Title:

Complexities of emergency communication: Clinicians' perceptions of communication challenges in a trilingual emergency department

Abstract:

Aims and objectives. To understand the challenges that clinicians face in communicating with patients and other clinicians within a Hong Kong trilingual emergency department.

Background. Effective communication has long been recognised as fundamental to the delivery of quality health care, especially in high-risk and time-constrained environments such as emergency departments (EDs). The issue of effective communication is particularly relevant in Hong Kong EDs, due to the high volume of patients and the linguistic complexity of this healthcare context. In Hong Kong, ED clinicians are native speakers of Chinese, but have received their medical training in English. The clinicians read and record virtually all of their medical documentation in English, yet they communicate verbally with patients in Cantonese and Mandarin. In addition, communication between clinicians occurs in spoken Cantonese, mixed with medical English. Thus, medical information is translated numerous times within one patient journey. This complex linguistic environment creates the potential for miscommunication.

Design. A mixed-methods design consisting of a quantitative survey with a sequential qualitative interview

Methods. Data were collected in a survey from a purposive sample of 58 clinicians, and analysed through descriptive statistics. Eighteen of the clinicians were then invited to take part in semi-structured interviews, the data from which were then subjected to a manifest content analysis.

Results. Nearly half of the clinicians surveyed believed that medical information may be omitted or altered through repeated translation in a trilingual ED. Eighty-three per cent of

clinicians stated that there are communication problems at triage. Over 40% said that they have difficulties in documenting medical information. Around 50% believed that long work hours reduced their ability to communicate effectively with patients. In addition, 34% admitted that they rarely or never listen to patients during a consultation.

Conclusion. The findings reveal that the quality of communication in this Hong Kong ED is compromised by specific factors inherent in the linguistic complexity of Hong Kong EDs. These factors include the constant translation of medical information, inadequate documentation of medical information, and significant professional and cultural pressures. Each of these issues increases the likelihood that healthcare communication will be difficult, incomplete, or incorrect. This research provides empirical evidence for, and justifies the development of, an effective framework to enable clinicians to overcome communication challenges.

Relevance to clinical practice. The findings of this study may shed light on the unique conditions faced by clinicians, particularly in relation to communication, in the complex trilingual healthcare context of an ED similar to those in Hong Kong, and provide potential policy solutions for barriers to improve communication in such settings.

Keywords:

Emergency department, clinician-patient communication, clinician-clinician communication, discourse analysis, patient safety, trilingual, Chinese patients, spoken interactions

What does this paper contribute to the wider global clinical community?

It offers empirical evidence of the nature and degree of the challenges that clinicians face in communicating in a trilingual ED.

Communication in this and other Hong Kong trilingual EDs involves constant translation and leads to inadequate documentation.

Clinicians experience significant professional stress due to high patient volumes and long hours.

Researchers recommend clinician education programmes to promote a shared language in clinical explanations and a common process for medical documentation.

Clinician education should foster interpersonal communication skills (e.g., empathy).

Introduction

Effective communication is fundamental to the delivery of quality healthcare, especially in high-risk and time-constrained environments such as emergency departments (EDs) (Slade et al 2011). Within the ED healthcare context, areas for concern in communication include: inadequate information dissemination and documentation practices (Slade et al 2015a), as well as poor patient health outcomes (e.g., incorrect diagnoses, prolonged hospital stays, unscheduled returns to hospital) (Stiell et al 2003). In an ED, the continuity of medical care is particularly reliant on verbal consultations and patients' medical notes, since prior medical records may not be available. Thus, communication – both written and verbal – is particularly important in EDs (Chandler et al 2015).

Hong Kong EDs, like many EDs in Asia and Europe, are currently trilingual (Cantonese, Mandarin, and English). In Hong Kong, ED clinicians are native speakers of Chinese, but have received their medical training in English. The clinicians read and record virtually all of their

medical documentation in English, yet they communicate verbally with patients in Chinese (Cantonese) and Mandarin. In addition, clinicians communicate with one another in spoken Cantonese, mixed with medical English (Slade et al 2015). This written English is different from that in daily use, which leads to discrepancies in the written medical information. As a result, medical information is translated numerous times within one patient journey (Matthiessen 2013). These factors create a complicated process of multilingual communication that may be time-intensive, difficult to document, and susceptible to errors (Pun et al, 2015). In addition to issues associated with constant translation in a multilingual healthcare context, clinicians in Hong Kong EDs face high levels of stress due to high patient loads, limited time per patient, and a lack of integration between different medical services (Tam & Lau 2000). For these reasons, communication is often significantly compromised in Hong Kong EDs.

Background

Throughout the world, healthcare communication, particularly at the interpersonal level, plays a crucial role not only in effective diagnosis and treatment, but also in securing the patients' understanding of these domains of care and in gaining their trust in, and satisfaction with, the healthcare that they receive (Health Canada 2004). International research indicates that insufficient and incorrect clinical communication is the primary cause of issues concerning patient safety and satisfaction in high-risk settings such as EDs (Apker et al 2008; Cheung et al 2010; Kachalia et al 2007; Lingard et al 2004; Slade et al 2011; Sutcliffe et al 2004). Although emergency medical staff spend nearly 90% of their time engaged in communication with patients and/or other clinicians (e.g., face-to-face discussions, telephone conversations, written notes, whiteboard notes, and e-mails) in EDs, there are still significant gaps in the transfer of information (Spencer et al 2004; Coiera 2002). Research by Slade et al (2015) shows that there is insufficient and/or ineffective

interdisciplinary teamwork in the ED healthcare context. Furthermore, since patients typically present to the ED without immediately accessible medical records or established relationships with staff, ED clinicians rely heavily on spoken communication with patients and their family members to assess each patient's condition. Often, clinicians and patients are not able to communicate effectively due to time constraints, insufficient documentation, patients' language limitations, and conflicts between clinicians (Slade et al 2015a).

Current research demonstrates that, when communication is compromised in an ED, patients may experience adverse events (including severe illness and death) and/or lower quality healthcare services (e.g., delays in receiving care, incorrect diagnoses, incorrect medical treatments) (Cheung 2010; Coiera et al 2002; Chisholm 2000; Evans 2015; Ye et al 2007). Slade et al (2011) investigated clinician-patient communication in five EDs across Australia and identified six key communication challenges: 1) disruptions to the continuity of care due to complexities in the flow of communication; 2) changes to, or losses of, information related to a patient's history; 3) differences in communication style between senior and junior clinicians; 4) barriers in cross-disciplinary communication; 5) restrictions on a patient's role in his/her healthcare; and 6) the absence of empathy in clinician communication. Although ED clinicians face a range of communication challenges (Madhu et al 2009; Slade et al 2008; Vanderford et al 2001) current research also demonstrates that effective communication is associated with a significant reduction in medical errors (Risser et al 1999) and a major reduction in patient complaints (Lau 2000).

In response to the clear communication challenges in EDs, a range of solutions have been proposed and implemented in recent years. These interventions include: patient-centred care, bedside handovers, the iSBAR checklist, communication training for clinicians, and improved documentation processes (Eggins et al 2016; Slade et al 2015a). Despite these advances, communication between clinicians and patients in EDs often

remains a complicated, time-constrained, and error-prone process (Corbett et al 2000; Engel et al 2009; Redfern et al 2009).

To date, most research on communication in EDs stems from a western, highly developed, predominantly monolingual healthcare context. In contrast, Hong Kong is a complex multicultural, multilingual environment for the provision of ED services. Although there is limited research on Hong Kong EDs, there appear to be significant communication challenges in this specific healthcare context. The Hong Kong Hospital Authority (HA), a statutory body that manages all public hospitals in Hong Kong, has recently made patient-centred care a key policy priority, particularly in relation to frontline medical staff in Hong Kong hospitals. The HA states that effective 'two-way communication (between patients and clinicians) is indispensible for understanding and meeting a patient's needs' (Hong Kong Hospital Authority 2013:1). Despite the HA's current policy focus on improving patient safety through enhanced healthcare communication, there have been a significant number of patient complaints related to clinician-patient or clinician-clinician communication during critical medical incidents in Hong Kong hospitals (The Medical Council of Hong Kong 2011, 2012). Communication in Hong Kong EDs is frequently jeopardised by chronic understaffing, heavy patient loads and time pressures. These communication issues are compounded by the absence of spoken handovers, the tendency to downgrade interpersonal communication with patients, and poor staff attendance at communication training courses. In previous research, ED staff in Hong Kong described patient-centred communication as dispensable and time-consuming. This reveals a distinct contrast between the HA's policy of patient-centred care and current medical practices (Chandler et al 2015).

Overall, ineffective and inadequate communication is a significant cause of patient dissatisfaction and complaints in Hong Kong hospitals (Tam & Lau 2000). The first Patient

Satisfaction Survey published in Hong Kong revealed that healthcare information-giving and decision-making practices were seen as the least favourable areas of medical services (Wong et al 2011). That study noted that improvement was necessary in both the clinicians' 'communication with patients and their families' and in the 'engagement of patients in decisions about their care and treatment' (ibid:393). In addition, Manidis et al (2009) found that 11% of patients in Hong Kong EDs felt that they had not been given sufficient information about their condition or treatment. According to Chung, 'emergency medicine suffers from an innate lack of patient rapport…; far greater efforts are required in risk management and to secure patient satisfaction in the emergency department' (2005:4). Thus, several different research teams have called for a review of current communication practices in Hong Kong hospitals, with a particular emphasis on information-giving practices, interpersonal communication, and joint clinician-patient decision-making processes (Chandler et al 2015). This paper will 1) investigate communication issues in one large, trilingual Hong Kong ED, 2) elucidate the key communication challenges more clearly, and 3) present strategies to address these issues.

Methods

Design

This study used a mixed-methods approach (Morse & Niehaus 2007), with a quantitative survey followed by a qualitative interview. The questionnaire aimed to elicit clinicians' views and their experiences of communication problems within the ED. After conducting a preliminary analysis of questionnaire data, the findings informed the development of a semi-structured interview guide to further our understanding of the clinicians' experiences with the communication issues that were identified.

Participants and setting

The data were drawn from a survey of 58 clinicians (36 nurses, 22 doctors) and semi-structured interviews with 28 clinicians (8 doctors, 20 nurses). Doctors and nurses working in this ED were recruited via hospital staff to participate in this study. All individuals were native speakers of Cantonese, who were born in Hong Kong and received their medical training in Hong Kong. The clinicians' experience in this ED ranged from 3 months to more than 9 years. This research site is one of the busiest EDs in Hong Kong, with clinicians seeing approximately 600 patients per day. This ED serves one million patients each year, which is over 10% of the city's population. On an average day, the ED treats 600 patients, with 150-190 patients in triage categories 3 (urgent) or higher.

Data collection

This research was conducted by a team of seven specialised researchers between August and September 2011. Survey data were collected, followed by interviews. Survey questions were developed through a review of local and overseas studies on health communication.

The research team conducted discussions with one professional in hospital management, two ED doctors, two ED nurses, and two health communication researchers, all currently working in Hong Kong. The researchers piloted the survey with a group of doctors and nurses to ensure that the meaning of each item was clear. A high degree of reliability was found between the responses. The Cronbach's Alpha was 0.8. The survey consisted of 15 questions, covering three key areas: 1) the communication processes in the ED, 2) the documentation of medical information, and 3) the professional working environment. The quantitative survey was designed to encourage ED clinicians to relate their views on, and experiences of, clinician-patient and clinician-clinician communication in this Hong Kong ED. All participants were asked for demographic details such as their age, gender, first language, years of working experience, role, and area of expertise.

This recruitment process resulted in a 100% response rate for the survey. In addition, the research involved audio-recording ten patient journeys from triage to disposition in order to analyse and describe the features of both effective and less effective interactions.

The subsequent interviews were individual, semi-structured, and designed to give ED clinicians an opportunity to relate their experiences and opinions on communication issues in the ED. Clinicians were asked to reflect on the role of communication in the ED, their methods for facilitating effective communication with patients, and their communication challenges and strategies.

Data analysis

Following the collecting of data, all survey data were analysed using SPSS software package version 22.0 Descriptive statistics of counts and percentages were produced. The analysis of the qualitative data was conducted through *NVivo software package*.. All of the interview recordings were transcribed and translated from Cantonese to English by a bilingual research assistant... Two bilingual researchers from the team performed a final check on the accuracy of the translation and transcription against the original audio-recordings. In analysing the interview transcripts, a constant-comparison and iterative approach was adopted to allow themes to emerge.

We first read through the transcripts carefully and gave an initial free-coding to all segments relevant to any aspect of communication in the ED. We then carried out several rounds of comparing, sorting, and recoding as we looked for connections among the coded segments and compared analyses. In this way, a number of major themes emerged relating to the ED staff's views of their communication issues at the ED. To check on the reliability of the coding framework in this project, approximately 10% of each type of data was independently

coded by two raters according to the coding sheet. The two raters established an inter-rater reliability of ($k>0.8$) using Cohen's Kappa coefficient.

Ethical considerations

Ethical approval was granted by the Hong Kong Polytechnic University's Human Subjects Ethics Committee and the Clinical and Research Ethics Committee of the specific cluster of the Hospital Authority. All of the participants signed a consent form to be interviewed and audio-recorded. All participant identifiers have been removed from this paper.

Results

The findings from the quantitative survey and qualitative interviews with clinicians are reported in this section. Overall, the data point to significant communication challenges in this Hong Kong ED – both between clinicians and patients and between clinicians themselves. Nearly half of the clinicians (48.3%) thought that information is altered when explaining English medical notes in spoken Cantonese. Similarly, 44.8% thought that information is changed when translating between the spoken Cantonese consultation and the written English medical notes. Furthermore, 12% were aware of one or more critical incidents within the past 12 months that involved poor communication. The remaining 88% stated that they were not aware of any instances of this nature.

In the qualitative interviews, clinicians reported that the most common forms of miscommunication, particularly at handover, were: incorrect verbal orders of medication by doctors and misinterpretations by nurses of medications with similar English pronunciations. Given that 48.3% of the clinicians surveyed thought that information is altered during verbal translation, this points to a common and highly consequential communication issue. One senior doctor described how communication problems create

risks for patients:

> *Sometimes the [doctors] may give a verbal order ... and maybe what the doctors ordered was not well-perceived by our staff.... And so it may lead to some misunderstanding in delivering – I mean a wrong dosage or wrong rate of infusions for the patient. And so this is one of the communication problems that I've observed ... in the past 12 months. (INT_Doc_1)*

Another senior doctor stressed that writing English medical notes involves being selective and finding ways to condense what patients say in Cantonese.

> *Of course we have to condense a very long story into [something] concise. Because we just can't copy what the patients say. Even if they speak in English, we can't copy what they say. (INT_Doc_5)*

When explaining medical knowledge to the patient, one doctor stated that there are problems in translating on the spot from written English to spoken Cantonese.

> *For some specific disease that we know in English, sometimes for some rare diseases it may be difficult for us to find the right Chinese term to explain to the patient. (INT_Doc_2)*

A senior doctor admitted that medical information is sometimes omitted or changed during the translation process. This doctor then observed how clinicians tend to deal with this problem.

Because we have [been] doing this for so many years, we try to closely relate those Cantonese things into the notes. But sometimes actually the Cantonese cannot be directly translated into the English. I think many colleagues will put the Chinese character inside the notes. (INT_Doc_1)

These examples provide evidence of the nature and perhaps frequency of communication challenges related to rapid, repeated translation between English and Cantonese or Mandarin.

Written medical information

Nearly 50% of clinicians had problems with the process of documenting medical information. Specifically, 21% did not have time to write the medical notes, 11.3% did not have the space to write notes, and 11.3% admitted that they forgot some information before they wrote the notes. These results suggest that medical documentation in this ED may often be incomplete or inaccurate. Qualitatively, each clinician reported that each has his/her own preference in the medium of communication (written, verbal, or both) for transferring information to other clinicians. Both doctors and nurses commented that it is difficult to predict which form of communication will be used and when that form may change. Following a handover, clinicians rely upon their experience to interpret what is written or stated about a patient's medical condition, because there is no consistent process of medical documentation. As one clinician described it, the 'chaotic traffic' in communication, particularly in handovers, can lead to omissions or changes in medical information. As reported, nearly 50% of clinicians believed there are currently problems with the process of documenting medical information.

In addition to these translation issues, 21% of clinicians said that they did not have the time to write adequate medical notes, so it appears that the process of documenting medical information contains multiple risks for patients.

Communication problems at triage

Overall, clinicians stated that the key points of transition in the patient journey presented the most challenges for both clinician-patient and clinician-clinician communications. The survey showed that 83% of clinicians reported that communication is a problem at triage, either 'sometimes' (63.8%) or 'always' (19%). More specifically, 19.5% believed that there was a problem with the explanation of processes in the ED (such as the expected waiting time). Similarly, 12.6% said that explanations of diagnoses were insufficient, and 14.9% said that explanations of treatments were inadequate. The high patient attendance rate and the high expectations of patients place pressure on clinicians; doctors and nurses are expected to triage patients into one of five categories (from urgent to non-urgent) within 5-10 minutes. Thus, communication errors are more likely to occur, and to have a greater impact on patients, at these vital junctures in the patient journey. One senior doctor described the triage station as follows:

> *I think the triage is the most high-pressure area in our department because the volume of [patients] is so … high. Sometimes there may be 30, 40, 60 patients waiting outside in the waiting hall to be seen by the doctor, so triage became a very convenient point for them to go to the triage nurse and ask 'What's happening here? And why am I waiting here so long?' And so I think problems can arise easily in the triage area, and communication is a very important tool to overcome those problems. (INT_Doc_2)*

In Hong Kong, unlike most other international healthcare contexts, the triage category is made explicit to patients. Nonetheless, patients still feel frustrated about the long waiting time and lack of explanation regarding ED procedures. When a triage category is not assigned correctly, serious problems may arise. One senior doctor said that the consequences may be dire when a patient is assigned to too low a category; this could lead to the exacerbation of the patient's condition or even death. This senior doctor described a situation in which poor communication had catastrophic consequences.

> *We had a patient who was referred from a GP because of leg swelling. Actually, the GP had written in the referral notes that a clot inside the blood vessel was suspected. But it was inappropriately triaged and the patient was left waiting for two hours; and then the patient collapsed and finally died of lung–primary embolism. (INT_Doc_3)*

This tragic incident most likely could have been prevented, yet the clinicians were unaware of the problems in the triage process for this patient. This doctor explained that this patient was incorrectly triaged due to poor communication.

> *In terms of communication, maybe you are worried that [the triage staff] did not read the GP's letter carefully. We're not sure whether it was due to the time limitations or whether it was due to a lack of knowledge of this disease…. (INT_Doc_6)*

Incidents like this one create immeasurable distress for the patient's family and sometimes for the staff, and have very serious implications for the hospital. Nonetheless, the factors

that compromise communication in this Hong Kong ED remain a part of daily medical practice.

Communication problems at handover

As a result of time pressure and a high volume of patients, a third of clinicians stated that they knew of one or more instances of miscommunication during a clinical handover within the past 12 months. Two thirds of clinicians said that there had not been an incident of this nature.

In this Hong Kong trilingual ED, the process of clinical handover involves two or more doctors speaking briefly about the patient(s); a senior nurse may join the doctors during the handover and later brief the other ED nurses. Doctors stated that they usually perform short, informal, verbal handovers, conducted in Cantonese or in a mixture of Cantonese and English. This type of handover between clinicians focuses on the written medical notes, which are in English. These notes are documented in a highly condensed format and are replete with tick-boxes; a detailed description of the changing condition of the patient is lacking.

One senior doctor interviewed suggested that formal clinical handovers and extensive documentation are not practical in Hong Kong EDs because of the high demand for ED services and the resulting time pressure:

> *We have 600 patients a day …. So it would be very difficult for us to do a formal handover between doctors and nurses. So we just do some mini-handovers between the doctors themselves, and the nurses will also do some handovers among themselves. (INT_Doc_7)*

The condensed, rushed handovers described by clinicians in the qualitative interviews indicates another key point at which the accuracy and thoroughness of communication are at risk.

Pressures on communication

Twenty-three per cent of clinicians believed that working in an ED places considerable pressure on communication. Half of the clinicians surveyed, particularly the doctors, reported that long working hours sometimes detrimentally affected their ability to communicate with patients. (The majority of clinicians reported working 40 to 50 hours per week, although nearly 7% were working 50 or more hours per week.) In addition, 33% stated that communication challenges exist between junior and senior doctors and nurses.

Clinicians in this ED variously described their work as 'challenging', 'complex', 'high-pressure', 'demanding', and 'frustrating'. Given the high patient loads and long work hours, most clinicians said that they had to focus on assessing and managing urgent patient presentations. They did not believe that they had the time to focus on the quality of their relationship with the patients. In the interviews, some clinicians also expressed concern that, due to time pressures, the ED was possibly an unsafe healthcare system. One junior nurse articulated the problem in this manner:

> *When there are too many patients waiting, there's no time for detailed explanations. Misunderstandings are common. (INT_Nur_1)*

A senior doctor expressed the problem in these terms:

> *So imagine we only have two to three nurses at the triage stations and I don't think they*

have adequate time to communicate with the patients efficiently. (INT_Doc_8)

Another senior doctor described the high-pressure work in the ED in the following terms:

Usually I spend two to three minutes [before seeing a patient], because our electronic record can give us some more detailed information about the patient's condition. After that, I will go to see the patient. But we usually spend five to 10 minutes with the patient. (INT_Doc_3)

The insufficient time afforded to clinicians appears to create serious risks and also raise the likelihood of patient complaints and disruptions to the ED system. In an already challenging communication environment such as a trilingual ED, communication is further complicated by the rushed nature of the interactions and the often fatigued clinicians.

Interpersonal communication

The majority of clinicians reported being aware that patient-centred care represents optimal medical practice. Nearly all (98.2%) thought that establishing empathy with patients was of either 'high' importance (44.8%) or 'medium' importance (53.4%). Along these lines, 96.6% agreed that it was important to ask patients what they thought was wrong with them (the patients). However, these clinicians' viewpoints were inconsistent with actual communication practices. When clinicians were asked if they have the time to listen to their patients, only 58.6% said that they sometimes listen to patients, 29.3% said they rarely listen, and 5.2% admitted that they never listen to patients. Despite the above findings, the majority of doctors and nurses expressed satisfaction with their communication practices.

The majority of clinicians interviewed were aware of the relevance of providing patient-centred care and agreed with this approach in principle. However, these clinicians felt too busy or too uncomfortable to actively engage in this style of communication. In the interviews, very few clinicians felt that they were able to empathise with patients or spend the time to reassure them of the quality of their medical care. Thus, interpersonal communication skills, as well as hospital practices that support clinicians in this area, clearly require further improvement.

Discussion

There is a growing amount of research on the nature and perhaps frequency of communication challenges when communicating with patients who speak a foreign language (Bischoff et al 2003; Frank et al 2000; Hudelson & Vilpert 2009; Karliner et al 2007) or with those from different cultural groups (Vasquez & Javier 1991; Alegría et al 2009; Timmins 2002; Brooks 1992). Very few of these studies have explored how clinicians respond to the rapid communication demands characteristic of such a high-stress setting like an ED when operating in two languages (Chandler et al 2015; Pun et al 2015; Slade et al 2015b; 2016a). Dawson et al (2013) found that having a common language or 'cognitive picture' enables more effective communication, and being familiar with each other and listen attentively to patients will help to break down barriers. In our study, we pointed out the complex issues with multiple languages or different dialects and numerous translations involved in medical care that merit the utmost attention, especially in an extremely busy, overcrowded healthcare setting with overworked healthcare professionals and frustrated patients.

Given a global shortage of health professionals, many health professionals, nurses, and doctors believe that they have no alternative but to continue to work rapidly, under high

pressure and for long hours, using only segmented, limited medical information about their patients. The structures, processes, and policies often do not allow for flexibility. Slade et al (2015a) pointed out that communication training programmes designed to improve healthcare communication can subsequently lead to a reduction in the number of patient complaints, fewer adverse events, and greater levels of confidence and satisfaction for clinicians. Dunnion and Griffin (2010) asserted that care plans are of value in increasing nurse/patient contact times, and lead to better communication in the emergency department. In another study, Slade et al (2015b) developed a communication framework that lists strategies for developing rapport with patients and communicating medical knowledge with authentic clinician-patient interactions in Hong Kong EDs. Given the complexity of communicating in an ED, continuous research and evaluation to measure the effectiveness of interventions would be beneficial.

Conclusion

This research into the trilingual environment in a Hong Kong ED exposes the significant challenges that clinicians face in communicating with patients and other clinicians, especially at key points of transition (e.g., triage, handover) and in relation to addressing patient needs (e.g., allowing patients to be heard). In this Hong Kong trilingual ED, communication involves a process of constant translation, inconsistent and inadequate documentation, and significant professional pressures (e.g., long working hours, high patient loads, tensions between different staffing levels). In addition, the majority of clinicians admitted that they rarely listen to patients or engage patients in a discussion about their illness or injury. The detailed data sets in this paper point to serious communication issues (i.e., the potential omission, misinterpretation, or alteration of medical information) in the high-stress environment of this busy, trilingual Hong Kong ED. This research also

sheds light on a potential framework for multilingual, patient-centred education programmes for clinicians that may improve communication in this and other similar Hong Kong EDs

Relevance to clinical practice

The findings of this study illuminate the challenges and issues involved in clinician-patient and clinician-clinician communication in trilingual contexts. It also highlights the need to take steps to develop realistic and systematic communication frameworks for professional development to enhance clinical communication. By developing communication training programmes based on the key results of this and similar research projects, researchers can improve clinician-patient and clinician-clinician communication at key points of transition in the patient journey through the ED. In addition, researchers can assist hospital administrators to comply with the Hong Kong HA's emphasis on patient-centred care (Saha et al 2008).

Even though EDs are a particularly challenging environment in which to provide patient-centred care, EDs also represent one of the most crucial locations for these practices. Current research into communication within EDs supports the benefits of devising models of patient-centred care (Slade et al 2015a).

Based on the results discussed in this paper, the research team makes the following recommendations to hospital management and staff in a similar cultural context:

1. Use a patient-centred healthcare communication framework to provide clinicians with communication training programmes focussed on the priorities and practices of patient-centred communication.
2. Change medical documentation to electronic devices only to allow for rapid, accurate, digital translation (when needed).

3. Offer management training to enable clinicians to facilitate processes in a complex trilingual healthcare environment, especially in relation to tensions between junior and senior clinicians and difficulties in managing patient expectations.
4. Reduce code-mixing languages by offering clinicians guidance and support in using a particular language consistently, for precise purposes, in discussions and documentation.
5. Provide patients with visual, written, and auditory information, in multiple languages, about hospital processes, procedures, and costs (where applicable), so as to reduce tension in EDs.
6. Negotiate with hospital management to provide additional clinicians at peak periods, so as to reduce patient loads and time pressures on clinicians.
7. Embed a safety check system (e.g., iSBAR) to ensure that patients are correctly triaged and managed throughout the patient journey.
8. Balance medical and interpersonal forms of communication.

Figure 1 - Communication flow in a Hong Kong trilingual ED

Figure 1 here

Figure 1 depicts the complex, cyclical, multilingual communication process in this Hong Kong ED. The purpose of this figure is to illustrate the specific points of translation in this process, thereby identifying the areas of greatest risk in communication within this healthcare context.

The first area of communication in the patient journey in this Hong Kong ED is the

discussion between a triage nurse and a patient; this engagement occurs in Cantonese or Mandarin (in Figure 1, a green colour is used for both languages). The triage nurse then documents this interaction in written English in the patient's medical notes (red colour). Subsequently, the doctor translates these notes into spoken Cantonese (or Mandarin) to consult with the patient. The doctor then writes information about the patient in English in the medical notes. The doctor gives written orders in English for tests, treatments, or further examinations. Next, the ED nurse reads the English medical notes and follows through on the doctor's requests; the ED nurse speaks with the patient in Cantonese or Mandarin, then writes the patient's status in English within the medical notes. During this time, there may be a clinical handover in which the doctors and nurses speak to each other in Cantonese or in a mixture of English and Cantonese. Depending on the patient's length of stay in the ED, elements of this communication process may be repeated numerous times.

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Appendix 1:

Table 1. Demographic data of the participants in the questionnaire survey

		Nurses	Doctors
Total number of participants		36	22
Gender (Male)		10	16
(Female)		26	6
Age group (in years)			
	20-30	17	8
	31-40	12	8
	41-50	5	5
	51-60	2	1
Work experience in ED (in years)			
	<1	1	3
	1	4	0
	2	3	1
	3-4	3	4
	5-6	7	2
	7-8	2	1
	>9	16	11

Table 2. Views of Hong Kong medical doctors and nurses on different topics on emergency communication in EDs

Questions	*Respondents (in percentage %) N=58*
1. Are you aware of any critical incidents in the past 12 months in the ED where you work in which poor communication played a part?	*Yes, one incident (8.6%)* *Yes, two to five incidents (3.4%)* *No, no incidents that I am aware of (88%)*
2. How many hours do you work each week?	*30 to 40 hours (5.2%)* *40 to 50 hours (87.9%)* *More than 50 hours (6.9%)*
3. Do these long working hours affect your ability to communicate effectively?	*Always (1.7%)* *Sometimes (53.4%)* *Rarely (25.9%)* *Never (19%)*
4. Can communication be a problem in triage?	*Always (19%)* *Sometimes (63.8%)* *Rarely (10.3%)* *Never (3.4%)* *Nil (3.5%)*
5. How important do you think it is to establish empathy with a patient in the ED?	*High (44.8%)* *Medium (53.4%)* *Low (1.7%)*

6. Do you have time to listen to the patient?	*Always (6.9%)* *Sometimes (58.6%)* *Rarely (29.3%)* *Never (5.2%)*
7. Do you think it is important to ask the patient what they think is wrong with them?	*Yes (96.6%)* *No (3.4%)*
8. Do you believe that there is a lack of explanations given to patients in relation to: a) Processes in the ED, e.g., expected waiting time b) Diagnosis c) Treatment	 *a) Yes (19.5%) No (12.6%) Nil (67.9%)* *b) Yes (12.6%) No (20.7%) Nil (66.7%)* *c) Yes (14.9%) No (17.8%) Nil (57.3%)*
9. Is working in the ED different from working in other areas of the hospital in terms of pressure on communication?	*Yes (23%)* *No (10.3%)* *Nil (66.7%)*

10. What are the main problems that you have when writing a patient's notes?
(Participants were allowed to choose more than ONE option, % represented in the responses)

a) I don't have any problems with writing a patient's notes. (50%)
b) I don't have time to write the notes at the time that I am caring for the patient. (21%)
c) By the time I write the notes, I've forgotten some of the information. (11.3%)
d) I don't have enough space to write down my notes. (11.3%)
e) I'm not sure exactly what I should be writing in the notes. (1.6%)
f) *Other problems (4.8%)*

11. When transferring the spoken Cantonese knowledge into written English in the patient's medical records, do you think that information is changed or lost?	*Always (0%)* *Sometimes (44.8%)* *Rarely (43.1%)* *Never (10.3%)* *Nil (1.8%)*
12. When you explain English medical knowledge to patients in spoken Cantonese, do you think that information is changed or lost?	*Always (1.7%)* *Sometimes (48.3%)* *Rarely (41.4%)* *Never (5.2%)* *Nil (1.4%)*
13. Has there been an incident due to miscommunication during the handover, in which information about a group of patients and their cases are passed to another clinician or to a team of clinicians?	*Yes, often (0%)* *Yes, sometimes (32.8%)* *No (65.5%)* *Nil (1.7%)*
14. When consulting a senior doctor/nurse, are there any problems with communication between the junior and senior doctors/nurses?	*Yes (33%)* *No (67%)*

15. During clinical handovers, is there a problem with cross-disciplinary communication (e.g., between nurses and doctors; nurses and ambulance officers)?	*Yes (25.9%)* *No (72.4%)* *Nil (1.7%)*