Evaluating handover practice in an acute NHS trust


Abstract
Good nursing handover is central to the delivery of high-quality care. However, there are no national tools available to audit and benchmark practice standards in this area. Following a review of the literature, evidence-based best practice standards were identified and used by the author to audit nursing handover in one acute NHS trust in the UK. Results of the audit were used to assure quality of care and identify areas for improvement.

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PATIENT-CENTRED CARE is dependent on good nursing handover, which involves: effective leadership (Meissner et al 2007, Chaboyer et al 2009); communication of relevant information, while respecting patient confidentiality (Riesenber et al 2010); timely processes (O’Connell et al 2008, Riesenber et al 2010); and emphasis on patient involvement and participation in care (Fenton 2006, Currier 2011). Although the National Nursing Research Unit (NNRU) (2012) recognises that handover is essential to enable nurses to exchange information, there has been little work to combine the elements of good handover to support best practice. By using service improvement methodology to measure and understand the processes involved, healthcare professionals can disseminate and embed good practice.

Defining handover
Handover occurs whenever there is a transition in care. Currie and Watterson (2008) described the process as ‘a highly complex communication method… to transfer knowledge between staff that is vital in the provision of continuous safe care to patients’. Handover may be associated with the physical transfer of the patient from one care setting to another; it may occur between individuals or across teams and frequently involves the exchange of information between different professional groups. This article focuses on handover occurring between shifts, also known as nursing report (NNRU 2012).

Handover involves ‘the transfer of professional responsibility and accountability for some or all aspects of care for a patient on a temporary or permanent basis’ (NHS Modernisation Agency et al 2004). Professional accountability means that a nurse has an obligation to account for or justify his or her actions and provide an explanation for particular decisions, including situations where responsibility has been delegated to another person (Cornock 2011). Given this context, the importance of effective handover cannot be underestimated.

As well as the transfer of information, handover serves other functions including socialisation, education, group cohesiveness and emotional support, as well as providing an opportunity for reflection by staff (Scovell 2010). Handover has been criticised for being another element of ritualised nursing practice (Kerr et al 2011), and Davies and Priestly (2006) cautioned against trivial conversation. Although handover is a key element of nursing practice, there is a lack of information about what constitutes evidence-based best practice in this area (Riesenber et al 2010).

Handover and high-quality care
Any transition of care is a high-risk activity (Kerr et al 2011) and effective handover is crucial in providing quality nursing care because ‘any errors
or omissions made during the handover process may have dangerous consequences’ (Pothier et al 2005). It has been shown that the quality of handover has a direct effect on the quality of care during the following shift (Thurgood 1995). In general, communication problems are the cause of most errors and the World Health Organization (WHO) (2007) identified that ‘twice as many adverse incidents resulting in harm to patients arise from poor communication rather than inadequate skills of the practitioner’.

There is evidence to suggest that many handovers are not being conducted effectively. For example, handover is often time consuming, and disrupted frequently (Meissner et al 2007). In general, the information communicated may be inaccurate, subjective or irrelevant (Davies and Priestley 2006). Where problems are identified, they may be non-specific, or discussed in a way that is open to interpretation and/or not amenable to nursing intervention. Often, handovers do not clarify issues about patient status, treatment or management, and much of the relevant information can be found in the nursing documentation (Sexton et al 2004).

Ineffective communication compromises patient safety and disrupts continuity of care (Riesenberg et al 2010), while good handovers improve patient outcomes, reduce avoidable errors, and improve patient safety and experience of care (NHS Institute for Innovation and Improvement 2008a). Poor handovers can also have an adverse effect on staff wellbeing, being a source of ‘stress and frustration when the required information is not available, is not communicated appropriately or is at the wrong time’ (Street et al 2011).

The literature tends to focus on identifying characteristics of poor handover, with less attention being given to developing and evaluating good handover techniques (O’Connell et al 2008). Examining handover systems provides an opportunity to identify areas requiring improvement and modification (Kerr et al 2011).

Using a service improvement framework to improve handover

Imperial College Healthcare is a large acute NHS trust and academic health science centre in London, offering a range of specialist tertiary services across five sites. Service improvement in nursing and midwifery is steered strategically through an improving practice group, which has adopted the NHS Institute for Innovation and Improvement’s (2010) six-stage framework. The six stages include:

- Measure and understand – assess the current situation to understand the level of change required to achieve the defined aims.
- Design and plan – identify the activities required to achieve the defined aims.
- Pilot and implement – trial proposed activities.
- Sustain and share – disseminate successful changes.

The improving practice group is using the six-stage framework to improve outcomes in three clinical areas: prevention of catheter-acquired urinary tract infections, pressure ulcers and falls. Because of the significance of handover to patient safety, improving handover practice was identified as an overarching theme to support best practice in these areas.

Measuring to understand how the organisation is currently working is the third stage of the framework (NHS Institute for Innovation and Improvement 2010). Having identified handover as an overarching theme, members of the improving practice group identified a need to understand and benchmark handover practice in the trust to support improvement work. Fenton (2006) suggested that nurses should ‘consider the model of giving report within their own clinical areas and the quality of information delivered… Nurses could initiate discussions within their ward teams regarding the content of information delivered in nursing handover. This could precede an audit that would identify areas for improvement.’ Since there are no national best practice standards relating to handover practice, it was necessary to construct an internal audit tool using the elements of best practice identified from the literature review to understand practice better in the trust and how this might be improved.

**Defining a good shift handover**

The British Medical Association (BMA) (2004) provides a useful framework for identifying good professional practice for any handover, urging healthcare professionals to consider:

- Who should be involved in handover?
- Where and how should handover occur?
- When should handover take place?
- What needs to be handed over?

**Who should be involved in handover?**

Studies suggest that leadership is vital to effective handover (Meissner et al 2007, Riesenberg et al 2010). The presence of the nurse in charge at a handover demonstrates a commitment to the process and provides the nurse with an overview of the clinical area. Effective leadership from the ward manager is particularly important in terms of implementing and sustaining a change in
handover practice (Meissner et al 2007, Riesenberge et al 2010). Kerr et al (2011) suggested that nurses prefer to receive handover from the nurse who has been caring for the patient. Studies make little reference to which members of the nursing team attend handover, therefore a question to this effect was included in the trust audit.

In terms of improving patients’ experience of care, the benefits of involving them, their carers and families in handover are relatively well established (NNRU 2012). Healthcare professionals have a professional obligation to involve patients in their care (Nursing and Midwifery Council (NMC) 2008) and by doing so an organisation can demonstrate compliance with the Care Quality Commission’s (2010) Essential Standards of Quality and Safety. Despite this, there is a lack of information about the best way to achieve patient involvement. Therefore, the audit aimed to establish whether, if at all, patients were involved in the handover process and if handover had been raised as an issue in any recent complaints.

**Where and how should handover occur?**

In a review of the literature examining handover, O’Connell and Penney (2001) explored three types of handover technique: group verbal, tape-recorded and bedside, and found that no specific type of handover was more effective than any other, and that each had particular strengths and limitations. Initial investigation at the trust suggested that tape-recorded handover was no longer occurring and that handover was largely verbal. Therefore, it was decided to audit which model of handover was being used in the trust, in terms of the location – office, bedside or mixed – and how documentation was being used to support this.

There is ample evidence that handover should be undisturbed. Reisenberg et al (2010) cited interruptions and a range of other environmental factors, such as multi-tasking and a lack of privacy, as barriers to an effective handover. Handovers should also be of appropriate duration. There may be lack of sufficient time for handover (Meissner et al 2007), however overly long handovers can be time-consuming (Kerr et al 2011) and perceived as a waste of valuable resources (Scovell 2010). The trust audit aimed to establish how long, on average, handover was taking.

**When should handover take place?**

It is widely accepted that, by definition, a full handover occurs at the beginning and end of a shift. What is less clear is the role of what has variously been described as a ‘headline report’ or ‘mini-handover’, whereby staff are provided with a quick update on changes in care, particularly after ward rounds or a review by other members of the multidisciplinary team. The role of these handovers in supporting effective care during longer shifts, commonly 12 hours and 30 minutes, is supported anecdotally, but is under-researched. Therefore, the trust audit aimed to establish whether mini-handovers were occurring in clinical areas, particularly those where a 12 hour and 30-minute shift pattern was usual practice.

**What needs to be handed over?**

There has been a move in health care towards standardising care delivery, which has been shown to improve consistency and reliability of outcomes (Burnett et al 2010). While there is a lack of information about best practice standards or guidelines for handover, there is some work outlining the benefits of using various communication tools as a basis for a structured handover. These tools include the Situation, Background, Assessment, Recommendation (SBAR) framework (NHS Institute for Innovation and Improvement 2008b), or the Identify, Situation, Observations, Background, Agreed plan, Read back (iSoBAR) tool (Porteous et al 2009). The tools consist of standardised prompt questions to ensure that staff share concise and focused information in a structured manner. They allow staff to communicate assertively and effectively, reducing the need for repetition.

Some authors caution that a ‘one size fits all’ approach to handover may not be appropriate across a range of clinical environments and patient groups, recognising that while a structured approach to handover is beneficial, staff need to be involved in determining which model is most appropriate for their clinical area (Fenton 2006, NHS Institute for Innovation and Improvement 2008a). Therefore, the trust audit aimed to quantify whether local guidelines or templates had been developed and were in use, and which aspects of patient care were being handed over routinely between shifts.

**Method**

Using the findings of the literature review, an audit tool was developed by the improving practice group in consultation with nursing staff to measure handover practice (Box 1).

The trust audit was undertaken in November 2012. A senior nurse was asked to observe a shift handover and complete one audit per inpatient clinical area. During the audit, senior nursing staff were encouraged to discuss the handover process with staff and patients. The audit questions were designed to capture quantitative and qualitative data.
It is important to consider that collecting data for service improvement is not the same as collecting data for research. Data are not being collected on a large scale with a fixed hypothesis to remove variation; rather, the aim is to collect data that answer the question ‘how does it work here?’ to drive service improvement (Clarke et al 2009).

A total of 47 handovers were observed across a range of specialties, including adult care (medical, surgical and specialist services such as critical care, emergency medicine and haematology), paediatric care, maternity services and neonatology. It was not considered necessary to pilot the audit tool.

Results

Ideally, it would be useful to make a comparison of the results from the audit at Imperial College Healthcare NHS Trust with practice in other acute trusts in the UK. However, while some data have been published about handovers, these tend to examine specialist practice or the process of medical handover only (Aase et al 2011). There is a lack of audit data available focusing on the practice of nursing handover across a large organisation.

Therefore, it is anticipated that the results from the trust audit may be useful for other nurses wishing to audit and benchmark handover practice to provide a focus for service improvement.

Results of the audit demonstrated that only 36% (n = 17/47) of clinical areas reported having local guidelines for conducting handover. The majority of clinical areas (89%, n = 42/47) reported one to three handovers in any 24-hour period. Since the majority of inpatient clinical areas work a 12 hour and 30-minute shift pattern, this reflected a pattern of full handover between the day and night shifts, with some areas reporting additional handover for staff working an eight-hour early or late shift pattern. The remaining clinical areas tended to be those with a high throughput of patients, such as the emergency department, theatres or recovery. Figure 1 shows how long handover was reported to take in the trust, highlighting that full handovers took less than 60 minutes to complete, with the majority (60%, n = 28/47) taking 21–40 minutes.

In the majority of clinical areas (79%, n = 37/47), all members of the nursing team attended handover. Only 11% (n = 5/47) of clinical areas reported not using a system of mini-handovers or updates during the day. The majority of areas (67%, n = 28/42) (five did not report using mini-handovers) using mini-handovers reported using up to three during the course of a 12-hour shift, or that the pattern of mini-handovers was variable depending on the patients in the clinical area on that day. Fewer than half (45%, n = 21/47) of clinical areas reported that handover was usually interrupted.

Figure 2 shows how handover was being documented. There is no formal guidance in the trust for this practice and the audit shows that the majority of clinical areas (47%, n = 22/47) used the electronic bed management system, which allows users to add clinical information about patients, or another bespoke solution developed locally, either electronic or on paper, to document handover. Some areas use personal notes (8%, n = 4/47) or do not document handover at all (11%, n = 5/47).

Figure 3 shows where handover was occurring, with a fairly even split between office-based handover (36%, n = 17/47) and a mixed model of office-based and bedside handover (45%, n = 21/47). Only 11% (n = 5/47) of clinical areas reported handover solely at the bedside.

Figure 4 shows which aspects of patient information were being handed over in the trust. Drugs and infusions (96%, n = 45/47) and observations (94%, n = 44/47) were most consistently handed over. Discharge information was handed over 89% (n = 42/47) of the time, infection prevention control issues 87% (n = 41/47) of the time, resuscitation status 81% (n = 38/47) of the time...

### BOX 1

**Audit tool questions**

1. Do you have any local guidelines for handover?
2. How many full handovers do the nursing team give in a 24-hour period?
3. How long, on average, do these handovers take?
4. Does every member of the nursing team attend the handover?
5. How many mini-handovers, for example patient changes after ward rounds, do you have in a 24-hour period?
6. Is handover usually uninterrupted?
7. How is handover documented and recorded?
8. Which process best describes your handover: office, bedside or mixed?
9. Do you use a structured handover tool?
10. Do you discuss any of the following for every patient at handover:
   - Patient demographics.
   - Resuscitation status.
   - Patient observation chart or systems review.
   - Five key risk assessments: pressure ulcer, falls, food and nutrition, pain and manual handling.
   - Care plans.
   - Infection control status.
   - Drugs and infusions.
   - Discharge arrangements or stepping down patients to lower levels of care.
   - Other issues.
11. Are patients involved in the handover process?
12. Has the ward received complaints, or had any incidents relating to handover or poor communication in the past 12 months?
13. Are staff and patients generally happy with handover arrangements? Ask staff: do you feel prepared for every shift after handover? Are you confident that you can handover care safely and effectively?
and demographics 79% ($n = 37/47$) of the time. Risk assessments (70%) ($n = 33/47$) and care plans (68%) ($n = 32/47$) were handed over least frequently.

Around 45% ($n = 21/47$) of clinical areas reported that patients were involved in the handover process and 17% ($n = 8/47$) of areas reported that handover formed part of a complaint received in the past 12 months. A variety of comments were received from staff, the majority of which were positive.

**Discussion and actions**

The aim of the audit was to establish practice in the trust to identify actions for service improvement. Twenty-one percent ($n = 10/47$) of areas reported that not every member of the team attended handover. This would appear to be related to the structure of handover in these areas:

‘Staff don’t need to listen to the details of every patient and several smaller handovers of just bays may be more effective and efficient – this could happen in the bay’ (Participant 1).

This comment highlights a perceived inefficiency in receiving handover for patients that staff may not be directly caring for. However, this needs to be balanced with the need for the right staff to have an overview of the whole clinical area.

There is a need for more research examining the vertical (between different grades and areas of responsibility) and horizontal (between the same grades and areas of responsibility) transfer of information during handover, to identify what might be considered best practice and ensure the right information is received by the right person.

In the meantime, an action from the trust audit will be for staff to re-examine who needs to be present at handover to ensure that they are using an appropriate model of handover for their clinical area.

It was identified that the quality of handover may largely depend on the person involved:

‘Staff that have expressed that it depends on the nurse in charge how effective and comprehensive the handover is and if the medical notes have been read’ (Participant 2).

‘Handover is very dependent on the individual handing over as some are better than others’ (Participant 3).

These comments support evidence from the literature identifying the vital role of the ward manager and nurse in charge in co-ordinating and leading effective handover (Meissner et al. 2007, Chaboyer et al. 2009). To engage leaders in clinical areas in the process of improving handover, a reference group has been formed from members of the in-house ward managers’ development programme. These individuals will help design and lead more effective handovers, especially in clinical areas where poor handover has been identified as a contributory factor in a clinical incident.

The trust audit demonstrated significant variation in terms of whether handover is conducted in an office, at the bedside or both, and the effect this has on patient experience. The NNHU (2012)
found little international consensus about the best approach, but noted: ‘Generally, staff feel that handing over at the bedside improves the safety and effectiveness of care; and patients feel more informed about their care and who is caring for them.’

Of the 45% (n = 21/47) of clinical areas reporting patient involvement, the majority used bedside or a mixed model of handover. Much of the literature supports the common assumption that bedside handover involves patients and improves their experience (NNRU 2012). However, the results of the trust audit seem to contradict this. All areas reporting that handover featured as an element in a recent complaint – an important indicator of patient experience – reported using bedside or a mixed model of handover.

In reality, the term bedside handover encompasses a variety of different practices, which may or may not genuinely involve the patient. For example, imagine a bedside handover that involves staff huddling at the end of a bed using technical jargon to communicate to one another. Cahill (1998) referred to patient involvement in bedside handover of this nature as ‘mere tokenism’. Staff may perceive that they are conducting a bedside handover and involving patients, but patients are likely to feel uninvolved and dissatisfied with their care. Timonen and Sihvonen (2000) reported differing perceptions between staff and patients about the effectiveness of bedside handover, with nurses reporting that patients took a more active role in handover than patients themselves thought.

The NNRU (2012) suggested that ‘there is a need for robust evidence about the process and impact of different approaches to bedside handover on the safety and effectiveness of care and patient experiences’. In the first instance, identifying and addressing any common themes around handover that emerge from complaints will improve the quality of handover. It would also be useful to explore the context of bedside handover in the trust, including how staff conduct such handovers and patients’ wish to be involved. To this end, the trust is examining these issues in more depth.

The transfer of accurate information about the patient is key to effective handover (Pothier et al 2005). It is reassuring to find that information – including that involving drugs and infusions, observations, discharge plans, and infection prevention and control – is being handed over regularly. However, nurses are referring to care plans and risk assessments less frequently. This requires attention because the use of nursing documentation is essential to ensure improvements in handover practice (Street et al 2011). It may also be useful to consider what information is handed over and where. For example, it may be appropriate to use an office to exchange information about safety issues and confidential patient details, combined with a bedside handover of information based on a review of observation charts, drug charts and care plans with the patient (Farhan et al 2012). The benefits of a hybrid model of handover were identified:

‘The nurses feel that both [office and bedside] handovers are required, and if the information is succinct and comprehensive, the bedside handover should really just be checking the charts and should not duplicate information’ (Participant 2).

It is generally agreed that adopting a standardised approach can improve handover. There is a growing body of evidence that demonstrates handover improves after locally developed guidelines incorporating a structured tool or template are implemented (Jacox and Cole 2012). However, it is recognised that no single model will be appropriate for all clinical areas, which perhaps explains the absence of any national guidelines. Interestingly, several comments were received from staff asking for further guidance, including requests for more information on templates and provision of a handover sheet with an overview of all the patients. In view of this, it was agreed that the trust should develop an overarching guideline to complement locally agreed documents and to support areas where guidelines are not in place. The guideline will outline the trust’s position in terms of best practice principles. One staff
member in the audit also commented how helpful mini-handovers have been in the clinical area:

‘A quick update at 14.00 has proven useful to re-focus and remind each other of things’ (Participant 4).

The guideline will include a recommendation to use mini-handovers. It is also recognised that effective handover is not taught during nurse training, but learned on the ward (Scovell 2010). Therefore, implementing these guidelines will also require education and training for staff.

Pothier et al (2005) showed that the use of a handover sheet almost entirely eliminates loss of data during verbal handover. Therefore, consideration needs to be given not only to how to document what has been handed over, but also how this is integrated with the existing health record without duplicating it. The trust audit demonstrates that the majority of clinical areas are using the electronic bed management system to document handover. Other areas report using the healthcare record or another bespoke record.

From a medico-legal perspective, it is of concern that some areas are reporting the use of personal notes – referred to as ‘scraps’ of hidden nursing information in the literature (Hardey et al 2000) – or no record at all. In response, a vital component of the trust guideline will be a recommendation to use a newly developed template to structure and record handover where there is no effective system in place. An electronic version of this template can be used to standardise and evaluate handover practice more fully across the organisation as the trust moves towards implementing an entirely electronic patient record.

Staff comments in the audit identify the link between effective nursing handover and functioning of the wider multidisciplinary team. Problems were reported when doctors did not update the health record or where handover was interrupted more generally:

‘There is pressure to finish [handover] early by medical staff’ (Participant 5).

‘[Handover is given] at the nurses’ station and very prone to interruptions’ (Participant 6).

It is well recognised that handover should not be interrupted, yet the results from the audit show that this is a problem in 45% (n = 21/47) of occasions. It has been proposed that, as part of new handover guidelines, the trust will support the concept of protected handover. The concept of protected mealtimes will be familiar to many nurses – all non-urgent clinical activity stops, allowing patients to eat their meals without interruption and nurses to focus on meeting patients’ nutritional needs (National Patient Safety Agency (NPSA) 2007). The concept has also been extended to protecting drug rounds from disturbance in an effort to reduce medication errors (Scott et al 2010). By protecting handover time, it is hoped that handover will become more efficient and effective. More work will need to be done to ensure implementation, with education and training for staff.

References


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be required to evaluate whether this initiative will save time in areas reporting long handovers and poor staff satisfaction with the process.

The trust audit results demonstrate that the length of time spent handing over varies. It is probably not possible to standardise this, but there is scope for further work to establish whether the handover process could be streamlined in clinical areas reporting long handovers. Reducing interruptions, in addition to providing a better structure, may make handover safer and more effective. The proposed improvement work arising from the audit is summarised in Box 2. Engaging every member of staff in these actions will be essential to sustain improvements in practice (Bowers 2011).

**Box 2**

**Actions for improvement work**

- Ensure teams in clinical areas are involved in examining their handover practice in light of the benchmark provided by the audit results.
- Raise the profile of the importance of effective handover with ward managers.
- Examine more closely what is occurring during bedside handovers, particularly how patients are being involved in the process and how this affects their experience of care.
- Develop a trust guideline and handover template linked to the roll-out of the electronic patient record.
- Ensure that handover is being documented effectively in all clinical areas.
- Consider piloting the concept of protected handover, where interruptions are reported as an ongoing problem.
- Re-audit practice following implementation of improvement projects.

When focusing on improving handover, it is important to remember that all the various functions of handover need to be considered when implementing any change to practice. This ensures that an improvement in one area does not have a detrimental effect on other areas (O’Connell et al 2008), and that ‘any future attempts to introduce alternative handover styles should continue to measure patient and staff acceptability as well as improvements in standards of nursing care and documentation’ (NNRU 2012).

**Conclusion**

Ensuring good handover practice is integral to the delivery of high-quality care. The literature is beginning to establish what good practice standards might look like, although there is a lack of consensus in many areas. In addition, there is a lack of clear benchmarking data to understand where nursing is as a profession and where healthcare professionals should focus their improvement efforts. Measuring current practice to understand where to focus service improvement efforts is one of the key principles of service improvement methodology. The analysis of the audit data presented in this article has enabled nurses at Imperial College Healthcare NHS Trust to identify a series of agreed actions, with the collective aim of improving handover practice.


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