Figure 7. process tool for PACU handover

Summary

Handover improvement strategies and solutions must be specific to the context of care in which they are used. Multiple methods and sources of data ensure that these strategies and solutions are acceptable and feasible to implement because they incorporate local influences and sensibilities. Consideration should be given for handover improvement strategies that not only standardise processes and guide clinical handover but also allow ongoing quality monitoring and evaluation to ensure handover practices are both robust and resilient in the workplace.

References

11. Vermeulen, C. et al., Intra- and Interprofessional communication during clinical handover and patient safety in the Post Anaesthetic Care Unit (PACU).13 The project was conducted in three organisations (one public and two private). The framework reflects the importance of systematic and comprehensive measurement of all aspects of inter- and intra- professional communication during clinical handover and within the context of care delivery. The importance of understanding the factors of this framework is to be able to recognize and inform reliable solutions. Underpinning the framework, are five concepts commonly used in quality improvement processes and prominent in the literature of organisational safety, high reliability organisations and change management in healthcare environments. These concepts are illustrated in Figure 2.

Using tools to evaluate the quality of interpersonal clinical handover in complex settings

Safe health care delivery depends on effective communication between health care providers. Developing and implementing consistent and reliable approaches to clinical handover is a key strategy to reduce communication errors.

Clinical handover (see Figure 1) is a routine task performed many times a day within numerous healthcare settings. Handover is most challenging in complex situations when patients are particularly vulnerable, handover is frequent and rapid, patient watching is not accessible, and environment can change unexpectedly, and when different professional groups interact. In these situations handover needs to be comprehensive, specific and time-efficient.

This document presents a range of practical tools and strategies that can be used to examine complex clinical handover situations and inform improvement solutions. This document will assist you to:

• tactical and useful methods for evaluating the quality of clinical handover in your local context using principles that underpin quality improvement
• identify advantages and disadvantages of using different methods for evaluating clinical handover
• develop a multi-method strategy for evaluating practice improvements specific to your clinical environment.

Clinical Handover “...the transfer of professional 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.” (Ceder Handbook: Safer Patients, Australian Commission on Safety and Quality in Health Care, 2006; p.8).

Figure 1. Definition of clinical handover

This framework of tools and strategies described here was devised and used in a recent quality improvement project that investigated interpersonal communication and team performance during clinical handover in the Post Anaesthetic Care Unit (PACU). The project was conducted in three organisations (one public and two private). The framework reflects the importance of systematic and comprehensive measurement of all aspects of inter- and intra- professional communication during clinical handover and within the context of care delivery. The importance of understanding the factors of this framework is to be able to recognize and inform reliable solutions. Underpinning the framework, are five concepts commonly used in quality improvement processes and prominent in the literature of organisational safety, high reliability organisations and change management in healthcare environments. These concepts are illustrated in Figure 2.

Figure 2. Framework for quality improvement

Background

In complex handover situations, cultural, behavioural and environmental factors associated with team performance10-14 can impact on patient safety outcomes by undermining the stability of team functioning and the effectiveness of interpersonal communication.15 Attempts to improve clinical handover that have focused on organisational interventions have been less successful than those that have considered multifaceted13,15 and organisational16 influences. Mixed method approaches use a combination of quantitative and qualitative data to capture the factors and barriers that impact on quality improvement. These methods are most effective in informing targeted improvement and implementation strategies.17-19

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Comprehensive quality assessment of handover

Three elements that need to be considered when evaluating the quality of handover are:

1) information
2) delegation of responsibility and/or transfer of accountability, and
3) the system and context of the handover, including the composition of the teams and their work environments (Figure 3) (Leape as cited in Jeffcott et al. 1)

Figure 3. Transfer of care at handover

Four sources of data useful for examining the quality of clinical handover are critical incident reports, observation of practice, team climate and safety culture surveys, and group discussion and reflection by stakeholders.

Analysing critical incidents

An incident is any event with the potential to cause harm to the patient. 18 Analysis of the characteristics of incident reports and the associated narrative descriptions of incidents can uncover quality and safety issues contributing to error. 19,20 As well as providing insight into an organisation’s safety culture related to reporting incidents, reporting culture and clinicians’ awareness of risk in a particular context. 21 This information can help to inform recommendations aimed at improving clinical handover processes. 21 Identification and analysis of incidents related to clinical handover can be challenging. Mixed attitudes about the value of incident reporting systems, 22-24 clinician competencies in using reporting systems, 22-24 deficiencies in the quality of reporting, 25,26 and the resources required to analyse incident data are common problems. 22 Riskman classifications may not be sufficiently sensitive to reliably identify harms related to incidents 27 and this is likely to result in under reporting of some types of incidents. 28 Some clinicians (e.g. anaesthetists) use alternatives to hospital reporting systems to report critical incidents 29,30 Incident classifications systems are typically broad and non-specific which can make it difficult to identify and examine incidents related to a specific type of error or event. 31

Observations

Observation methods are considered ‘gold standard’ for measuring aspects of quality and safety. Observation methods can use different communication failures 32 and to understand the complex social interactions that underpin clinical practice. 32 Observation studies of teamwork behaviors can identify patterns of communication, coordination, and leadership that support effective teamwork and quality patient outcomes. 32,33

During observation of handover there are two facets of observation. These are the tasks performed and accompanying behaviours. For a comprehensive approach to observation of handover, two trained observers can observe two loci independently where one observes clinician behaviours and the other tasks performed. 34

There are useful tools available that assist observations. For example the “observational teamwork assessment for surgery” (OTAS) tool 35 supports assessment of two facets of the surgical process by using two observers, each focusing on different aspects of practice.

Team climate and safety culture

Teamwork plays an important role in the causation and prevention of adverse events. 36 Health care teams are essential for high-quality patient care and positive safety culture and team climate are important characteristics of successful teams. 37 Team climate and safety culture are determined by power relationships, group values, attitudes, perceptions and competences as well as behaviours towards teamwork and safety management. 38,39 Understanding team members’ perceptions of their workplace is an important step in creating work environments where safety is a priority. 38

Patient safety culture correlates with increased incident reporting and better risk management. 40,41 UK and Australian studies show team climate scores related to team functioning and organisational readiness for change, 42 job satisfaction, 43 patient care outcomes 44 and patient evaluations of their care. 45,46

Surveys have been used extensively to collect data on team climate and safety attitudes and a number of tools exist for this purpose. 47 The Safety Attitudes Questionnaire (SAQ) 48 and Team Climate Inventory (TCI) 49 have been successfully used to examine organisational culture in relation to quality improvement in a number of healthcare settings.

Data collected using these surveys can be used to:

• Benchmark survey findings against data from similar organisations
• Detect differences within and between staff groups (e.g. across different wards, between disciplines)
• Provide information for improvement and inform local unit strategies as well as organisational aspects of a quality improvement framework.

The different dimensions of culture measured by the SAQ and TCI are shown in Figure 5.

The usefulness of survey data can be influenced by:

• Response rate (who did, and did not participate and are they representative of the broader staff group?)
• How the surveys are ‘sold’ to the staff
• Anonymity of participants.

Strategies most useful to enhance response rates include:

• including a support letter from the institutions’ executive
• enlisting support of clinical leaders and champions (medical and nursing)
• personal hand delivery of surveys to individual staff members with an explanation
• distribution of extra survey forms to staff during ‘down times’
• assuring anonymity
• staff incentives when satisfactory response rates are reached
• providing a designated return box in an easy to access location
• professional or discipline endorsement.

Group reflection and feedback (focus groups)

Group focus discussions are an effective way to explore the discipline specific perceptions about complex tasks in health organisations. 46 They are also a useful way to inform and engage clinicians in the processes of quality improvement.

In relation to clinical handover, focus group discussions can help unpack discipline specific perceptions related to:

• Transfer of responsibility and clarity of accountability for patient care
• Interprofessional expectations of information transfer
• Influences on quality and safety of handover
• Improving handover.

Tools for quality improvement of PACU handover

Examination of the multiple data sources from the three hospital sites informed the development of several tools to improve communication in the PACU handover through:

• Risk recognition and minimisation
• Standardisation of processes
• Use of checklists for the delivery of information

Risk recognition and minimisation

Observations of handover revealed three ‘categories’ of patient handover common in the PACU. These three categories fit a visual ‘traffic light’ system (Figure 6) to alert and guide clinicians to:

1. a checklist for the minimum standards for every handover (green)
2. situations associated with increased risk for communication error at handover (amber); and
3. situations of high risk where comprehensive and systematic handover is essential (red).

Figure 6. Matrix for risk minimisation by identification of patient and environmental risks

All
Alert
Alarm

Minimum patient information
Increased patient risk
Complex patient

Use a checklist
Busy environment
Stressful environment

A secondary benefit of the approach is the foundation for change management processes by facilitating participation and skill development of clinicians from within the clinical settings. This can be achieved by using reference groups and training local clinical champions to communicate and consult as well as lead, monitor and review the process of the progress.

Standard process

Five distinct steps in the process of clinical handover were identified using a multi-methods approach. These five steps were used to develop a process support tool for safe PACU handover (Figure 7) between inter and intra-professional groups:

1. CONNECT the patient to monitoring and support devices on arrival in the PACU and;
2. OBSERVE the patient and respond to patient care needs;
3. LISTEN to the verbal information provided;
4. DELEGATE care by checking the DOCUMENTS and DISCUSSION to clarify and confirm information.

Figure 4. Strategy for classification of handover related incident reports

Figure 5. Sub-scales of team climate and safety attitudes

SAQ sub-scales

• Teamwork climate
• Perceptions of management
• Safety climate
• Stress recognition
• Job satisfaction
• Work environment

TCI sub-scales

• Vision
• Participative safety
• Task orientation
• Support of innovation
• Social desirability

Figure 2. Matrix for risk minimisation by identification of patient and environmental risks

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