performed to obtain a holistic understanding of the clinical processes of these different disciplines and different wards.

Handover messages for each department and each discipline were also analysed to produce the minimum data sets. Experience revealed that a minimum of 50-100 messages needed to be analysed for each of the six different settings across medical and nursing shift-to-shift handovers. This analysis was combined with reviews of literature. From this work the team were able to generate individualised standard operating protocols across these three medical and three nursing areas. These versions of standardised operating protocols for General Surgery, Emergency Medicine and General Medicine were then used to stimulate feedback from participants that were in-turn used to further revise and refine until consensus was reached on standardised operating protocols for each of the three medical and three nursing areas. Based on these protocols the project team engaged in further analysis to explore their differences and commonalities.

Significantly, this approach supported the development of an over-arching minimum data set and over-arching standardised operating protocol to provide a coherent framework for supporting transferability of clinical handover improvement initiatives in different clinical settings.

The project team also developed training manuals and conducted workshops in order to assist the transfer of skills and knowledge of the standard operating protocols. The training manuals and workshops were themselves iteratively refined through the team's experience and participants' feedback on the implementation of the standardised operating protocols in medical and nursing shift-

to-shift handovers in the three different areas of General Surgery, Emergency Medicine and General Medicine. These activities specifically incorporated reflective learning and self-directed learning, and applied the principles of andragogy (Kaufman, 2003).

The project team also generated revised stakeholder engagement protocols. These revised protocols identify activators and inhibitors for the development and implementation of standardised operating protocols and provide best practice guidelines for engaging stakeholders for clinical handover improvement initiatives.

3.5 Output(s): Deliverables

The project's outputs are structured into 4 major deliverables including this final report.

1. Stakeholder engagement protocol:
2. Minimum data sets for clinical handover:
3. Standardised Operating Protocols (SOPs):
4. Training material for implementation of SOPs

The following sections briefly outline some of the key elements of these deliverables.

3.6.1 Engaging Stakeholders

This section briefly describes some of the key elements of deliverable 1 (Stakeholder engagement protocol). As part of the methodological approach an initial stakeholder engagement protocol was developed to provide a "How to" booklet to assist with the process of engaging appropriate stakeholders in clinical handover improvement initiatives. This protocol was then utilised within this project to engage stakeholders at the Royal Hobart Hospital (RHH) and using a feedback loop and leveraging analysis and interpretation developed during the project a revised stakeholder engagement protocol was generated.

Significantly these stakeholder engagement protocols provide a 'How-to guide' that fulfils two key functions. Firstly, the approaches adopted towards engaging stakeholders in the clinical handover project at the RHH are detailed. Secondly, drawing on these experiences the revised protocol presents a "How to" document to assist others in the process of engaging stakeholders in clinical handover improvement initiatives.

The key sections identified and discussed within the revised stakeholder engagement protocol are as follows:

- Identification of stakeholders
- Steps for advisory team engagement
- Steps for project team engagement
- Steps for support team engagement
- Steps for participant engagement
- Steps for external stakeholder engagement: implementation phase
- Steps for external stakeholder engagement: planning phase

Following the identification of all key stakeholders, the revised protocol is structured around steps taken to engage respective stakeholder groups. In essence, the approach adopted for each stakeholder group involves addressing 'how-to':

- Establish and conduct Initial stakeholder contact
- Provide project briefings
- Maintain stakeholder engagement
- Build sustainability and support transferability

In each of the above steps, the protocol identifies objectives, guidelines, challenges and proposed solutions. It is anticipated that the protocol will assist others in the process of engaging stakeholders

in clinical handover improvement and support the building of sustainability and transferability into such initiatives.

3.6.2 Minimum Data Sets (MDS) for Clinical Handover

This section briefly describes some of the key elements of deliverable 2 (Minimum data sets for clinical handover). The minimum data set refers to the minimum information required to be transferred between shifts for effective handover to take place. These have been developed for:

- a. Department of Surgery (Medical and Nursing)
- b. Department of Emergency Medicine (Medical and Nursing)
- c. Department of General Medicine (Medical and Nursing)
- d. Over-arching Minimum Data Set

This deliverable also presents the methodology the project team utilised including a summary of key literature reviewed and details of the process of data collection, analysis and iterative trialling and refinement of the minimum data sets produced. It also provides information on the challenges experienced by the project team in deploying the methodology and the approaches utilised to overcome them. The minimum data sets were developed for the six clinical areas investigated across the departments of General Surgery, General Medicine and Emergency Medicine at the Royal Hobart Hospital. These minimum data sets fulfil the needs of each individual clinical area to adequately and efficiently carry out clinical handover.

There are significant differences between the minimum data sets, which reflect differences in the role of each profession (Medical and Nursing), as well as the role of each clinical area. These differences are also related to different communication methods and settings used in clinical handovers. For example, some clinical areas conduct bedside clinical handover, offering the opportunity for patient involvement, while others conduct clinical handover away from clinical care to facilitate sensitive information to be transferred from one team to another.

As part of efforts to improve clinical handover across different clinical areas and under different clinical contexts the project team recognised the need for solutions that could be rapidly transferable and sustainable. As a result, analysis was conducted of the data sets to investigate the feasibility of an over-arching minimum data set. This over-arching minimum data set emerged from a detailed analysis of similarities and differences across the six minimum data sets produced.

This over-arching minimum data set provides a coherent framework for supporting transferability of clinical handover improvement initiatives in different clinical settings. The ability of this over-arching minimum data set to support 'flexible standardisation' is validated by its ability to accommodate all six minimum data sets. The over-arching MDS achieves a standardisation of minimum content for the transfer of information, responsibility and accountability during shift-to-shift clinical handover. The over-arching MDS is structured in five sections:

1. Environmental awareness

- a. Alerts and safety
- b. Advanced notice (especially high risk patient movement)
- c. Attention (to sick/deteriorating patients)

2. Patient identification and demographic details

- a. Textual identification (at least surname)
- b. Numerical identification (hospital unique identifier or date of birth)
- c. Wrist band check or other demographic data

3. History, evaluation and management

- a. History (presenting problem, relevant past history and current issues)
- b. Evaluation (physical examination findings, investigation findings and current diagnosis)
- c. Management to date

4. Responsibility, risk management and action plan

- a. Tasks to be completed (include the tasks as well as recommendations)
- b. Outstanding or abnormal results and observations (include a list, as well as actions and recommendations)
- c. Risk management

5. Accountability to ensure patient safety

- a. Patient (code status, MET status, other relevant information)
- b. Profession and colleagues (treating and responsible doctors, charts and clarifications)
- c. Organisation (discharge planning)

The project team view the combined individual minimum data sets and the over-arching minimum data set as a significant step in supporting flexible standardisation for clinical handover across a range of clinical settings.

3.6.3 Standardised Operating Protocols (SOPs) for Clinical Handover

This section briefly describes some of the key elements of deliverable 3 (Standardised Operating Protocols (SOPs) for clinical handover). The SOP refers to the structure for conducting clinical handovers and incorporates the minimum data sets. These have been developed for:

Department of Surgery (Medical and Nursing)
Department of Emergency Medicine (Medical and Nursing)
Department of General Medicine (Medical and Nursing)
Over-arching Standardised Operating Protocol

The over-arching standardised operating protocol (SOP) was generated from an analysis of data from the six SOPs developed for medical & nursing shift-to-shift clinical handover for General Medicine, General Surgery and Emergency Medicine. The six individual SOPs provide an analysis of the approach utilised to generate them and present the SOPs for each profession in the 3 clinical areas at the Royal Hobart Hospital including detailed examples. The over-arching SOP was further validated in these six areas to provide an evidence based guide for standardisation.

This over-arching SOP may be applicable to other scenarios but the evidence for its utilisation was limited to medical and nursing shift-to-shift handover. However, this SOP was designed to provide an inclusive framework to support future expansion and although it currently does not cater for multi-disciplinary handovers, it is anticipated that its inclusive framework builds the platform necessary for the future development and implementation of multi-disciplinary handover.

The development of this SOP recognised that the system for the delivery of healthcare services is very complex and involves multiple parties with a common aim to deliver the highest quality of care. Safety and quality in patient care depends largely on effective communication between various healthcare providers. Transfer of information between healthcare providers should ideally contain all relevant information in an accurate, unambiguous and timely manner. This will ensure that appropriate actions can be taken to facilitate the best quality care. Breakdown in communication has been identified as one of the most important contributing factors in serious adverse events.

Many factors have been identified as impacting on communication. One of these factors is the growing trend to reduce working hours for healthcare professionals, (especially junior medical officers), in recognition of the fact that fatigue may contribute to poor work performance (Junior Doctors Committee, 2004). In Europe, the European Work Directive will progressively reduce the maximum working hours of healthcare professionals to 48 hours per week (Junior Doctors Committee, 2004). In Australia, the Australian Medical Association has produced guidelines for safe working hours (AMA, 2006) and in the United States, the trend towards reduction in working hours is also evident (AMA, 2006). The reduction in working hours has led to an increase in the number of shifts and an increase in the number of teams of healthcare professionals who look after the same patient. Effective and efficient handover processes to transfer information, responsibility and accountability become pertinent.

Shift-to-shift clinical handovers amongst medical staff are not well defined and not well understood (AMA, 2006). Many hospitals do not have a clear policy for effective handover. More importantly, the transfer of responsibility and accountability is not well practiced (AMA, 2006). The nursing profession on the other hand has had a long tradition of practising shift-to-shift handover. The effectiveness and efficiency of nursing handover has been scrutinised intensely in recent times. There is still room for improvement in nursing handover in order to optimise the accurate transfer of information, responsibility and accountability. More importantly, the medical profession and the nursing profession need to work together more closely to achieve a uniform understanding of clinical handover.

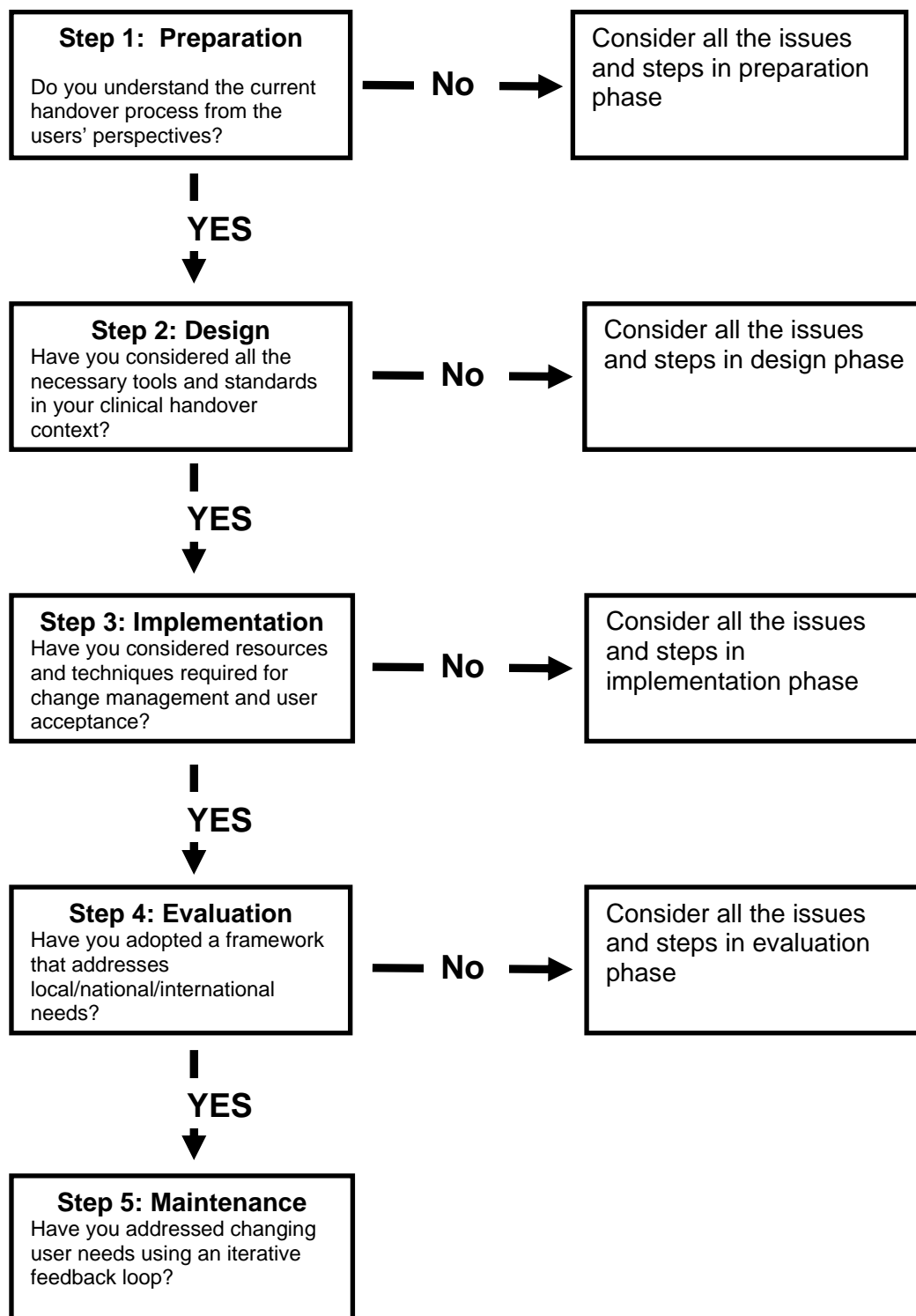
This over-arching SOP was developed in recognition of the need for solutions that are transferable at national and potentially international levels. Importantly, however, this SOP was also developed in a manner that recognised the fact that any standardised solution will also require the capacity to be adapted to local circumstances in order to ensure integration to achieve safer clinical care. Critically the 'flexible standardisation' of this over-arching SOP aims to achieve the following objectives:

- A standardised solution which allows seamless integration into the local clinical context to improve clinical handover.
- A standardised solution which will provide tools to clinicians and managers to implement clinical handover improvement initiatives within their local clinical services.
- A standardised solution which will reduce communication gaps for patient care.
- A standardised framework which allows for national learning from local adaptation and implementation of the standardised operating protocol.
- A standardised framework which will enable evaluation of information tools and communication processes for patient safety.

To achieve these objectives, the SOP is comprised of five phases: 1) Preparation; 2) Design; 3) Implementation; 4) Evaluation and 5) Maintenance. Each phase has a number of individual steps described in terms of background issues, objectives, framework, local considerations and tools and guidance. It is recommended that all five phases be considered by individuals or groups who are interested in improving the clinical handover processes. The five phases are displayed in the SOP flowchart (see Figure 2).

Although there has been a proliferation of literature in the area in recent years, there remains little evidence base for best practice in handover processes (Wong et al, 2008). There is a lack of frameworks to assist in understanding handover, developing tools to improve handover and also developing methodologies to evaluate handover practices. This is a significant barrier for clinicians and managers to establish practices to transform clinical handover into a more consistent and reliable part of the delivery of safe patient care. Whilst a strong argument exists for face to face handover, the lack of structure in terms of content and process and information tools leads to handover being a highly variable and individual-dependent process.

Figure 2 SOP Flowchart



The project team view the combined individual SOPs and the over-arching SOP as a significant step in supporting flexible standardisation for clinical handover across a range of clinical settings.

3.6.4 Training Material for Implementation of SOPs

This section briefly describes some of the key elements of deliverable 4 (Training material for implementation of SOPs). Materials for the implementation of the SOPs include manuals that incorporated the training workshops conducted with medical and nursing professionals in the three clinical areas (General Medicine, Emergency Medicine and General Surgery). In structuring these training materials individual manuals were prepared for nursing professionals in each of the three clinical areas, while a single training manual incorporating case examples from each of the clinical areas was prepared for medical professionals.

All of these training materials aim to achieve the following objectives for participants:

- Provide an understanding of patient safety with a focus on clinical handover.
- Provide an understanding of the importance of systems and human performance in patient safety with a focus on clinical handover.
- Provide an understanding of clinical handover problems through case study examples.
- Provide a dynamic discussion of strategies for clinical handover improvement.
- Provide an understanding of international and national clinical handover initiatives and the role of local improvement programs in informing national and international initiatives.
- Provide an understanding of the rationale and the current clinical handover standardised operating protocol, both at the conceptual and local level.
- Provide an understanding of the rationale and the current clinical handover minimum data set, both at the conceptual level and local level.
- Provide an overview of local implementation and local support for clinical handover improvement.
- Provide up-to-date literature to support current practice

In addition to the training manuals the deliverables provide reading materials of direct relevance to each clinical area. Comprehensive clinical handover guidelines are also provided for junior medical officers incorporating the minimum data set and standardised operating protocol with examples from each clinical area.

It is anticipated that where these materials are utilised they will be directly linked to systemic interventions aimed at improving clinical handover practice. It is recommended that training activities are carried out on a regular basis to ensure all staff members are familiar and understand the importance of clinical handover. It is also recommended that these training materials continue to be updated on a regular basis to ensure best practice is maintained.

4 Revision

The following issues have been re-considered and revisions made to the project deliverables:

1. Expansion of the section on multidisciplinary handover (Deliverable 3)
2. Expansion of the section on decision support and decision making during clinical handover, especially the need to identify deteriorating patients (Deliverables 3 and 4)
3. Clarification of environmental awareness (Deliverables 2, 3 and 4)
4. Clarification of the transfer of responsibility and accountability (Deliverables 2, 3 and 4)
5. Enhanced discussion of the support of clinicians during the clinical handover process
6. Enhanced discussion of the differences between nursing and medical handover
7. Enhanced discussion of the effectiveness of tool-based interventions versus culture-based interventions

5 Sustainability & Dissemination

A plan for sustainability is currently being developed for the continuation and expansion of clinical handover improvement initiatives at the RHH beyond the life-time of this current project. Furthermore, it is anticipated that a plan for dissemination within the hospital will be developed to showcase the work achieved through this project. The plan includes:

1. The Steering Committee will continue to meet throughout 2008/09 with the aim of supporting the on-going dissemination of clinical handover improvement initiatives at the Royal Hobart Hospital.
2. The project manager of this project will continue in a part-time role for the next 12 months to assist the implementation, evaluation and revision of the current SOPs and MDSs.
3. Other wards/areas will be engaged and encouraged to undertake similar activities in order to achieve uniformity of the clinical handover process within the hospital.
4. Information tools that support clinical handover may be improved and integrated into future information technology platforms to assist the sustainability of good clinical handover practice.
5. There are plans to assist the project team in additional local dissemination activities and in generating publicity of the outcomes from this project through internal newsletters and local media coverage.

The project team has also developed a plan for further external dissemination of the methodology, SOPs, MDSs and associated manuals and training workshops developed through this project. More specifically, the project is interested in investigating the transferability and generalisability of clinical handover solutions through the concept of "flexible standardisation". The project team is currently developing a plan to test the generalisability and transferability of the SOPs and MDSs in other institutions and in other clinical handover scenarios beyond shift-to-shift handover.

This project has generated a high level of enthusiasm among local healthcare professionals to improve clinical handover practices. It is hoped that sustainability will be achieved through the above initiatives. The project team is also keen to encourage and engage with other institutions who want to trial these SOPs and MDSs as part of their handover improvement initiatives. The team anticipate that this would also assist them to further refine and revise these SOPs and MDSs for generalisability and transferability. Institutions interested in trialling these SOPs and MDSs should contact ACSQHC for further information.

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