

Evaluation of the effectiveness and acceptability of standardised clinical handover tools at four Victorian health services

Results arising from the Victorian Quality Council (VQC) Clinical Handover Project
July–December 2007

Responsible working group: VQC Workplace Culture Working Group

May 2008

Contents

Executive summary	3
Background	3
Aim	3
Method	3
Results	3
General background	4
Pilot project background	4
Project aim	4
Objectives	5
Methodology	5
Description of clinical handover tools being evaluated	6
Activities	7
Data collection	7
Data analysis	7
Results	8
Usefulness of clinical handover tools	8
Medical staff interviews	11
Observational audits	12
Lessons learned from project management	14
Enablers to implementing the clinical handover tools	14
Barriers to implementing clinical handover tools	15
Strategies used to successfully overcome barriers	16
Strategies used that failed to overcome barriers	17
Strategies implemented to assist in the sustainability of the changes	18
Key recommendations for own health services regarding improvement in clinical handover	19
Key considerations for organisations implementing clinical handover improvement strategies	20
Project limitations	21
Conclusion	22
References	23
Appendices	24

Executive summary

Background

Clinical handover (CH) is a recognised patient safety issue. In June 2007 the Victorian Quality Council (VQC) developed a set of five standardised tools for shift-to-shift clinical handover in consultation with the Victorian public health sector. In July 2007 a pilot project to trial these tools was conducted in four public health services.

Aim

The aim of the pilot project was to evaluate the appropriateness and acceptability of the VQC clinical handover tools in health care settings.

Method

The health services were asked to involve their senior leadership in the project and select two appropriate areas within their organisations to trial the tools at night medical handover. Both pre- and post-baseline data and observation data were collected and medical interviews were conducted. Key performance indicators (KPIs) included the number of medical emergency team (MET) calls and CH-related incidents as well as a set of questionnaires regarding the usefulness of the organisational readiness checklist, policy and clinical handover template.

Results

The health services found the organisational readiness checklist and the suggested content for policy, guidelines/protocol and clinical handover useful. The organisation checklist was a good tool for identifying gaps and priority areas for improvement actions in CH practice. The suggested contents of policy, guidelines/protocol and CH templates provided a baseline for organisations to adapt and develop the content further to suit their specific needs. The suggested KPIs (listed in Appendix 5) were generally not considered useful due to the time frame and sample size. The MET calls and incidents reporting were also seen as not useful in determining the effectiveness of the clinical handover. All participants commented that there were too few MET calls to determine any change. The participants also believed that the number of MET calls does not necessarily directly correlate to the effectiveness and the quality of the handover. All sites also indicated that staff rarely document or provide details about the quality of clinical handover in the incident report. One health service found that the 'number of times that a medical staff is called to see a patient that they were not expecting the call' to be a more appropriate KPI for clinical handover. The project has highlighted that organisation support and commitment and stakeholder engagement and involvement is essential to implementing and sustaining changes to the CH process.

General background

The VQC is a ministerial council established in 2001 to lead the safety and quality agenda for Victorian health services. The VQC *Strategic plan* goal 2 aim is to 'Support the ongoing development of a workplace culture for all healthcare staff that values teamwork and individual competence in the delivery and continuous improvement of quality and safe patient care'. An objective of this goal is to 'Enhance continuity of care through clinical staff handover'.¹

*'Clinical handover refers to the 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.'*²

(Australian Commission on Safety and Quality in Health Care – May 2008)

Clinical handover is a recognised patient safety issue. Evidence of this can be found in Sentinel Event Program annual reports,³ outcomes of coroners' recommendations and the national^{4,5} and international literature.^{6,7} While the importance of good clinical handover has been recognised internationally, there is limited research to guide the development of best practice standards.

The VQC has taken a staged approach to investigating clinical handover. The activities undertaken include:

1. a literature review to identify patient safety issues related to clinical handover and potential system improvements
2. developing a CH information sheet, outlining generic concepts
3. surveying health services to identify problem areas, local improvement activities, and suggestions for project work to improve clinical handover.

The survey and literature review identified two significant areas of concern: shift-to-shift handover and interhospital patient transfer. Shift-to-shift clinical handover is the means by which outgoing personnel transfer relevant patient information and responsibility to the incoming personnel to ensure continuity of care.

Pilot project background

In early 2007 the VQC conducted a workshop with Victorian health service representatives to identify the major issues and opportunities for improving shift-to-shift handover. Following the workshop the VQC developed a set of five standardised CH tools, and in July 2007 commenced a pilot project to evaluate these tools in four health services. Rural health services have different CH-related issues to metropolitan and regional health services and were therefore not included in the pilot project.

This report presents the results and key learnings of the pilot project and may be useful for health services wishing to use the VQC tools to improve their CH process.

Project aim

The aim of this pilot project was to evaluate the appropriateness and acceptability of VQC's five shift-to-shift CH tools in the acute health care setting.

Objectives

The objectives of the clinical handover project were to:

- gain an understanding of the usefulness of the CH tools
- identify opportunities for improving the CH tools
- further develop the suggested KPIs via a consultation process
- identify enablers and barriers to implementing the CH tools
- identify common issues that organisations will need to consider when implementing the CH tools.

Methodology

Sample size

Three Victorian metropolitan and one regional health service were selected to participate in the pilot project through an expression of interest process. Each site was provided funding to appoint a project officer to manage the site's pilot and to facilitate changes to CH practice during the trial.

Time frame

The project commenced in July 2007 and was completed in December 2007.

Inclusion criteria

The inclusion criteria were:

- acute medical handover
- handover to two separate night medical officer positions
- handover of sick patients and patients who were anticipated to require a review in the next shift (VQC did not intend to alter the practice of the trial areas relating to the type of patients included in their handover)
- the tools must be evaluated in two areas of medical handover at each selected site. The areas selected to participate could be medical or surgery units or a combination of both.

Exclusion criteria

- Intensive care and high dependency units

Selected participating areas by health services

Participating areas selected by health services were:

Health service 1

- General surgery unit

- Nephrology unit

Health service 2

- Night handover involving surgical team
- Night handover involving medical team

Health service 3

- Renal unit
- Trauma unit

Health service 4

- Handover from medical, surgical and emergency department teams to night medical officer
- Handover to night second on-call medical officer (when called in)
- Morning handover from night medical officer to medical surgical and emergency department teams

Description of clinical handover tools being evaluated

A set of five standardised CH tools was provided to the selected health services. The clinical tools were designed to be adapted to the needs of individual health services to assist in providing safe and effective clinical handover. The objectives of the CH tools were to:

- identify organisational responsibilities for CH
- raise awareness of the required organisational commitment to CH
- increase knowledge of personal roles and responsibilities in relation to CH
- assist in identifying organisational structure that facilitates effective CH
- provide a standardised CH template
- provide suggested methods for measuring organisational performance with regard to CH.

The tools include:

1. clinical handover organisational readiness checklist (Appendix 1)
2. suggested clinical handover policy (Appendix 2)
3. suggested clinical handover protocol/guidelines (Appendix 3)
4. clinical handover template (minimum dataset) (Appendix 4)
5. list of proposed draft clinical handover KPIs (Appendix 5).

Activities

The four health services were required to undertake the following activities:

1. Select two appropriate areas within their health service to participate in evaluating the CH tools.
2. Adapt the suggested CH policy, guidelines/protocol and templates to suit their specific health service's needs (including staff education), and implement them.
3. Collect data.
4. Complete the fortnightly tracking tool.
5. Provide a report to the VQC.

Data collection

The following data was collected during the trial:

1. an organisational readiness check list – completed by the quality managers and the directors of medical services
2. pre- and post-implementation baseline data and questionnaires – completed by staff from participating areas
3. pre- and post-observational audits of day to night medical handover within participating areas – completed by project officers
4. a questionnaire survey of five senior personnel (executives and senior clinicians) on the usefulness of the organisation checklist, CH policy and KPIs
5. KPI data collection – collected one month prior to the project and for one month during the trial.

Data analysis

Data were prepared using Microsoft Excel. Additional contextual data extracted from written responses were keyed into a spreadsheet to analyse.

Results

Usefulness of clinical handover tools

The VQC requested a questionnaire assessing the usefulness of the suggested organisational readiness checklist, policy template and KPIs to be completed by five senior personnel from each organisation. Nineteen health executives across the four health services completed the questionnaire.

Clinical handover organisational readiness checklist

The aims of the CH organisational readiness checklist were to raise awareness of the required organisational commitment to the CH process, and to identify gaps in CH management at an organisation level. The CH organisation checklist evaluates the organisation's CH practice from the following perspectives:

- governance, leadership and culture
- competence and education
- information management and reporting.

The respondents were senior personnel not directly involved with the project. The majority found the CH organisation checklist to be moderately to very useful and 85 per cent would recommend using it in their organisation. The respondents indicated the checklist is a comprehensive guide for identifying governance requirements for executives. It has also assisted them to identify gaps in the CH process. In comparison with the executives' responses, all the project officers involved in the project found the checklist to be very useful in identifying gaps in CH processes.

Participating sites suggested that the following content be added onto the organisational readiness checklist:

- more details on the educational requirements for clinical handover – for example, not just at orientation but also ongoing education as part of quality improvement activities
- more direction required on how to incorporate the tools into existing systems within the organisation
- more information required regarding a CH evaluation process.

Clinical handover policy template

The suggested CH policy content outlined the organisation's commitment to clinical handover and the expectations of what will occur within the organisation. The aim of the suggested policy was to assist in identifying systems that facilitate effective clinical handover.

The suggested CH policy content appeared to be well accepted by the four health services. Eighty-nine per cent of respondents would recommend using the suggested policy content in their organisations. The participants felt that the proposed policy template provides a framework for the organisation wishing to develop policy/procedures for clinical handover. Two organisations have chosen to adapt the proposed policy content, and the other two have chosen to adapt the proposed guidelines or protocol/procedure content to guide CH practice in their organisation.

The following content was suggested by the participating sites to be added onto the policy template:

- *Include a statement regarding the benefits of good clinical handover such as:*
 - *risk mitigation for individuals and organisations*
 - *educational opportunities for clinical staff*
 - *opportunity for time management, prioritisation of tasks and team work*
 - *improved access and patient flow as a result of better communication and planning.*
- *Identify complexity of handover at different medical levels.*
- *Identify that clinical handover is a core component of staff responsibility.*
- *Include a mechanism for auditing clinical handover.*

Usefulness of suggested clinical handover guideline/protocol template

The participating sites considered the guideline/protocol template useful. It is easy to understand, provides comprehensive information to staff about clinical handover and a baseline for developing more specific guidelines for the organisation. However, they also suggested that organisations need to include information that is unit specific in the guidelines.

Draft clinical handover key performance indicators

1. A range of draft KPIs (see Appendix 5) was provided to allow organisations to select appropriate methods of measuring organisational performance with regard to CH. The participating sites collected data on (1) the number of MET calls during night shift in participating areas, and (2) the number of incident reports in participating areas as KPIs during the pilot period.

Majority of the respondents found the draft KPIs only a little bit useful. Most of them suggested that the proposed KPIs were time consuming, difficult to collect reliable data on and interpret; others believe that the KPIs were fairly comprehensive and would give a good overview about whether handover process was working.

It was shown during the trial that appropriate KPIs for clinical handover were difficult to determine. It was difficult to collect meaningful data to reflect both patient outcomes and the handover process during the pilot period due to the small sample size and short time frame. The four sites found using MET calls and incident reporting data as KPIs to measure the effectiveness of clinical handover problematic and inappropriate. They indicated that the number of MET calls does not necessarily directly correlate to the effectiveness and the quality of the handover and the number of incidents reported does not truly reflect the effectiveness of the clinical handover provided.

As a result, one health service elected to use ‘the number of phone calls to the night medical officers’ to measure the effectiveness of the CH process in their organisation and found this indicator was a more appropriate KPI. The other health services have subsequently agreed with the appropriateness of using ‘the number of phone calls to the night medical officers’ as a KPI for CH. However, due to the project timeline they were not able to obtain the required data from the medical staff. The health services also indicated that the data collected from the medical staff interviews and the observational audits were useful in determining the effects of the project and provided useful comparative data for further improvement.

The following KPIs were suggested by the participating sites:

- *number of patients who required review who were not included in the clinical handover (not expecting a call)*
- *number of patients requiring review that were reviewed*
- *number of patients whose condition deteriorated due to lack of CH*
- *patients not entered in the database who subsequently required review*
- *time taken to complete the CH*
- *number of phone calls to the medical officer per night*
- *whether the organisation has provided a location for clinical handover*
- *whether nursing and allied health staff were present at the clinical handover*
- *content of clinical handover – relevancy of CH content specific to the patient condition*
- *improved care planning*
- *improved discharge planning*
- *staff satisfaction with clinical handover – both giver and receiver of information*
- *whether there is auto-generation of a patient list/problem list and key pathology results.*

Medical staff survey and observational audits are useful in determining the effects of the project and also provided additional educational opportunity.

Clinical handover template

Overall, the participants considered the CH template containing the minimum dataset included most aspects of clinical handover, and was a useful foundation for the organisation to develop further to suit individual needs. It can also be adapted to an electronic tool for clinical handover. Some suggested that the minimum dataset is appropriate for medical patients, but needs to be adapted for surgical patients.

The following content was suggested to include in the minimum dataset:

- *urgency of review*
- *time of next review.*

Medical staff interviews

The number of medical staff who participated in the surveys varied between health services from four to 13 people. The intention of the project was to interview the same staff pre- and post-trial. However, this was not possible due to medical staff rotation. Hence the staff interviewed at the pre-trial may not have been the same post-trial. Only three of the health services completed the pre- and post-trial interviews, one site was unable to complete the post-trial survey due to the prolonged illness of the project officer. This section presents the data collected from the three health services that completed the pre- and post-interview survey.

Level of satisfaction about the quality of clinical handover

Medical staff from participating units were interviewed about their level of satisfaction with the following information provided at the clinical handover pre- and post-implementation of CH tools:

- handover of patients requiring review overnight
- information provided for patients requiring review overnight
- ability to identify priorities from the information provided at handover
- handover of all patient-related tasks to be performed overnight.

Post-implementation surveys of three health services indicated a positive trend in two health services and a negative trend in one health service (positive trend in one question).

Feedback from the staff of one health service was very positive. Staff noted a significant improvement in the quality of handovers allowing them to use time more efficiently.

Analysis of completed CH sheets by the project officer at the health service that demonstrated an overall negative trend showed that the CH template format was not properly utilised by the participating medical staff. The majority of the details in the CH sheet were not completed. In most cases the CH sheets were only used for the handover for one particular shift. The poor utilisation of the CH sheet may have contributed to the negative trend in this health service.

Knowledge of hospital policies and process regarding clinical handover

The survey showed that education conducted during the pilot project has increased medical staff's knowledge of their hospital's CH policy.

Level of satisfaction about the clinical handover tools provided for the trial

Eighty-four per cent of respondents were either satisfied or very satisfied and 13.5 per cent were dissatisfied with the CH tools provided for the trial.

Level of satisfaction with the improvement in the standard of clinical handover provided as a result of the trial

Seventy per cent of respondents from three health services were either satisfied or very satisfied and 13 per cent were dissatisfied in the standard of clinical handover provided as a result of the trial.

Observational audits

The project officers were asked to conduct observational audits of day-to-night medical clinical handover in each of the two selected areas for the project on three separate occasions. The following data was collected from all four health services.

Environment

The results showed that majority of the clinical handovers at the participating sites were conducted face to face, in a dedicated room and at a specific time. Apart from attending an emergency, the majority (76 per cent) of the clinical handovers were interruption-free. Two health services provided the medical shift overlap time to allow handover to occur during the nominated time. Only 50 per cent of the medical handovers occurred during the nominated time in one health service. Medical handovers occurring within the nominated time improved from 75 per cent to 100 per cent of the time in another health service by the end of the project. The audits also found that there was sufficient opportunity for the night medical staff to confirm their understanding of the handover provided by the day medical staff in all of the health services.

Access to radiology and pathology results

Three health services had access to radiology and pathology results in the handover room at most clinical handover times. One health service only had access to radiology and pathology results one-fifth of the time in the dedicated CH room.

Attendees present at the handover

Across the four health services, 96 per cent of the required medical attendees were present at the clinical handover. However, no senior nursing staff or the nurse-in-charge for that shift were present.

Clinical handover content

The project officers observed that for 78 per cent of the time, the outgoing medical staff were able to clearly communicate about the urgency of patients requiring review to the incoming medical staff. This was consistent with the findings from the medical interviews. The project officers also found that most of the CH participants at the trial sites were not aware of an escalation policy for CH. The resuscitation status of the patients was communicated in less than 40 per cent of clinical handovers.

Clinical handover approach

Three health services had a consistent approach to the clinical handover provided for each patient. One health service did not have consistent approach to the CH process. This could also explain the reason for the dissatisfaction with the tools by medical staff in the participating areas of this health service.

Lessons learned from project management

The project officers were asked to identify enablers and barriers to implementing the Clinical Handover Pilot Project. The following is a summary of their comments.

Enablers to implementing the clinical handover tools

Organisation

- Developing an organisational policy
- Accountability – for example, reporting project progress to the relevant committee, collecting the completed CH sheet
- Clear expectations set from the start of a medical rotation

Leadership

- Executive commitment and support during the execution and planning phase of the project to promote a culture of accountability, change and leadership
- Commitment of the medical clinical champions, especially in areas that were participating
- The involvement of the senior clinicians by promoting and encouraging the changes to handover through role modelling and expectation

Stakeholder engagement

- Establishing a CH working party to support the changes
- Gaining staff interest in making improvements to the CH process
- Engage other stakeholders such as nursing staff

The role of medical champions

All four health services felt the role of medical champions is a vital one for medical acceptance and to bring about change in CH practice. It is important that the head of each unit monitors the changes and works with junior medical staff to make improvements. However, the project officers indicated that there is a need for organisation-wide support to ensure sustainability. The project officers also suggested there was a need for clearly defined roles in each of the following positions:

- consultant – leadership, ensuring handover practice is adopted by the registrar
- registrar – provide educational support and role model for junior staff, pivotal to the success of the development and implementation of the tool
- resident-observer – implementation and supporter
- senior executive – leadership and support.

Resources

- A dedicated project officer should be appointed.
- Additional resource needed to enhance CH process provided during the course of the project.
- CH tools provided by VQC:
 - help to identify priorities of care that staff find useful and thus reinforce the culture change
 - enhance the existing CH tool and provide structure to the existing process.
- Placing printed handover guidelines in the handover room aids the handover process.

Education

- Provide education sessions on clinical handover and the pilot tool to ensure understanding of the purpose of clinical handover and the process required for the project.
 - Include examples of adverse incidents where poor handover was a contributing factor.
 - Education on the handover policy should be conducted during orientation.

Environment

- Pre-existing handover structure in place

Monitoring

- Collect CH sheet the following morning to aid compliance

Barriers to implementing clinical handover tools

Leadership

- Lack of executive or senior clinician support – difficulties in engaging senior clinicians
- Limited supervision or support by consultants in the evening or overnight to oversee implementation of the CH project
- Timeliness of feedback on templates from medical champions
- Competing demands on senior staff's time

Culture

- Some resistance to change
- Medical resistance to change being implemented by non-medical staff
- Staff perceptions
 - View of the project as a pilot and not as a long-term strategy to assist in clinical handover

- Perceived lack of importance of the need for structured CH practices
- Perception that successful clinical handover would only occur with implementation of an electronic solution (one unit)

Environment

- Clinical handover time
 - Limited support and supervision by the senior clinicians during night handover
- Lack of space/quiet areas – especially when the medical staff are required to access the computers for results
- Medical roster
 - Decreased compliance of weekend staff as not orientated to the project
 - Constant rotations of medical staff
- Competing organisational demands and/or work demands
- Poor staff morale and low staff levels in one unit impacted on available time for supervision, support and education

Education

- Factors related to education include:
 - education of handover tool not structured or consistent
 - difficulties in convening information/education sessions to all relevant staff
 - education alone found to be insufficient to change old habits.

Resources

- Tools
 - Non-compliance with process due to difficulty in using adapted tool – tool too cumbersome (one unit)
 - Perceived lack of importance of project unless there was implementation of an electronic tool
- Information technology
 - Issues related to hospital computer program
 - Inefficient use of new laptop programs introduced for the CH process
- Project was compromised due to the prolonged illness of project officer and competing demands

Strategies used to successfully overcome barriers to implementing changes to clinical handover within the participating areas

Education

- Inclusion of CH topic/issues in education and meetings of medical staff – for example, grand round

Stakeholder engagement

- Engaging senior clinicians at the pilot areas to support the project and to promote an expectation that the tools would be used
- Clinical champion appointed at registrar level
- Involvement of medical champions and nursing staff in program
- Enrolment of unit managers to support medical staff in seeking quiet areas for clinical handover

Monitoring, reinforcement and enabling

- Audits undertaken by well-known medical officer increased compliance of the medical staff in regards to using the tool
- Positive feedback on the audit results
- Results of observational audits feedback to medical staff that assisted in gaining their support
- Making space available for quiet clinical handover

Strategies used that failed to overcome barriers to implementing changes to clinical handover within the participating areas

Leadership

- Staff reverted back to pre-project CH process when the clinical and executive champion were not at the handover

Educational

- Inability of all staff to attend educational sessions
- Education alone not sufficient to sustain change
- Little impact on briefing the staff at the ward meeting by project officer as staff were preoccupied with competing tasks
- Difficulties in timing of communication with the participating wards and the project officer

Resources

- A running sheet for patients requiring urgent review over the following shift on the front of the handover sheet not utilised by the registrars as it was seen to be 'double documenting' in one unit
- Engaging registrar and consultant to support and participate in the project
- Rostering of medical champions to facilitate the project did not occur in one unit
- Involvement of other unit consultants to collect handover sheet, educate registrars and support the system changes in one unit

Strategies implemented to assist in the sustainability of the changes made throughout this project

Organisation

- Long-term organisation commitment to change
- Inclusion of CH improvement strategy in the health service's quality plan
- Organisational expectation and policy for clinical handover that included minimum standards driven by the executive
- Including clinical handover in junior medical staff orientation
- Reporting of project progress to the health service's quality and safety committee

Leadership

- Consultation and involvement of senior medical staff
- Signing off on the CH templates by senior medical staff prior to implementation
- Clinical champion at registrar level to be appointed on each ward
- Consultant-led handover provides the opportunity for education and also ensuring that handover structure and process is maintained

Education

- Include education session on clinical handover in the hospital and unit orientation program

Monitoring

- Establishing KPIs for clinical handover including providing feedback to the medical staff and reporting to the quality and safety committee on a regular basis
- Regular audits to monitor compliance
- Continue positive feedback at morning handover

Improvement of clinical handover tools

- Further development and improvement of the CH format used at the trial, and possible transferring of this format to an electronic version
- Refining and continuing to improve electronic tool and the in-house computerised system to reduce duplication

Key recommendations for own health services regarding improvement in clinical handover

Organisation commitment

- Organisation-wide approach to implement CH change
- Clinical handover must be lead by the organisation with expectations, policy and guidelines clearly communicated and documented
- CH education must be included as part of hospital orientation
- Adjustments to medical rosters to enable group handovers with interns and registrars – time-effective and educational opportunity
- Gap analysis of current CH practices (including medical, nursing and allied health) across the hospital

Stakeholder engagement

- Need to engage senior leaders
- Medical champions need to play an active role in implementing improvements to clinical handover – this includes reinforcing the requirement to utilise the CH template
- Including multidisciplinary team (nursing and allied health) in the project
- Establishing a steering/working group to effect the change and ensure consistency of process organisation-wide that will include nursing and allied health

Education

- Develop a handover education package to ensure consistent messages
- Ongoing education to ensure that the handover process is sustainable
- Education content needs to include both the purpose and process of clinical handover
- Medical staff to present education to medical staff to gain acceptance

Handover process

- A dedicated location to allow multiple units' handover that include IT access
- CH process should be multidisciplinary

- Tools
 - Consideration of speciality units in clinical handover tools
 - Use paper-based first and also consider exploring electronic clinical handover options – involve information technology department in the development of electronic clinical handover tool
 - Continue to improve the existing CH tool

Monitoring

- Ongoing monitoring/feedback required for sustainability
- Development of an audit process to measure effectiveness of handover
 - Establish auditing of night calls as a KPI
- Observational audits to monitor compliance to minimum dataset for clinical handover as a KPI

Key considerations for organisations implementing clinical handover improvement strategies

Organisation level

- Organisations need to commit and lead the change
- Handover process should be clearly documented in policy and guideline format
- Inclusion of CH process at hospital orientations
- Organisations need to be careful that they are not undertaking too many projects at the same time because staff might become overloaded
- Provide support for junior medical staff in providing a quiet space for handover
- Requires ongoing work to see results

Stakeholder involvement

- Gain executive support
- Ensure medical champion support and commitment
- Include residents and registrars in the project to ensure relevance of data in relation to escalation and urgency of review

Education

- Education to be undertaken at both organisational and unit level
- Generic education package to ensure dissemination of information on both the project methodology and purpose of clinical handover are consistent

- Incorporate clinical examples in the education sessions to highlight the importance of clinical handover
- Use medical staff to provide education and guidelines to medical staff
- Educate the nursing staff about the policy, particularly in relation to allowing medical staff interruption-free time for handover

Resources

- Sufficient resources to develop and implement clinical handover improvement
- Willingness to adjust CH templates to reflect speciality units
 - Does not need to be electronic in the first instance; tool can be adapted, but consider developing it into electronic tool later on
 - If using electronic tool, ensure it can be used as a paper-based tool and has prompts
- Project officer
 - Commitment of project officers to one project at a time
 - Ensure that staff are not overloaded with competing priorities/projects

Timing

- Commencing with morning rather than evening handover would create greater support and buy-in
- Issues with the timing of rotations of medical staff and the timing of the project need to be addressed

Project limitations

The aim of the project was to implement and evaluate the effectiveness and acceptability of the CH tools developed in public health services. A number of the limitations to the project were recognised.

- Sample size: Only three metropolitan and one regional health service were involved in the pilot study. The small sample size means that the findings may only apply locally and may not be applicable to other similar health services.
- It was difficult to interpret the data collected from the health services as there was some confusion over how data should be collected and reported. The different interpretation of the questionnaires and the variation in sample size between health services has further complicated the data evaluation process.
- It was clear that the period over which the project was run was insufficient to collect meaningful data such as the content of the CH template, staff satisfaction of the CH process and also the long-term impact on patient outcome.
- Tight time frame: The tight time frame for the project didn't allow for mishaps and it was also impossible to complete the project within one rotation of junior medical staff. There was insufficient time to collect observation data.

- The project time frame was insufficient to allow comment on whether ongoing change had occurred.
- The night medical staff shift-to-shift handover was chosen to pilot the CH tools. The impact on day medical, nursing or other allied health handover was not measured.
- The medical roster also posed a challenge to the project. The constant rotations of medical staff meant that using the CH template may not be forwarded onto the new rotation without orientation to the process. The medical rotation has also impacted on the data collection as it was difficult to interview the same medical staff pre- and post-trial.

Conclusion

Overall, the participating health services found the pilot project valuable. The CH organisational checklist, as well as suggested content for policy, guidelines/protocol and CH templates provided health services with a strong basis from which to adapt the tool and implement consistent organisation-wide CH practices. Finding appropriate KPIs for clinical handover appears to be problematic. It is important to have good sample size to detect any meaningful change in CH practice. The project has highlighted that organisational commitment and support (including resource support) is essential to implement and sustain changes to the CH process. It has also demonstrated that the changes will not occur without the engagement and cooperation of all relevant stakeholders, including the medical champion, medical staff and nursing staff. The project will require ongoing work, monitoring and organisational commitment to realise fruitful results.

References

1. Victorian Quality Council, Workplace culture, strategic goal 2, http://www.health.vic.gov.au/qualitycouncil/stratplan/stratgoal_2.htm accessed May 2008.
2. Australian Commission on Safety and Quality in Healthcare, <http://www.safetyandquality.org/internet/safety/publishing.nsf/Content/programs-lp> accessed May 2008.
3. Clinical risk management, Victorian Government Health Information, <http://www.health.vic.gov.au/clinrisk/sentinel/ser.htm> accessed May 2008.
4. Ye K, McD Taylor D, Knott JC, Dent A, MacBean CE 2007, 'Handover in the emergency department: deficiencies and adverse effects', *Emergency Medicine Australasia*. 19(5):433–41.
5. Bomba DT, Prakash R 2005, 'A description of handover processes in an Australian public hospital', *Australian Health Review*. 29(1):68–79.
6. Alvarado K, Lee R, Christoffersen E, Fram N, Boblin S, Poole N, Lucas J, Forsyth S 2006, 'Transfer of accountability: transforming shift handover to enhance patient safety', *Healthcare Quarterly*. 9 Spec: 75–79.
7. Roughton VJ, Severs MP 1996, 'The junior doctor handover: current practices and future expectations', *Journal of the Royal College of Physicians of London*. 30(3):213–14 .

Clinical handover organisational readiness checklist

1. Governance, leadership and culture

Processes established
and working effectively

Processes in place but
need enhancement

Processes under
development

No processes in place
for this element

- a. An organisation-wide policy has been developed for clinical handover
- b. An organisation-wide protocol/guideline has been developed for clinical handover
- c. Board and staff have received education about the impact of clinical handover on patient safety
- d. Clinical leaders regularly reinforce and demonstrate commitment to effective clinical handover
- e. Quality improvement process is applied to key performance indicators (KPIs)
- f. All units have implemented an escalation policy
- g. Resources have been allocated to facilitate effective clinical handover

2. Competence and education

- a. Clinical handover is a component of orientation for all clinical staff
- b. Clinical staff receive feedback about KPIs and are involved in improvement opportunities where these are identified

	Processes established and working effectively	Processes in place but need enhancement	Processes under development	No processes in place for this element
--	---	---	-----------------------------	--

- c. Senior staff provide mentoring of junior staff in clinical handover
- d. All staff are provided with an opportunity to clarify issues that arise during clinical handover
- e. Responsibility to comply with organisational policy and protocol regarding clinical handover is stipulated in position descriptions

3. Information management and reporting

- a. KPIs have been developed and reporting mechanisms to Board Quality Committee established
- b. Minimum dataset for the organisation has been agreed upon
- c. Unit review of minimum dataset has occurred and necessary additions made for specific units
- d. The incident reporting system allows adverse events related to clinical handover to be captured
- e. Information technology facilitates effective clinical handover, allowing access to results and reducing duplication

Prepared by _____

Authorised by _____

Suggested content for clinical handover policy

Who	All staff participating in clinical handover and those with responsibility for delivering patient care.
Definition	<p><i>Clinical handover refers to the effective transfer of information from one health care provider to another when:</i></p> <ul style="list-style-type: none"> • <i>a patient has a change of location of care, and/or</i> • <i>when the care of a patient shifts from one provider to another (either individual staff member or institution).</i> <p>Adapted from The Australian Council for Safety and Quality in Health Care – May 2005</p>
Expected outcomes	<p>That clinical handover is performed in an effective manner, with appropriate communication of information, delivering safe patient care.</p> <p>That (<i>insert name of health service</i>) recognises the importance of clinical handover in safe patient care, providing support, monitoring effectiveness and responding to outcomes.</p>
Why	Effective clinical handover is vital in maintaining patient safety. Evidence for this can be found in Sentinel Event Program annual reports, outcomes of health service inquiries, coroners' recommendations and international literature.
Policy	<p>Health service x:</p> <ul style="list-style-type: none"> • recognises the importance of clinical handover in delivering safe, quality care • supports a culture where the importance of clinical handover is acknowledged and high expectations are clearly specified by individual units • recognises that clinical handover is an essential component of clinical care and will improve practice by providing relevant resources and training • includes clinical handover as an integral part of orientation/induction for relevant staff • has established key performance indicators that are evaluated, reported to the Board Quality Committee on a (<i>insert time frame</i>) basis, and responded to as necessary • includes clinical handover as a responsibility for all clinical staff, including senior staff, in position descriptions • uses a minimum dataset as the basis for all clinical handover situations • has developed a process for documenting clinical handover – this should be (<i>outline process</i>) • recognises the importance of multidisciplinary participation in clinical handover and encourages this approach wherever feasible • recognises that clinical handover requires effective communication, including an opportunity to clarify information. For this reason health service x provides funded handover time for both medical and nursing

	staff.
Responsibility	<p><i>Governance</i></p> <p>Board and chief executive (on behalf of x health service) are responsible for ensuring that an effective clinical handover system is established and maintained.</p> <p><i>Operational</i></p> <p>Unit heads/department managers (<i>insert appropriate terms</i>) are responsible for ensuring that clinical handover is conducted in accordance with x health service's clinical handover policy and protocol.</p> <p>Clinical staff are responsible for complying with the standards established by x health service and supported by unit heads.</p>
Links	<p>Refer to:</p> <ul style="list-style-type: none"> • <i>Clinical handover protocol</i> • <i>Organisational risk management policy</i> • Attachment – Clinical handover template • www.health.vic.gov.au/qualitycouncil

Suggested content for clinical handover protocol/guidelines

Who	All staff participating in clinical handover and those with responsibility for delivering patient care.
Expected outcomes	<p>That the expectations of clinical handover are clearly stipulated for all clinical staff.</p> <p>That leadership is apparent in the management of clinical handover.</p> <p>That clinical handover is conducted in a manner that:</p> <ul style="list-style-type: none"> • facilitates effective communication • provides participants with an understanding of expectations in the forthcoming shift • provides participants with an awareness of priorities for the forthcoming shift. <p>That patient safety is enhanced as a result of effective clinical handover.</p>
Why	<ol style="list-style-type: none"> 1. Clinical handover is a recognised issue in maintaining patient safety. 2. Health service x recognises the importance of clinical handover in delivering safe, quality care. 3. Standardisation of practice at health service x will contribute to improved patient safety.
Procedure	<p>Health service x:</p> <ul style="list-style-type: none"> • provides orientation of clinical handover processes to all new staff • requires that programs/divisions (medicine and nursing) establish the following for clinical handover: <ul style="list-style-type: none"> ○ senior clinician involvement in clinical handover via participation and consultation ○ staff responsibilities for participating in clinical handover and complying with clinical handover policy and protocol to be stipulated in position descriptions ○ information communicated during clinical handover should be documented in x ○ specified handover time ○ specified room for use during handover, with access to radiology and pathology results ○ rosters with overlap of shifts, allowing time for handover to occur ○ specified mandatory attendance at handover • ensures no interruptions occur during clinical handover except in the case of an emergency • requires all units to have an escalation policy that clearly outlines steps to be followed by junior staff in specific circumstances and at

	<p>what stage assistance is to be sought (this escalation policy must be communicated to the multidisciplinary team and be readily accessible)</p> <ul style="list-style-type: none"> • encourages multidisciplinary participation in clinical handover wherever feasible • requires its minimum dataset is to be used in all clinical handover situations (units are encouraged to consider any specific fields that are to be added to meet the needs of their service) • requires that clinical handover of a patient occurs in the order outlined in the minimum dataset (all designated fields are compulsory) • provides an opportunity to clarify issues/understanding • understands that handover of patient information by phone (where participants are rostered to attend handover) is inappropriate except in emergency situations • requires incident reports are completed when issues arise related to clinical handover.
Reporting	<ul style="list-style-type: none"> • Reporting of the following key performance indicators occurs on a x basis to the Board Quality Committee. Unit heads are responsible for ensuring that data collection and reporting occurs in a timely manner. It is expected that feedback be provided to staff and improvement strategies implemented where an opportunity is identified. • Programs/divisions are required to submit relevant data as per quality manager guidelines.
Links	<p>Refer to:</p> <ul style="list-style-type: none"> • <i>Clinical handover policy</i> • <i>Organisational risk management policy</i> • Attachment – Clinical handover template • www.health.vic.gov.au/qualitycouncil

Clinical handover template for ward patients

Compulsory fields are listed below (optional fields to be determined by organisation/treating unit/discipline).

1. It is critical that the clinical handover template set is supported by policy/guidelines/key performance indicators.

Format of template – to be adapted by organisation

Item
Name
Age
Location
UR
Treating unit
Admission date
*Escalation plan
Working diagnosis
Procedures/date
Results Pending Abnormal
Ongoing management plan (include issues, reason review required, time frame for review)
Resuscitation plan
Alerts (includes allergies, clinical risk factors)
Signature and position
Date

*Where escalation refers to when to contact more senior staff and who should be contacted.

Additional fields for consideration

Relevant past history
Relevant examination findings (include vital sign trend)
Discharge planning

Suggested clinical handover key performance indicators

Structure/process/outcome

It is not suggested that organisations complete all the KPIs listed below. A range of KPIs are provided to allow organisations to select appropriate measures for their situation. Initially, process and structure KPIs may be relevant to measure progress against established organisational CH policy and protocol. However as improved patient care and safety is the aim of effective clinical handover, outcome measures are recommended once a standardised process is established.

Outcome KPIs

1. No. of patients subsequently requiring review not presented at clinical handover x 100

$$\frac{\text{No. of patients}}{\text{No. of patients}}$$
 - Define which clinical handover situation the measure applies to.
 - Define number of patient presentations measure applies to.
2. No. of incident reports related to clinical handover (patient issues)
3. No. of MET calls
 - Define number and type of shift measure applies to (such as night shift).
 - Define period of time over which measure occurs (such as month).

Structure KPIs

1. No. of medical units with specified time for clinical handover to occur x100

$$\frac{\text{No. of medical units}}{\text{No. of medical units}}$$
2. No. of nursing units with specified time for clinical handover to occur x100

$$\frac{\text{No. of nursing units}}{\text{No. of nursing units}}$$
3. No. of medical units with access to pathology and radiology results during clinical handover x 100

$$\frac{\text{No. of medical units}}{\text{No. of medical units}}$$
4. No. of nursing units with access to pathology and radiology results during clinical handover x 100

$$\frac{\text{No. of nursing units}}{\text{No. of nursing units}}$$

Process KPIs

2. No. of clinical handover occasions when all mandatory attendees were present x 100

$$\frac{\text{No. of clinical handover occasions}}{\text{No. of clinical handover occasions}}$$
 - Define which clinical handover situation the measure applies to.
 - Define the number of clinical handover occasions to be measured.
2. No. of patients who were presented at clinical handover using the minimum data set x 100

$$\frac{\text{No. of patients presented at clinical handover}}{\text{No. of patients presented at clinical handover}}$$
 - Define which clinical handover situation the measure applies to.
 - Define number of patient presentations measure applies to.

3. No. of clinical handover occasions with senior clinical staff present x 100
No. of clinical handover occasions
- Define which clinical handover situation the measure applies to.
 - Define the number of clinical handover occasions to be measured.