Nursing Team Leader handover in the intensive care unit contains diverse information and lacks structure: An observational study

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Contribution of the paper

1. What is known about the topic?

- Inconsistent communication at clinical handover is a major contributing factor to patient harm and one of five priority areas for patient safety improvement worldwide.
- The Australian Commission on Safety and Quality in Health Care introduced the National Safety and Quality Health Service Standard 6 – Clinical Handover, to improve communication practices at handover.
- There are limited handover resources specific to critical care.

2. What this paper adds….

- Our research identifies the content of information discussed during senior nurse handover in an adult intensive care unit, not previously investigated.
- Findings indicate that critical patient information is either absent or not consistently transferred at handover, which has the potential to significantly compromise patient safety.
- This study will inform the development of a minimum dataset for senior nurse handover in the intensive care unit to improve communication at handover and the quality of care provided to patients.

Nursing Team Leader handover in the intensive care unit contains diverse and inconsistent content: An observational study

ABSTRACT

Background

Despite a proliferation of evidence and the development of standardised tools to improve communication at handover, evidence to guide the handover of critical patient information between nursing team leaders in the intensive care unit is limited.

Objective

The study aim was to determine the content of information handed over during intensive care nursing team leader shift-to-shift handover.

Design

A prospective observational study.

Setting

A 21-bed medical/surgical adult intensive care unit specialising in cardiothoracic surgery at a tertiary referral hospital in Queensland, Australia.

Participants

Senior nurses (Grade 5 and 6 Registered nurses) working in team leader roles, employed in the intensive care unit were sampled.

Method

After obtaining consent from nursing staff, team leader handovers were audiotaped over 20 days. Audio recordings were transcribed and analysed using deductive and inductive content analysis. The frequency of content discussed at handover that fell within the *a priori* categories of the ISBAR schema (Identify-Situation-Background-Assessment-Recommendation) was calculated.

Results

Forty nursing team leader handovers were recorded resulting in 277 patient handovers and a median of 7 (IQR 2) patients discussed at each handover. The majority of nurses

discussed the *Identity* (99%), *Situation* (96%) and *Background* (88%) of the patient, however *Assessment* (69%) content was varied and patient *Recommendations* (60%) were discussed less frequently. A diverse range of additional information was discussed that did not fit into the ISBAR schema.

Conclusions

Despite universal acknowledgement of the importance of nursing team leader handover, there are no previous studies assessing its content. Study findings indicate that nursing team leader handovers contain diverse and inconsistent content, which could lead to inadequate handovers that compromise patient safety. Further work is required to develop structured handover processes for nursing team leader handovers.

Key words:

Patient handoff, critical care, quality improvement, patient safety, communication

BACKGROUND

Clinical handover is “the transfer of information, responsibility and accountability between individuals and teams” (British Medical Association., 2006) and is an inherent part of patient care. Handovers predominantly occur at shift changes, when clinicians take breaks, when patients transfer between wards or hospitals and on discharge. In recent years, poor clinical handover practice has been identified as a major contributing factor to patient harm, with 80% of serious errors in healthcare attributed to communication errors between care givers during the transfer of patients and approximately one in five patients experiencing an adverse event (Australian Commission on Safety and Quality in Health Care., 2011, Joint Commission on Accreditation of Healthcare Organizations., 2012).

Clinical handover is listed as one of five priority areas for patient safety improvement worldwide (World Health Organization., 2007). Over the last decade the Australian Commission on Safety and Quality in Health Care has taken an active role in piloting research projects and developing handover resources to improve communication practices in healthcare facilities nationally (Australian Commission on Safety and Quality in Health Care., 2011). More recently, the Australian Commission on Safety and Quality in Health Care introduced the National Safety and Quality Health Service Standard – Clinical Handover, Standard 6, whereby all health care facilities are required to have structured handover processes in place (policies and procedures, work unit guidelines, minimum datasets) to meet accreditation standards.

National and international strategies to improve clinical handover practices and reduce adverse events associated with inconsistent communication has led to major changes in handover processes (Australian Commission on Safety and Quality in Health Care., 2010, Insitute of Medicine of the National Academies., 2008, Jorm et al., 2009). One recent initiative is the movement of the handover location from offices and desk spaces to the bedside, facilitating face-to-face interactions among both clinicians and patients as opposed to written, recorded or phone handover. Although clinicians have reported concerns regarding patient confidentiality (Anderson et al., 2015, Mardis et al., 2016) and frequent interruptions with bedside handovers, there is a general belief that bedside handover is beneficial to both patients and staff. Patient benefits include increased patient and family involvement with clinicians during handover and reports

of higher satisfaction between patients, and families with communication during handover (Anderson et al., 2015, Mardis et al., 2016, McMurray et al., 2011). Staff benefits include enhanced prioritisation of patient-centered care (Anderson et al., 2015, Chaboyer et al., 2010); improvements with completion of nursing care tasks and documentation (Kerr et al., 2013); decreased overtime (Anderson et al., 2015) and increased safety, efficiency and teamwork (Chaboyer et al., 2009).

Alongside the implementation of bedside handover, the need for structured handover has been identified. Clinicians find handover challenging if there is no structure to follow as they are forced to decide what information to include or hold back and how the information should be conveyed (Holly et al., 2013). Consequently, unstructured handovers have been reported to contain too much or not enough information, irrelevant details, repetitive information and content that varies between clinicians (Benson, 2006, O'Connell et al., 2008). In the last decade numerous handover tools have been implemented to improve communication at handover (Australian Commission on Safety and Quality in Health Care., 2010, Craig et al., 2012, Joy et al., 2011, Kaufmnan et al., 2013, Zavalkoff et al., 2011). Introducing a structured handover process, alongside bedside handover has been linked to increased confidence among clinicians (Chu et al., 2009), improved communication (Craig et al., 2012), decreased medical and technical errors and reduced omissions of critical information (Joy et al., 2011).

While there are a multitude of handover tools available for healthcare areas to adopt, authors commonly acknowledge a single tool may not suit all areas. Communication tools need to contain flexible frameworks that can be modified or used in conjunction with other tools to ensure handover content is relevant to the clinical context (Alem et al., 2008, Anderson et al., 2015). Furthermore, clinicians need to be engaged in the development of resources to meet user needs at handover (Alem et al., 2008, Miller et al., 2009). Although various tools have been implemented in ward areas (low acuity patients), tools specific to the intensive care unit (high acuity patients) are limited.

The intensive care unit is an event-driven, time-pressured environment prone to continuous distractions. Patients are critically ill and require timely care at a moment’s notice (Smith et al., 2008). The complex and multidisciplinary nature of the intensive

care environment renders it susceptible to medical errors. Handovers occur frequently in the intensive care unit between bedside nurses, team leaders and Nurse Unit Managers. While there is published research related to topics such as intensive care bedside nursing handover (Spooner et al., 2013), handover between theatre and intensive care (Catchpole et al., 2007, Joy et al., 2011, Kaufmnan et al., 2013, Segall et al., 2012), emergency to intensive care (McFetridge et al., 2007), multidisciplinary handover (Miller et al., 2009), end of life care (Ganz et al., 2015) and interruptions during handover in the intensive care unit (Gupta et al., 2013, Spooner et al., 2015), little is known about intensive care team leader handover. As their title suggests, team leaders coordinate and manage care for multiple critically ill patients, supervise bedside nurses and liaise with all members of the multidisciplinary team. Maintaining patient continuity and safety requires team leader shift-to-shift handovers to be detailed, structured and informative. The study aim was to determine the content of information handed over during intensive care nursing team leader shift-to-shift handover. These data will lay the foundation for researchers to determine where gaps in practice exist in relation to the National Safety and Quality Health Service Standards, so that handover resources can be developed and tailored to the nursing team leader handover.

METHODS

Ethical approval was obtained by the Institutional and University Human Research and Ethics Committee.

Setting

A prospective observational study was conducted in a 21-bed (government funded) medical/surgical adult intensive care unit, specialising in cardiothoracic surgery at a tertiary referral hospital, in Queensland, Australia. There are 180 registered nurses employed in the intensive care unit including 63 senior registered nurses (Grade 5 and 6) working in team leader roles. Nursing levels are part of the industrial award and range from grade 1 (Assistant in nursing) to 12 (Executive director of nursing) and in the intensive care setting nurses are employed as grade 5 to 7. Grade 5 nurses (Registered nurses) predominantly carry out bedside patient care and once they have successfully completed a team leader educational package they can work as team leaders, coordinating care of up to nine patients in the intensive care. Grade 6 nurses

(Clinical Nurses) are senior nurses that carry out bedside care, work in team leader roles and mentor grade 5 nurses. All team leaders have at least three years intensive care experience and a postgraduate qualification in critical care. Grade 7 nurses (Clinical Nurse Consultant, Nurse Unit Manager, Nurse Educator) are senior nurses that coordinate the clinical and managerial operation of the whole unit. The intensive care unit consists of three areas (ICU 1 - cardiac surgical, ICU 2/3 - general), each area containing up to nine beds coordinated by one team leader. Team leaders predominantly work 12-hour shifts (0700-1930 or 1900-0730) with handover conducted during the last 30 minutes of the shift. Handovers occur at the nurses' station with a maximum of nine patients discussed by each team leader. Prior to commencing this study, team leaders could choose from five different paper handover templates to conduct handover within the three intensive care areas. There was no standardised tool utilised, with various tools used in a single handover, depending on team leader preference.

Participants

Senior nurses (Grade 5 and 6 Registered nurses) working in team leader roles, employed in the intensive care unit were sampled. All team leaders in the intensive care received participant information sheets and consent forms via internal mail. Potential participants were informed of the study at staff meetings and written consent was obtained prior to study commencement.

Data collection

Forty team leader handovers were audiotaped which provided a broad representation of the current content of team leader handovers. To reduce the chance of bias, a random number generator was used to sample in a random fashion one team leader handover from the three areas within intensive care during the night to day shift and the day to night shift handover between Monday and Friday. Handovers were audiotaped if the oncoming and outgoing nurse provided consent to participate and had not been previously recorded handing over. If the team leader conducting handover did not provide consent or had been audiotaped previously, the next randomly selected pair were approached and recorded. Prior to commencement of

handover, consent was confirmed with the participants and the audio recorder was started.

Nurses were recorded once giving handover and any number of times receiving handover. The audio recorder was positioned on the desk at the nurses' workstation where handover occurred. Handover consisted of the outgoing nurse giving handover as well as questions and answers between the oncoming and outgoing nurse. The recorder was stopped once the outgoing nurse left the desk at the nurses' workstation. Nurses participating in this study had previously been exposed to audiotaped handovers during a study examining bedside handover in the intensive care and during hospital-wide auditing of clinical handover. Nurses' previous exposure to audiotaping assisted in reducing the chance of participants changing their usual practice during audiotaped team leader handovers. A case report form was used to collect demographic data during this phase. Demographic and other data included nursing grade, hours worked per fortnight, number of patients handed over, length of time taken to perform handover and handover shift.

Data analysis

An experienced transcriptionist transcribed the audio recordings. The transcripts were checked for accuracy by a researcher (AS). Deductive and inductive content analyses were used to examine the data. Inter-rater reliability (98%) between two research nurses (AS and BP) performing the content analysis was tested on 10 transcripts to ensure consistency and reliability.

Deductive content analysis (Elo and Kyngas, 2008, Vaismoradi et al., 2013) was used to categorise data from the transcripts according to the ISBAR schema (Identify-Situation-Background-Assessment-Recommendation), a tool originally developed by the United States military and adapted for healthcare by Kaiser and Permanente (Haig et al., 2006, Institute for Healthcare Improvement, 2015, Leonard et al., 2004). For the '*Assessment*' category within the ISBAR schema, the frequently used body systems approach, (central nervous system, respiratory system, cardiovascular system, renal system, gastrointestinal system, skin system and social network) was used to further categorise the data (Elo and Kyngas, 2008, Haig et al., 2006).

Data that did not fit into these *a priori* ISBAR categories were analysed inductively and were used to create additional categories based on the principles of inductive analysis (Elo and Kyngas, 2008, Vaismoradi et al., 2013). An iterative process was adopted, whereby the researchers moved between the raw data to the emerging findings (categories), back to the raw data. Data were read and re-read with similar ideas grouped together and a descriptive category label given to each. Emergent labels were scrutinized by senior researchers (WC, LA). These labels formulated a general description and new knowledge about the content of information discussed at handover.

A quasi-quantitative approach was also used to identify the frequency of *a priori* categories (ISBAR), subcategories (body systems approach) and inductive categories that were discussed during handover. These results revealed which data were frequently and infrequently handed over by team leaders during handover.

RESULTS

Forty nursing team leader handovers were recorded (40 nurses giving handover, 40 nurses receiving handover) resulting in 277 patient handovers with a median of seven patients (IQR 2) discussed at each handover. Half of the team leaders giving handover were grade 6 Clinical Nurses and the remaining nurses were grade 5 Registered nurses working in team leader roles. Approximately half of the team leaders studied were full time employees (Table 1). All handovers were conducted at the nurses' workstation and were evenly spread between the three areas of the intensive care unit. Sixty percent (n=24) of handovers were recorded from the night to day (0700-0730) shift. The mean handover time was 22 (± 7) minutes or 3 (± 1) minutes per patient (Table 1).

Table 1 Demographics team leader handover

Category		Number	Median SD	Percentage (%)
Grade of Registered nurses giving handover	Grade 5 Grade 6	20 20		50 50
Grade of Registered nurses receiving handover	Grade 5 Grade 6	17 23		43 57
Employment status Registered nurses giving handover	Full time Part time	22 18		55 45
Employment status Registered nurses receiving handover	Full time Part time	23 17		58 42
Handover shift	Night – day shift Day – night shift	24 16		60 40
Handover time	Total (minutes) minutes/patient (n=277)	896	22 ± 7 3 ± 1	

Deductive analysis

Overall, the majority of nursing team leaders referred to the patient's *Identity* (99%), the *Situation* (96%) and the patient's *Background* (88%) during handover. Within the *Assessment* category of the ISBAR schema, the body systems approach (central nervous system, respiratory system, cardiovascular system, renal system, gastrointestinal system, skin system and social network) was used to further categorise the content (Table 2). Overall, 69% of nursing team leaders referred to the *Assessment* category. The body systems frequently discussed at handover included central nervous system (83%), respiratory system (96%), cardiovascular system (95%) and the renal system (85%), while other body systems were mentioned less frequently. A large amount of diverse information was discussed within each body system with little consistency between handovers. The final category *Recommendations* (60%) included consults/referrals to specialists, all those activities that required follow up, were intended to guide team members in the plan of care and was the least frequent category referred to at handover. Overall, 51% of 277 handovers contained at least one concept within each category of the ISBAR schema.

Table 2 Deductive content analysis

ISBAR category/ sub-categories	Frequency

n=277	Percentage (%)
IDENTIFY	276 (99)
Name	251 (91)
Age	193 (70)
Days in ICU	195 (70)
Bed number	242 (87)
Admitting consultant/team	143 (52)
SITUATION	266 (96)
Diagnosis	221 (80)
Surgical procedure	188 (71)
Acute Resuscitation Plan	18 (7)
Discharge status	68 (25)
BACKGROUND	242 (88)
Medical history	182 (68)
Surgical history	83 (30)
Significant event/s	168 (61)
Management for significant event/s	161 (58)
ASSESSMENT	277 (100)
Central nervous system (including assessment, [b]medications and pain status)	231 (83)
Respiratory system (including assessment, airway, ventilation and [a]results)	265 (96)
Cardiovascular system (including assessment, [b]medications and [a]results)	263 (95)
Gastrointestinal Tract (including assessment, [b]medications and [a]results)	187 (68)
Renal System including assessment, therapies and [a]results)	236 (85)
Skin system (including assessment, documentation and treatment)	84 (30)
Social network	61 (22)
RECOMMENDATIONS	165 (60)
Consults/referrals to specialists (conducted in previous shift/planned for next shift)	51 (18)
Patient plan for next shift/s (determined by daily clinical ward round)	42 (15)
Items team leader needs to follow up for next shift	112 (47)

[a]Reflects the results of a variety of blood, diagnostic and other tests pertaining to that body system.

[b]Reflects medications received pertaining to that body system.

Inductive analysis

Additional information that did not fit into the ISBAR schema was categorised inductively. The main categories generated were: unit specific information such as unit flow and management (admissions to the intensive care unit, bed movements, staff skill mix, theatre cases) and unit administrative tasks (dangerous drug orders, equipment issues, patient menus/orders completed); and patient specific information

which included alerts (allergies, falls risk, infectious status, site of infection, precautions, PRIME clinical incident reporting system, patient consent to follow up, patient on a research study), and additional updates (antibiotics, end of life plan, mobility, patient behavior, patient weight, scheduled investigations) (Table 3). Within these categories there was much variation in the information discussed and little consistency of content mentioned during handover.

Table 3 Inductive content analysis

Category/ sub-categories n=277	Frequency Percentage (%)
UNIT SPECIFIC INFORMATION	
Unit flow and management	
Admissions to ICU	15 (5)
Bed movements	12 (4)
Staffing/skill mix	7 (3)
Theatre cases	8 (3)
Unit administrative tasks	
Dangerous drug orders	4 (1.4)
Equipment issues	2 (0.7)
Patient menus/orders completed	3 (11)
PATIENT SPECIFIC INFORMATION	
Patient alerts	
Allergies	24 (9)
Falls risk	2 (0.7)
Infectious status	44 (16)
Site of infection	25 (14)
Precautions	3 (2)
PRIME reports	2 (0.7)
Additional patient updates	
Antibiotics	44 (17)
End of life care	1 (0.4)
Mobility	48 (17)
Patient behavior	2 (0.7)
Patient weight	3 (1)
Scheduled investigations	79 (29)
Patient consent to follow up	1 (0.4)
Patient on a research study	3 (1)

DISCUSSION

This study describes the content of nursing team leader handovers across a large intensive care unit. Although team leaders nearly always communicated information relating to some aspects (*Identify, Situation, Background*) of the ISBAR schema during handovers, *Assessment* and *Recommendations* were not consistently addressed in

handovers and half of all handovers addressed one concept within all five categories of the ISBAR schema. Furthermore, handovers contained a diverse range of additional information that did not relate to the ISBAR schema or the body systems framework suggesting that the ISBAR schema does not capture all the information necessary to conduct an informative nursing team leader handover.

The ISBAR schema was originally introduced into healthcare areas as a framework to assist clinicians with transferring the most crucial patient information at handover. Findings from this study suggest that critical information within *Situation* (i.e., Acute Resuscitation Plan) and patient *Recommendations* (i.e., patient plan – determined at daily clinical ward round, items team leaders need to follow up for next shift e.g., blood results, medication orders) was infrequently discussed at handover and intensive care handovers contained diverse patient information in relation to the *Assessment* (body systems) of the patient.

Minimal information regarding *Recommendations* was consistent with Ilan et al's (2012) observational study audiotaping intensive care physician handovers with *Recommendations* absent in 60% of handovers (Ilan et al., 2012). Similarly, an observational study that trialled three information handover tools showed minimal change with reporting the patient management plan (*Recommendations*) between medical staff in a general ward and emergency department (Alem et al., 2008). The inclusion of *Recommendations* is crucial to ensuring clinicians are clear about the plan and direction of patient care, discharge status, organised procedures etc. The plan of care at this study site is established during the daily clinical ward round between the junior registrar, senior registrar, intensive care unit consultant, the multidisciplinary team, bedside and team leader nurses. The plan of care is documented in the medical progress notes on the computer information system. The absence of content relating to future plans for patient management has the potential to lead to errors by the incoming clinician thereby compromising patient care. Furthermore, handovers containing limited/no information regarding Acute Resuscitation Plans has been identified in other studies (Kowitlawakul et al., 2015, Spooner et al., 2013). An Acute Resuscitation Plan is a plan/alert to document decisions about resuscitation and end-of-life clinical treatment and care (SA Health., 2014). It is imperative that this information is included in handover to ensure patients receive appropriate care, in line

with their wishes (Cotler, 2000, SA Health., 2014). Further work is required to understand why these crucial handover items are consistently omitted from handovers so that strategies can be implemented to improve the inclusion of *Recommendations* and Acute Resuscitation Plans during handover.

There is strong evidence to suggest that the absence of critical patient information and a lack of standardised and appropriate information communicated at handover can lead to adverse patient events (Aldrich et al., 2009, Greenberg et al., 2007, Pronovost et al., 2006). International (World Health Organisation) and national agencies (Australian Commission on Safety and Quality in Health Care) have endorsed standardised handover frameworks such as the ISBAR schema to improve communication practices in an attempt to reduce adverse patient events associated with poor handover practices. Standardised frameworks provide a formula to communicate patient information with colleagues, promoting a shared understanding of patients (Manser, 2011). These frameworks have been shown to improve the effectiveness of communication transfer at handover in clinical and non-clinical situations, especially when staff are under time constraints (Aldrich et al., 2009). Utilising a standardised framework like ISBAR in the intensive care unit could assist nursing team leaders to deliver handovers containing the most relevant and critical patient information.

This study reveals several additional concepts discussed during nursing team leader handovers that are not related to the ISBAR schema. Although not part of the ISBAR schema, additional information may provide essential patient information relevant to the nursing team leader role. For example staffing/skill mix, which refers to the level of skill, training and experience of nurses caring for patients in the intensive care unit was mentioned in some team leader handovers (Elliott et al., 2012). This information enables the team leader to distinguish whether skills of individual nurses are aligned with patient acuity and alerts the team leader to nurses that may require extra support to ensure the delivery of safe, quality care to patients (Elliott et al., 2012). Other concepts discussed at handover included infectious status, site of infection and antibiotics. This knowledge provides team leaders with information relating to specific infections along with the precautions (e.g., personal protective equipment) staff should adhere to when caring for these patients. These findings indicate that handover tools

such as the ISBAR schema may not adequately provide handover content required by nursing team leaders in the intensive care unit.

While the introduction of standardised handover tools may benefit handover, clinicians need to be cautious when implementing these tools into their clinical areas. Healthcare areas vary widely in size, location, specialty area and workforce and have different needs in terms of clinical handover. Standardisation must incorporate flexibility and address the needs of patients and the clinicians in the clinical context. In a recent study minimum datasets (flexible, standardised handover tools) were trialled in six clinical areas (general medicine, general surgical and emergency) in a large tertiary referral hospital in Australia (Yee et al., 2009). Nurses and medical officers used a minimum dataset containing a modified ISBAR schema (ISOBAR) and additional items specific to each clinical area to handover patient information. Implementation of the minimum dataset showed improvement in communication practices at handover (Jorm et al., 2009). Recent studies suggest that a minimum dataset containing the ISBAR schema along with additional information specific to the clinical context would provide a flexible framework that is likely to meet the needs of team leaders in intensive care (Australian Commission on Safety and Quality in Health Care., 2013, Jorm et al., 2009, Manser, 2011).

Since 2010, all Australian health care facilities are required to have processes in place to fulfil the National Safety and Quality Health Service Standard 6 – Clinical Handover to meet accreditation standards (Australian Commission on Safety and Quality in Health Care., 2010). Using audiotaped handovers, this study reveals that a number of key criteria (e.g., using a standardised structured handover process, referring to three patient identifiers, carrying out bedside handover and including patients and care givers in handover) within National Safety and Quality Health Service Standard 6 are not met during nursing team leader handovers. These include variability in the content discussed, suggesting inadequate use of a structured process to communicate critical patient information at nursing team leader handover; not all patient identifiers were mentioned during handover (e.g., patient identification number) indicating that team leaders did not carry out bedside handover and the patient was not adequately identified; and there was no information to indicate that patients or their family were involved in handover. Although patient and family involvement in handover is a

requirement of National Safety and Quality Health Service Standard 6 and there is current research to suggest patients and family value being included in bedside handovers in the ward context (Tobiano et al., 2013), there is limited research relating to patient and family involvement during nursing handovers in the adult intensive care unit. These results suggest that further work is urgently needed to improve communication at nursing team leader handovers to ensure they meet the safety requirements of National Safety and Quality Health Service Standard 6.

Recommendations

In the last decade there has been global initiatives to implement structured handover processes to improve communication during handover and reduce adverse events associated with inconsistent communication at handover. As this study highlights, handover tools alone (i.e., ISBAR) may not be adequate to fulfil the handover needs of the intensive care clinician and additional information may need to be incorporated into handovers. Furthermore, consistent omissions of critical patient information highlights the need to identify barriers and facilitators relating to the inclusion of critical patient information at handover so that targeted strategies can be implemented to improve the transfer of this information at handover. The benefits of using other kinds of handovers (e.g., interdisciplinary) in the intensive care unit should be examined.

Limitations

Although this study was conducted in one intensive care unit and the sample may seem small (40), 277 patient handovers provided a large volume of data to enable a comprehensive snapshot of nursing team leader shift-to-shift handover content in intensive care. The investigators chose to study handovers between Monday and Friday, as the intensive care was busiest during this time. It is possible that weekend handovers may have provided further insight into the content of handovers between nursing team leaders. A limitation of overtly observing behavior is the Hawthorne effect, which may have caused the observed nurses to modify their behavior. Nursing team leader handovers however, had recently been observed during a study examining bedside handover and during hospital-wide auditing of clinical handover, thereby reducing potential bias. The investigators believe that nurses appeared comfortable with having their handovers audiotaped and behavior changes would have been minimal.

CONCLUSION

Our research identifies the content of information discussed during nursing team leader handover that has not been previously investigated. Although all elements of ISBAR were addressed in some handovers, the content of handovers was varied. Furthermore, key concepts outlined in National Safety and Quality Health Service Standard 6 were absent from handovers. These findings indicate that critical patient information is either absent or not consistently transferred at handover, which has the potential to significantly compromise patient safety. This study will inform the development of a flexible, standardised handover tool specific to nursing team leader to improve communication at handover and the quality of care provided to patients.

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