Title

Training in communication and interaction during shift-to-shift nursing handovers in a bilingual hospital: A case study

Abstract

Aim: To explore the perceptions and practices of nurses on handovers.

Background: At handover, accountability must be transferred to ensure a consistent quality of patient care. Studies highlighted unstructured handovers as a major factor contributing to critical incidents. The design of handover training requires a systematic method for evaluating nurses' practices.

Design: An explorative case study, qualitative design that combined ethnography with discourse analysis.

Methods: A training programme based on these practices was administered to 50 nurses, and a protocol focused on CARE was implemented. The nurses' perceptions and practices were evaluated, and 80 handovers were recorded.

Results: Three areas likely to enhance the continuity of care emerged: 1) explicit transfer of responsibility by outgoing nurses; 2) responsible engagement of incoming nurses in the handover and 3) adherence to a systematic handover structure.

Conclusion: The change in practice from monologic handovers with passive incoming nurses before training to interactive and collaborative handovers, where all nurses appeared to take an active role in clarifying patients' cases, after training was significant.

Impact:

What problem did the study address?

- Studies on handovers primarily emphasize the transfer of information but fails to address an interactional focus that ensures comprehension.

What were the main findings?

- The training provided to nurses appeared to significantly improve their engagement in both informational and interactional aspects of handover.

Where and on whom will the research have an impact?

- The CARE protocol provides a useful tool with which nurses can provide comprehensive information to ensure the continuity of care.

Keywords:

clinical handover, communication, perceptions, nursing, patient safety, bilingual, discourse analysis; ethnography

1. Introduction

Handover practices are considered a core component in the effective transfer of patient care among nursing professionals. The failure to share relevant clinical information about a patient in an accurate and timely manner may lead to adverse events, delays, inappropriate treatment or an omission of care. Smeulers et al. (2014) noted that different nursing handover styles might ensure the continuity of information and improved outcomes of the nursing process. Shift-to-shift nurse handovers occur mainly through face-to-face conversations. Regardless of the specific practice, the failure to conduct a complete, structured and logical handover places patients at risk, as the responsibilities associated with patient care are unclear and may be jeopardised by such ineffective communication (Slade et al., 2018).

Unfortunately, few handovers are structured in professional nursing practice. Accordingly, the lack of structure can lead to the variable or omitted communication of information between the involved nurses, who may then fail to transfer and assume the expected responsibility and accountability for patient care (Delupis et al., 2014). In nursing education, limited studies on teaching handovers to nursing students (Riesenberg et al, 2010). These studies are majority in the simulation context. Kim et al (2018) reported the efficacy of simulated-based and peer-learning for handover learning for nurse graduates. In real practice, Palese et al (2019) analysed questionnaire data from 9607 nursing students in 27 universities across Italy and found that nursing students had little in handovers during their clinical rotations. In a contemporary issue of this journal, Lim and Pajarillo (2016) stressed that standardized handover tool should be provided in clinical nursing education for patient safety and better quality of care. In their review, there is no available study on the use of standardized change-of-shift documentations in non-simulated nursing practicum. This marks the gap in the literatures that developing a structured documentation for teaching handover to both nurse professions and students are desperately needed as this will promote clinical reasoning that is fundamental in nursing education, and allow students to implement evidence-based practice, which ultimately increase their confidence, autonomy in their practice. A structured handover protocol aims to reduce the risk of miscommunication and misunderstanding among nurses due to the inaccurate presentation of critical information and is categorically and morally needed to improve patient safety and ensure nursing competence. Although much recent attention has focused on structured information, this study argues that effective handover communication should focus on both informational and interactional aspects (Eggins et al., 2016). This dual focus would allow both incoming and outgoing nursing staff to present, comprehend, cross-check and read-back all necessary information about the patients, their responsibilities and, more importantly, the accountability in terms of the continuity of care provided to the patient.

1.1 Background

Many studies have explored the use of various protocols. ISBAR (Identify, Situation, Background, Assessment, Recommendation) has been increasingly utilised as a format for structured handover communications in different clinical settings (Kitney et al., 2016). ISBAR was first introduced by rapid response teams at Kaiser Permanente in Colorado in 2002 with the aim of ensuring patient safety and has subsequently increased in popularity, especially among nursing professionals in healthcare. The ISBAR format allows nurses to structure their thoughts during handovers by using a worksheet that enables a short, organised and predictable flow of information between nurses. The main purpose of the ISBAR technique is to improve the effectiveness of communication through a standardised process (Achrekar et al. 2016). As nurses often take a more narrative and descriptive approach when

explaining a situation, the ISBAR technique facilitates focused, relevant and systematic communication during shift handovers. This technique allows nurses to provide a summary of the patient's past and present medical status, identify issues and concerns, assess findings, list provided intervention(s), make recommendations for the next shift and evaluate client care outcomes with the aim of safely providing continuous nursing care (Kalisch et al., 2008).

However, very few research studies have explored the logical sequence and methods by which clinicians organise their information and the language used to present information about patients. More research examining whether available protocols, such as ISBAR, provide superior efficacy or transferability is thus warranted (Bakon et al., 2017). This lack of information about the use of structured tools by clinicians during handovers may lead to questions regarding the quality of a handover in which clinicians actually transfer their responsibilities and accountability (Anderson et al., 2014). More studies are thus urgently needed to clarify how clinicians operate these structured tools. Previous studies have applied an ethnographic approach to examine the actual language used by clinicians during handovers and thus evaluate authentic handover communications during actual interactions (Eggins & Slade, 2013). This approach has also been used to evaluate the language used when communicating patient information using a structured tool (Slade et al., 2018).

The theoretical framework that we draw on for this study based on extensive research in Australia for effective communication in clinical handover (Eggins et al, 2016). As we approach handover data, we adopted the discourse analysis approach (Harris, 1952) as a way to analyse patterns of language across texts or speech and examine relationship between language and cultural contexts in which it is used (Paltridge, 2012). As such approach enables researchers to make interpretations on how the use of language in a specific situation such as handover is influenced by relationship between participants (i.e. nurses) as well as the effects the use of language has shaped their institutional identities and relations (Jones, 2012). Our analysis began by exploring practices of nurses on handover interaction through studying the ways of nurses communicate and how their produced utterances at handover as to see how these spoken interactions fit into their institutional and clinical context. When examining these interactions, we see the choices of language selected by the nurses as a systematic resource of expressing twofold of meanings: 1) the *informational* meaning, which are about content, actions and actors, what we are talking about; 2) the second is the *interactional* meaning—how we are talking to each other including how we view each other. As language is organised that we cannot avoid expressing these two types of meanings simultaneously (Eggins et al, 2016). For informational dimension of handover communication, it is about how nurses organise and express clinical information about patients. For interactional dimension of handover communication, it is about how outgoing nurses interact with incoming nurses during the handover. Both informational and interactional meanings map very closely onto the clinical handover standard's identifications in Australia for effective handover practice and has been used a framework in exploring nursing clinical handovers (Slade et al, 2018), we therefore found it both theoretically coherent and practically useful to adopt such framework in this study.

2. THE STUDY

2.1 Aim

The aims of this study were to explore the perceptions and practices of nurses on handovers interaction in surgical and medical wards.

2.2 Design

An explorative case study, qualitative design using a combination of focused ethnography and discourse analysis (Dörnyei, 2007) was adopted for this study. Focused ethnography focused on the specific topic of nurses' shift handover communication with observations and nurses' interviews (Richards, 2003). For the discourse analysis of the nurses' handover practices, the team analysed the patterns of language across texts or speech and examine relationship between language and cultural contexts in which it is used (Paltridge, 2012). Such a combination of combing ethnography with discourse analysis allow researchers to describe the way people use language in authentic, everyday contexts in order to accomplish social activities (Pun et al., 2017 for a method case study in clinical context).

2.3 Setting

The study was conducted in two medical and surgical wards of a major tertiary hospital in Hong Kong. All data were collected between July 2016 and October 2017.

2.4 Participants

Fifty nurse participants were recruited for the 3-hour nursing handover training programme. Nurses were informed about the study through emails sent by their Nurse Unit Managers and invited to provide verbal opt-in consent. The observation audit used handovers representative of both medical and surgical wards, weekdays and shifts selected randomly to capture a wide range of handover practices. Three senior nurse managers and seven general nurses were interviewed.

2.5 Data collection

The researchers conducted non-participant observations of the nurses' different shift handovers as well as video recordings of total 80 nursing handovers. These data were used to construct the training modules, and video re-enactments were produced using on-site role-play simulations based on a communication framework about ISBAR checklist and CARE protocol (Slade et al., 2018). The ISBAR checklist comprised practical communication skills with authentic examples to facilitate a logical and coherent nursing handover practice (Figure 1). The CARE protocol provided nurses with strategies to actively engage with nursing colleagues and thus ensure the continuity of care. One month after training, the observed nurses participated in semi-structured interviews about handover practices. Please see Figure 2 for a description of the research process.

Figure 1

Figure 2

A 3-hour training programme focused on a better logical sequence for the transfer of patients' information (ISBAR) and improved quality of interactions for patient safety (CARE) during clinical handovers between nursing staff was implemented and evaluated. The nurses participated in role-plays and thus learned skills in both the interactional (i.e., relational) and the informational (i.e., communicative) aspects of nursing handovers (Eggins & Slade 2013)

(Figure 3). The ISBAR and CARE protocols were developed and validated in previous studies in Australia (XXX, XXX) and are currently being adapted for use in Hong Kong.

Figure 3

The research team adopted a template for ISBAR (XXX, XXX) to integrate a more evidence-based standardised procedure for the performance of successful handovers, using the information documented by nurses in their handover work sheets, and worked closely with senior nurses to build on their existing practices of documentation and worksheet use (See Figure 4).

Figure 4

2.8 Ethics

Ethical approval for this study was obtained from the hospital ethics committee (Ref no. RC-2017-07). All participants provided informed consent prior to the study. All handovers were transcribed and de-identified.

2.9 Data analysis

Ethnographic discourse analysis was adopted to evaluate the observed handover interactions. The quality of the interaction sequences was examined between outgoing and incoming nurses (e.g. how the nurses responded to questions and followed up with answers) and to identify any discourse strategies (i.e. openness or closeness, question types, turn-taking, pauses). This analysis investigated the transfer of informational and interpersonal aspects, such as the manner in which incoming nurses asked questions, raised concerns and sought clarifications from outgoing nurses. Such approach includes different layers of detailed language diagnoses of the observed handover interactions (e.g., turn-taking strategies, speech functions and exchange structures) as to shed light on what strategies that nurses used to transfer clinical information with other nurses (Pun et al, 2017).

All recorded data were transcribed and translated into English and subsequently analysed using *NVivo* software. Two bilingual researchers checked to ensure the accuracy of the medical terms and expressions. A bilingual research assistant from the team double-checked the final translations and transcriptions against the original audio recordings. Furthermore, approximately 10% of each type of data was independently coded by two raters according to a coding sheet to check the reliability of the coding framework (Creswell, 2013). The process of qualitative content analysis described by Krippendorff (2013) was followed. The analysis was conducted deductively based on the pre-set information and interaction protocols and inductively to capture any recurring topics raised by the nurses after training. The inductive aspect allowed authors to make inferences from nurses' interview transcript by grouping similar views based on "intuitively meaningful similarities among units of analysis" (Krippendorff, 2013, p.206). Here, we first read the transcripts carefully and broke down into units based on thematic distinctions about effective or non-effective nursing handovers. Units were clustered which formed connections and this process continued until no content remained to sort.

3. Results

Our analyses of all collected material revealed that the nurses performed their handovers professionally and efficiently. The discourse analysis of post-training video-recorded handover interactions and the content analysis of nurses' interviews revealed three areas likely to enhance patient safety and continuity of care: 1) explicit transfer of responsibility by the

outgoing nurses; 2) responsibility of incoming nurses to engage in the handover interactions and 3) adherence to a systematic handover structure. By delineating these three issues at handovers, the researchers revealed how the nurses viewed their own perceptions and practices of handovers.

3.1 Explicit transfer of responsibility by the outgoing nurses

In the training, we suggested that to enhance patient safety, nurses should complement the revised ISBAR-based worksheets with verbal handovers conducted according to the staged ISBAR structure. This would ensure that each ISBAR stage was covered in a predictable and logical sequence in which information is grouped and delivered to follow a trajectory of 'past—present—future'.

Specifically, information is compiled and presented in sections in the relevant ISBAR stage, with staging markers used to indicate a transition to the next stage. For example, in the following extract from HO-Med3, the outgoing nurse presents a clear sequence of **I**dentification, **S**ituation and **B**ackground:

Extract from Handover (HO)-Med 3

1	Nurse (Outgoing)	(**I**SB): Then, ten-one-three-one, a case newly admitted yesterday. Her doctors are Dr AAA and Dr BBB. (I**S**B): She is a 59-year-old lady who has CA of the left brain, with brain secondary. She visited the XX Hospital in 2015. She was diagnosed with CA of the breast. It was not followed up until May 2017, her response began to be slow. Then, there was some leakage of fluid on the left breast. [N4 nods]. Therefore, she consulted Dr AAA. She was admitted for examination. [N4 nods]. (IS**B**): She is allergic to plaster. Good past health. In 2014, she once visited YY Hospital because of bone… because of a bone fracture, and a left foot surgery was performed in YY Hospital.

In the post-training observations, we observed an explicit transfer of responsibility through the confirmation of key information by the outgoing nurses. The outgoing nurse repeated and checked that the incoming staff understood and accepted her instructions about the dressing:

24	N4 (Outgoing)	Yes, she is fasting for her CT. [N3 nods. For a guided lung biopsy. **Please do this. Okay? [to N2]. Please do it.**
25	N2 (Incoming)	Yes. *[Nodding]*
26	N3 (Outgoing)	Any questions [to N2]
27	N4 (Outgoing)	**Is it okay about the dressing?**
28	N1 (Incoming)	Yes. *[Nodding]*

Similarly, in HO-Surg3, the outgoing nurse explicitly stated the actions required by the afternoon shift and responded to a clarifying statement from one of the incoming nurses:

55	N(Outgoing)	Yes, [N(HO) points at N4's document]. **For you, PM shift, see when Dr DDD will inform you to do ECG and ECHO.**
56	N1(Incoming)	It was just ordered today?
57	N(Outgoing)	This just happened. Wait for him to inform. [N(HO) flipping her own document]. There is nothing special. He said he will bring this along by himself. He will be discharged tomorrow. So, you should see when he is free.

During training, we also encouraged the nurses to indicate the ISBAR structure of their handover by using staging markers (e.g., words and expressions such as 'next, then, now turning to …'). Evidence suggests that nurses are adopting this practice. For example, in HO-Med2, the outgoing nurse delivered the Identification, Situation and Background stages in a clear sequence before using a framing term ('then', in the English translation) to transition to the Actions/Assessment stage:

Extract from HO-Med2

2:32	1	N (Outgoing)	This is ten-one-two-eight, Dr CCC's patient. Has NPC, mucositis. Because of undergoing RT electrotherapy, the neck and mouth are affected. Therefore, he cannot eat. [N nods]. He was admitted to receive an injection with TPN and continue with RT. That's why he was admitted.
2:50	2	N (Incoming)	Um.
2:51	3	N (Outgoing)	*Then*, he is stable. His appetite continues to be poor. For an oral ulcer [N4 nods], dynastat is being injected for pain relief. It's IVI. The headache is still uncomfortable for him, um, around two points on the scale. He once before had nausea. [N nods]. Therefore, there is a Zofran prn injection for him.

During the training session, nurses were encouraged to interpret the 'R' of ISBAR as both 'Recommendations' and 'Readback'. In other words, during the final stage of the handover, the outgoing nurse should (i) clearly deliver instructions for the incoming staff to follow during the next shift and (ii) check that the information and instructions have been received and understood by the incoming staff.

The post-training handovers strongly evinced that the nurses were providing both Recommendations and Readback. For example, in HO-Med3, the outgoing nurse first described what had already been done to dress the patient's wound and then repeats the need for incoming staff to repeat this dressing:

Extract from HO-Med3

5	N (Outgoing)	… There is a wound on the left breast. There is occasional leakage of fluid. The amount is small, pain score is around a point or two. Dr BBB once came to visit her yesterday.
6	N4 (Incoming)	Um
7	N (Outgoing)	To help her dress the wound. It is being covered by bap… Bactigras and pack. Because the left breast ultrasound was done today, [N4] nods, the dressing was once removed around the X-ray area. **So, for PM shift, please = =**
8	N4 (Incoming)	= = okay
9	N (Outgoing)	**Do the dressing one more time**. Already asked Dr AAA to continue.

Regarding whether the ISBAR training had improved the handovers, the comments included:

> *'In the past, during handovers, the nurses would express what they thought was most important rather than providing a clear, systematic and comprehensive picture... I realise that I could have missed some key points in the past. After the workshop, following the guidelines and reporting the ideas point-by-point has made the handover more comprehensive'.*

> *'ISBAR was the most important component of the workshop, and the information part was the most important element. The second most important thing introduced in the workshop was the handover sheet. It helps to keep a record of the nurses' work and follow-ups, rather than using blank paper'.*

3.2 Responsibility of incoming nurses to engage in the handover interactions

3.2.1 Use of CARE by incoming nurses

We noted that before training, the incoming nurses largely remained silent throughout the handovers, despite some issues of ambiguity, omission and inaccurate information in the outgoing nurses' handovers. Post-training, the transcripts indicated a dramatic increase in the numbers of queries and checks by the incoming nurses. Although the level of interaction was higher among medical ward nurses than among surgical ward nurses, a striking change in the behaviour of *all* incoming team members was observed in almost all post-training handovers. All team members now appear willing to ask for clarifications throughout the handovers. The following examples from different handovers demonstrate the increased participation of incoming nurses in interactions. In all cases, the outgoing nurses responded immediately to resolve the queries.

Extract from HO-Med3

1	N(outgoing)	She is allergic to plaster. Good past health. In 2014, she once visited YY Hospital because of bone… because of a bone fracture, and a left foot surgery was performed in YY Hospital.
2	N4(incoming)	**Can she walk?**
3	N	She can, okay. But it is because her response is rather slow.
4	N4	Um. [N4 nods].
9	N (outgoing)	Do the dressing one more time. Already asked Dr BBB to continue.
10	N3 (incoming)	For this patient, was a wound already there yesterday?
11	N(outgoing)	Yes, there is a wound.
12	N4(incoming)	Skin broken down? Skin erosion/ulceration?
13	N (outgoing)	It is already = = skin broken down. Skin erosion/ulceration.

We observed that the incoming team members checked instructions by repeating the outgoing nurse's instructions. For example, in HO-Sur4, N4 clarified the instructions given thus far in the handover:

Extract from HO-Sur4

99	N(HO)	[Checks the progress sheet, pointing to the physician's orders to N1 and N2] Here, X-ray. [N1+N2 look at the progress sheet] It was ordered yesterday and completed today. [N1 nods] There's another plan; he could have his clips off on 10th Aug, which is Thursday. [N1 nods head] [(Dr EEE will help him.)]
100	N1	[(Dr EEE will help him.)]
101	N(HO)	Then, planning for discharge.
102	N4	**So, there are two things to complete.**
103	N(HO)	Yes.
104	N4	OK.

A further indicator that the incoming nurses are more actively participating in handovers is the frequent *self-checks* to ensure that they have no further questions for the outgoing nurses. For example, in this extract of ***HO-Med3***, one incoming nurse (N3) checked with another incoming nurse (N2) before the outgoing nurse *also* checked with both incoming nurses:

Extract from HO-Med3

24	N(HO)	Yes, she is fasting for her CT. [N3 nods. For a guided lung biopsy. Please do this. Okay? [to N2]. Please do it.
25	N3	Any questions [to N2]?
26	N(HO)	Is it okay about the dressing?

In ***HO-Sur4***, the incoming team members also prompted the outgoing nurse to check the completeness of the handover (turn 146). The highly interactive and collaborative nature of the end of HO-Sur4 below presents a marked contrast to the pre-training handovers:

Extract from HO-Sur4

137	N(HO)	[(He usually urinated twice in one shift.)]
138	N1	He usually has a large amount of urine?
139	N(HO)	Yes. (Pause)
140	N1	Anything else?
141	N(HO)	Yes, so let's see when the physicist will come tonight. (To N1) His physiotherapy usually starts at 5PM. [N1 looks at N(HO)]
142	N2	OK.
143	N(HO)	Let's see today's arrangement.
144	N2	So we still have the bath not yet completed.
145	N1	OK.
146	N2	**Yes, we have to wait to notify his wife about his bath. Then we need to help him.**
147	N(HO)	So, there's nothing else for this case.

The increased interaction by incoming nurses allows for the swift local management of queries. This process takes very little time and clearly supports safer patient care.

3.2.2 Use of CARE by outgoing nurses

Prior to training, the research team observed that the outgoing nurses rarely confirmed that the information they had provided was heard and understood by their colleagues. The outgoing nurses also rarely invited questions from their colleagues.

In stark contrast, the videos and transcripts obtained during post-training handovers indicated a marked shift in behaviour. Outgoing nurses routinely ended their handovers by asking if their colleagues had any questions. For example, in ***HO-Med2***, the outgoing nurse did not finish the handover until she had confirmed that at least one incoming nurse had no further questions. She also re-iterated the need for action by the incoming team.

Extract from HO-Med2

21	N (outgoing)	BD, this was reduced to daily most recently. Please start again tomorrow.
22	N4	Good.
23	N(HO)	This is it for this one. Good. **Is it okay?**
24	N4	Okay.
25	N(HO)	**Is it okay?**
26	N4	[N3 nods] Understood.
27	N(HO)	Then I will put this away. **Please follow up.**

Regarding whether the CARE protocol was useful and improved the handovers, the nurses' interviews yielded the following comments:

'The use of ISBAR saves time on writing, and the CARE protocol could promote additional interactions within the time of the handover. This makes communication more convenient'.

'The introductions of ISBAR and CARE have been very useful in the workshop. They help to improve the nurses' communication skills, let them know that giving feedback is important and encourage more interaction and eye contacts during handover. The workshop also allowed us to learn more about our own weaknesses. After the workshop, handovers were done in more organised manner to save time, and we learned in the workshop how to apply the theories in a more practical way which enabled us to teach junior staff about proper handovers'.

3.3 Adherence to a systematic handover structure to develop a better communication between incoming and outgoing nurses

As mentioned earlier, in our observations, we noted a lack of systematic structure in the handover protocols used by participating nurses. This lack of structure increased the likelihood that key information would be forgotten and that omissions would be overlooked by the incoming team. Our training used a revised worksheet based on ISBAR and in the post-training videos, all the incoming nurses were using this revised worksheet. We encouraged all nurses to refer to this worksheet during handovers and to use it to structure the provision of and request for information. These handovers were presented in a more sequential manner that allowed incoming nurses to clarify the assessments and treatment plans.

Regarding the usefulness of the new handover ward sheets after training, the nurses' interviews yielded the following comments:

'After the training, the ward sheet helped guide the nurses through their processes and thinking and helped them to follow through with the handover smoothly. The handover has become clearer and communication is better than before'.

'In the ward sheet, the grids are very helpful and useful for them to follow. The ward sheet is more practical than the posters; they said that the posters were not as effective. The ward sheet helps them to be more alert and aware of the situation, so they won't forget important information so easily'.

In the interviews, the nurses said that the ISBAR worksheet helped them greatly to organise their thoughts and avoid missing any important information.

5. Discussion

Three areas likely to enhance patient safety and continuity of care emerged from the discourse analysis of interviews and video-recorded handover interactions: 1) explicit transfer of responsibility by outgoing nurses; 2) responsibility of incoming nurses to engage in the handover interactions and 3) adherence to a systematic handover structure.

Our study is the first to explore the nursing handover interactions and associated training in a bilingual hospital environment where nurses communicate in Cantonese but write medical records in English. The use of a combined focused ethnographic approach and discourse

analysis provided an authentic view of the evidence-based clinical handover communication practices (Pun et al, 2017). Furthermore, the use of de-identified authentic transcripts and videos to develop training materials for the same clinical context allowed the stakeholders and practitioners to understand how communication may affect the nurses' involvements and, potentially, patient safety (Eggins et al, 2016). This methodological approach may enable preventive interventions, as well as ongoing professional training for nurses based on re-enacted videos, role-play and the presentation of good handover practices that facilitate the effective involvement of both incoming and outgoing nurses in all aspects of their care trajectory.

The detailed discourse analysis of authentic interactions clearly identified the features of communications and interactions that could potentially lead to informational gaps, misunderstandings or even errors that could potentially affect the safe continuity of patient care (Slade et al, 2018). In this study, the use of an evidence-based approach to training very successfully encouraged the nurses to recognise that the handover is a pivotal moment in their shared responsibility for patient care as it is fundamental to develop such skills in nursing clinical education (Riesenberg et al, 2010). Additionally, this approach gave the nurses communication tools to better manage both the informational and interactional challenges of handovers. As pointed by Lim and Pajarillo (2016), the lack of standardized handover tool in clinical nursing education, the introduction of ISBAR and CARE as tools for handover planning and delivery had a significant impact by enabling nurses to follow a more logical and clearly signalled structure and, simultaneously, to interact with their colleagues to ensure comprehension and accountability for patient care.

A significant change in practice was observed from the monologic handovers with passive incoming team members before training to the interactive and collaborative handovers after training, wherein all present nurses appeared to take an active interest in understanding each patient's case. Many staff members suggested that all nurses should undergo this training and particularly recommended the introduction of a 'train the trainer' programme to all senior and junior hospital staff (e.g., literature about the importance of sustainability as requested by the participants). The hospital is currently implementing the above-detailed changes, emerged from the discourse analysis, to nursing handover practice, which could significantly enhance safety of patients and quality of care in this bilingual healthcare context (Pun et al, 2018).

The use of a nursing handover work sheet is necessary to provide clear, concise and relevant clinical information that accurately portrays the patients' presenting and current conditions and prepares the incoming colleagues for the next shift. This practice would minimise the risk of adverse events. However, evidence in the literature indicates that this type of documentation is rarely standardised and often inconsistent, particularly in terms of repetition, a lack of important information and a lack of room to add notes (Lim and Pajarillo, 2016). Each ward has its own practices of handover and of documenting written information on the handover work sheet. Sodhi et al. (2015) clearly demonstrated that the proper documentation of information during a shift change plays an important and integral part in providing accurate and quality patient care.

5.1 Limitations

This was a case study of a single hospital with a relatively small sample size of 80 handovers (10 handovers per condition). Nonetheless, these 80 videotaped handovers provided meaningful insights into both the problems with current handovers and the benefits that

specific training could bring to this clinical practice. This study also ensures ownership of the process and a proper understanding of the local setting in the participating hospital.

6. Conclusion

This paper reports the practices of nurses and their perceptions of shift-to-shift handovers in a hospital in Hong Kong. The handover practices were observed and evaluated before and after participation in an evidence-based communication training. The findings demonstrate the absence of informational and interactional aspects that led to incomplete and unstructured nursing handover practices prior to training. The training used authentic transcripts together with communication protocols (e.g., ISBAR and CARE), and a hospital-based handover sheet was developed in close collaboration with researchers to address specific weaknesses in handover interactions. Accordingly, this training has encouraged nurses to shift from a passive role in handovers to an active role in recognition of their shared responsibility for patient care.

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Conflict of interest

The authors declare that they have no competing interests.

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