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ORIGINAL RESEARCH

Communication and Influencing for ED Professionals: A training programme developed in the emergency department for the emergency department

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Abstract

Objective: The objective of the present study is to develop and pilot a communication and influencing skills training programme that meets ED health professionals' needs at an urban district hospital.

Methods: Qualitative methods within a participatory action research framework were utilised. An interdisciplinary team guided the programme's design and development. A training needs analysis saw team meetings, interviews, focus groups and observations conducted across the ED. Thematic analysis of the data identified health professionals' communication and influencing challenges. The training needs analysis informed the training programme curriculum's development. The pilot programme involved an interdisciplinary group of seven health professionals across 5 × 2 h sessions over 3 months, followed by a post-training survey.

Results: Five themes of communication and influencing challenges were identified: participating in effective handovers, involving patients in bedside handovers, effectively communicating with interdepartmental colleagues, asking ED colleagues to do tasks and understanding ED colleagues' roles, expectations and assumptions. Based on these challenges, the formulated RESPECT model (which stands for Relationships, Expectations, Styles, Partnerships, Enquiry, Coaching and Teamwork) informed the training curriculum. The peer coaching model used in the training programme was highly regarded by participants.

Conclusions: Communication and Influencing for ED Professionals™ (Babel Fish Group Pty Ltd, Melbourne, Victoria, Australia) addresses a gap for communication programmes developed in the ED for the ED. Future research will evaluate the programme's impact in this ED.

Key words: *communication, education, emergency medicine, qualitative research.*

Key findings

- Five key themes of communication and influencing challenges in the ED were identified.
- The RESPECT model for effective communication and influencing skills in the ED was devised.
- Action Learning can be an effective approach within the ED.

Introduction

An ED is a unique working environment characterised by time-stress, high patient turnover, unfamiliar patients, the management of high-risk patients, a high proportion of interruptions[1] and a high level of multitasking,[2] all of which contribute to making it a high-risk hospital area in regard to patient safety and medical errors. ED health professionals have high communication loads quantified as 89% of a health professional's time.[1]

Breakdowns in communication are a significant contributor to adverse events in EDs.[3] It has been reported that miscommunication was associated with 12% of the clinical errors during an ED clinician's shift.[4] Communication during triage, ambulance transfer, ED handover and admission are of vital importance.[5] Communication is a key cause of patient complaints in the ED.[6]

Despite the identified need for effective communication, ED health professionals receive inadequate training in non-technical skills, including communicating, during their vocational medical education.[7] The key training areas in the ED reported in the literature, to date, include structured communication protocols to guide handover,[8,9] structured communication tools to improve communication[10,11] and teamwork training (with or without simulation-based training), comprised of team strategies and tools to enhance performance and patient safety (TeamSTEPPS)[12,13] and crisis resource management (CRM).[14,15]

Of interest, the two most popular approaches reported within the literature for teamwork training have been translated from the defence (TeamSTEPPS) and aviation industries (CRM). In addition, there are limited

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reports of action learning or action research approaches taken to communication training within the ED, with the majority of approaches being didactic and teaching oriented.

Action learning is an iterative process of learning and reflection, with and by colleagues as they learn with and from each other in the context of their active working environment.[16] Action learning and action research approaches to training are suited to the ED for their unique ability to respond to complex organisational problems, the importance of effective high-performing teams and the need for time efficient learning.[17] The present paper seeks to open a new conversation on the application of action learning within the ED environment, describing the design and development of a communication and influencing (COIN) skills training programme, namely, COIN for ED Professionals™, piloted in the ED of Queen Elizabeth II (QEII) Jubilee Hospital. The term 'influencing skills' was used deliberately within the training programme to provide an empowering and assertive approach to communication skills for healthcare professionals regardless of their position. In the present paper, 'influence' refers to the ability of health professionals' communication to make an impact where previous attempts had been ineffective, working towards mutually beneficial outcomes for the patient.

Methods

Setting

The QEII is an accredited urban district public 180-bed hospital, which saw a new ED opened in October 2013 seeing 51 000 presentations per year. There was a significant number of new staff with implementation of a new model of care at this time. The ED is staffed by 77 full-time equivalent nurses and 41 full-time equivalent medical staff.

Study design

A core group of ED clinicians formed the COIN team, supported by two content experts using a participatory action research approach.[18] Researchers worked as collaborators, using a cyclical process of planning, action and review, to increase participation and ensure stakeholders' interests and perspectives informed the programme's development. The core team's membership was comprised of six individuals from the ED leadership group, including two medical and four nursing staff members, with between 9 and 20 years' experience in emergency medicine.

The approach saw the COIN core team meet six times across the span of 9 months, from April to December 2014, for 1–2 h meetings to review and progress the project. The COIN core team provided invaluable organisational support and advisory on four key areas of providing knowledge of the operational environment, recruitment and selection for focus groups, review of training needs analysis findings and training design review.

Study procedure

The first phase involved a training needs analysis. The second phase comprised the design and development of the training curriculum and materials. The third phase involved the piloting of the training programme delivery. This study was approved by the Hospital and Health Service Ethics Committee.

Phase 1: Training needs analysis

The training needs analysis involved the collection and analysis of primary and secondary ED data to identify the communication training needs of the health professionals in the ED. Primary data included data from interviews, core team meetings, observations on the floor, focus groups and a pre-training survey completed by the pilot programme participants. Individual interviews were conducted by the first author with members of the ED management team, including the ED Director, Acting ED Director and the Nurse Unit Manager (NUM). All study participants chose to participate and provided verbal informed consent prior to data collection. Secondary data included data from ED documents, namely, QEII ED reports, which comprise incidents reported by staff. These documents were reviewed by the first and second author to identify communication issues involved in the reported incidents.

A total of 12 h of observations of the clinical areas within the ED (Fast Track, Short Stay Unit and triage), communication events (group nursing handover, group medical handover, individual nursing handover and nurse team leader (nurse in charge) handover) and individual ED medical staff interactions were performed. Bed management meetings outside the ED, which were attended by all of the hospital's NUMs and/or their representatives (which in the case of the ED was the NUM and the nurse team leader), were also observed to obtain insights into interdepartmental communication. Observations were performed by the first and second authors, who are external consultants and researchers with expertise in communication. The observers carried notebooks and captured health professionals' communication in field notes, paying particular attention to the communication and influencing challenges experienced by ED health professionals in observed interactions.

In order to decrease the impact of the observers' presence and the recording on the naturalness of the data collected, observations were typically conducted over several hours and observations occurred over a week, with staff becoming more familiar and comfortable with the observers' presence and recording over time. Finally, the observers attempted to minimise the intrusiveness and impact of themselves and the recording devices on the participants observed and the work activities undertaken by carrying small notebooks and by occupying a peripheral position.

In total, 55 unique health professionals participated in this project. Table 1 below outlines the key breakdown of participation in each phase of the research.

Seven 1 h interdisciplinary focus groups were conducted by the first author, to explore the key COIN challenges within the ED. Participants were asked to share their own stories of communication success and communication failure in regard to handover communication, ED interdisciplinary communication and interdepartmental communication. A total

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TABLE 1. *Key breakdown of participation in each phase of the research project*

Phase of research	Number of participants involved
Phase 1: Training needs analysis	COIN core team: 6 health professionals
	Observations: 45 health professionals
	Focus groups: 36 health professionals
	Individual interviews: 3 health professionals
Phase 2: Design and development of training curriculum and materials	COIN core team: 6 health professionals
	External reviewer: 1 action research professor
Phase 3: Pilot of the training programme delivery	Pilot programme participants: 7 health professionals

COIN, communication and influencing; ED, emergency department.

of 36 ED health professionals (medical, nursing and allied health) participated in the focus groups, which were audio-recorded. All focus groups were transcribed with 51 illustrative stories collated and a thematic analysis conducted to identify the key COIN challenges. The first and second authors independently read through the transcribed focus group data, and notes from core team meetings, interviews and observations and identified the same themes regarding the communication and influencing challenges faced within the ED environment. The researchers then discussed these themes and jointly devised the questions that encompass the five key communication and influencing challenges in the ED.

Phase 2: Design and development of the training curriculum and materials

The COIN for ED Professionals™ programme was built on five design principles. The first principle is to respect and acknowledge the stories, experiences and expertise of QEII ED health professionals. The second principle is to leverage a design focussed on providing long-term sustainability of the programme within the department for potential future translation to other departments. The third principle is for the programme to be both experiential and instructional. The fourth principle is to follow action learning principles with built-in continuous improvement. The final principle is that the facilitation skills required to deliver the programme are learnable within a train-the-trainer format. Three key resources were identified and informed the design and development of the programme.[19–21]

Phase 3: Piloting of the training programme delivery

The pilot training programme included the first author (as trainer) leading 5 × 2 h sessions from October 2014 through to January 2015. The intervals between sessions were designed to provide time for participants to implement their action learning 'on-the-floor' projects. A total of seven participants consisting of the COIN core team and a nurse team leader completed the pilot training.

Although a full evaluation of the programme and its impact are beyond the scope of the current study, with a future study planned to evaluate the impact of the whole programme within the ED, in keeping with an action research approach, a short post-training survey was utilised to help inform the improvement of the programme (Appendix S1).

Results

Results from phase 1: Training needs analysis

The COIN core team articulated three key drivers for the training programme. First, to help develop skills and competencies required for hospital accreditation against the National Safety and Quality Health Service Standards with a particular focus on clinical handover and consumer engagement. Second, to provide organisational development around the areas of staff culture, collaboration and improved inter-departmental communication. And third, to recognise that the ED is in service of the community and seeks to be a place where patients are the focus of our efforts.

In addition to the drivers, the COIN core team articulated that the COIN programme would seek in particular to help participants to learn and develop in: (i) communicating respectfully with colleagues; (ii) communicating and influencing with purpose and clarity; and (iii) handover communication – including bedside handovers that involve patients.

Thematic analysis

Thematic analysis of the training needs data revealed five themes regarding the key communication and influencing challenges faced within the ED environment. The themes were articulated in the form of questions to empower participants to use these as part of their own action learning projects. The five key themes and illustrative focus group stories are represented in Table 2.

Results from phase 2: Training curriculum development

The RESPECT model

Based on the key COIN challenges that emerged through the thematic analysis and after discussion with the COIN core team, an overarching mnemonic was formulated to inform the training curriculum, design and delivery (Fig. 1).

The RESPECT model serves as a guide to effective communication and influencing within the ED. **R**elationships and relationship building are key to effective communication and influencing. **E**xpectations need to be clear for effective communication. **S**tyles of communication and influencing differ significantly across people, and the ability to adapt our style impacts our effectiveness. **P**artnerships

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TABLE 2. *Key communication and influence challenges faced by health professionals in the ED and illustrative stories*

Communication and influence challenge	Illustrative focus group story
Theme 1: What can I do to ensure I participate in effective handover?	Medical registrar who listens to the whole story 'But a lot of the time some of the med reg's (registrars) are really good on night. (First name of medical registrar), who's one of the med reg's, is a really lovely girl who actually works with you. And on night shifts as a registrar you really need that. She's amazing! And will sit down and talk through a patient with you and stuff. She's fantastic. She listens to the whole story, does her active listening, but then will have questions afterwards and say "Well have you thought about this?" and you're like "Oh that's actually really useful" and then you can talk with her, as opposed to a lot of the time to the med reg's and stuff.' (doctor)
Theme 2: How can I involve a patient in bedside handover so that it is mutually beneficial for both me and the patient	Patient corrects and contributes more information 'Yeah it was the same thing this morning when handing over a patient from resus to the ward. So basically we were handing over in front of the patient and I said to the patient "Correct me if I'm wrong. I'm just handing you over to the staff who is going to look after your care." So we were having a chat about (the patient's name). So basically asking him in any case if I miss something that they can basically add on to what I'm saying. So I was telling them that-because I was informed this morning that the patient was coming from a nursing home but no, he was from his own home, he lives alone. So he was just telling me now that he has Blue Care (in-home support), so every information that I missed, so he's adding on to it, so he's adding more detailed information up at the ward so…' (nurse)
Theme 3: How can I most effectively communicate with and influence inter-departmental colleagues so they cooperate with me?	The registrar's stalling tactics 'So on the weekend referring to the surg reg (surgical registrar) who was stuck in theatre for hours and so I had a patient who had an inguinal hernia which was incarcerated, it wasn't severe and he wasn't unwell, and he probably could have gone home and come back in the morning for theatre but he needed to have it done. And I kind of needed the surgeons to see him because it was on the weekend so that they could organise for him to come back and have it all sorted rather than via phone or whatever. The surgeon was in theatre for hours, passing messages via the nursing staff to him in theatre, finally getting onto him on the phone and he's like "I've been trying to call you" and I'm like "Well my phone's been with me the whole time and it hasn't rung. But anyway, that's fine, let's start again." And him being "Well no oh he needs to have a CT (Computed Tomography scan)" and I'm like "Well he's been here for six hours now. He doesn't really need a CT. He's got a little bit of fat in a hernia". It was all you know it was a stalling kind of process and trying to explain to him that this patient had been here for a very long time and I just need to get him sorted, he's a very easy sort, can you please come in and see him. And anyway it got to after he had had his CT, which I relented on doing, and finally got to an agreement where the patient could go home and he'd come back in the morning, which is what I wanted to do in the first place. And trying to get that across via nursing staff passing messages and you know it is difficult. And it's hard for the patients because they don't understand the way the system works. And we're kind of hampered waiting on in-patient teams to come and help us'. (doctor)
Theme 4: How can I be assertive in asking my ED colleagues to do a task that needs to be done?	Junior doctors afraid to ask nurses to do tasks 'I found some junior doctors they are freaking out to ask the nurses something. So they tend to leave there and sort of wait or hanging around, want to ask but saw you're busy and then walk away, they're sort of afraid of asking you to do a favour. But actually that's your job you're meant to do. Then that sort of delayed the patient's care a lot. I found that happens a lot. But for example one of the senior doctors they have a good relationship with this group of nurses "Oh I just ask you to do something. Can you do that for me now?" "No problem. I'm going to do it for you." That sort of is really effective for the patient care. But I feel like some people really sort of need sort of to understand that concept. It's not something personal, it is the thing that needs to be done, that's what I've found'. (nurse)
Theme 5: How can we better understand our roles, expectations and assumptions when working together within the ED?	Interpreter didn't get booked 'There was just a patient that they wanted an interpreter for. And there was just a bit of confusion between who was actually booking that interpreter, whether it was the nurse in charge, the doctor, or the social worker. So that interpreter didn't get booked because everyone thought everyone was doing it. So it was three hours where it had gone by where it hadn't…And you know that patient could have probably gone home in that three hour time. We could have gotten to the bottom of what was actually going on'. (social worker)

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R	Relationships	How am I building the relationship in this interaction?
E	Expectations	How am I working to clarify expectations in this interaction?
S	Styles	How am I being mindful of communication and influencing styles in this interaction?
P	Partnerships	How am I stepping into the other persons shoes and treating them as a partner in this interaction?
E	Enquiry	How am I practicing the skills of asking questions in this interaction?
C	Coaching	What opportunities do I have to practice the skills of a good coach in this interaction?
T	Teamwork	What opportunities do I have to put into play the skills of being an effective team player?

Figure 1. *The COIN for ED Professionals™ RESPECT model for effective COIN.*

and mutuality contribute to both patient involvement and collaborative working relationships with colleagues. Enquiry sees the skills of active engaged listening and questioning. Coaching and continuous improvement provide a key mechanism for health professionals to improve their COIN skills practice. Teamwork is central to any high performing healthcare delivery.

Action learning and programme content

Following the 70-20-10 learning model for training where 70% of a participant's learning takes place on the floor, 20% of their learning occurs through coaching and 10% of their learning is through structured learning programmes;[22] the COIN programme included in its structure an action learning 'on-the-floor' component. This 'on-the-floor' component saw participants' choosing action learning projects, which addressed one of the five key COIN skills challenges identified in the ED (Table 2).

The pilot training programme was based on 5 × 2 h sessions with at least a fortnight gap in between sessions to provide time for participants to progress their action learning projects. Some examples of the action learning projects included the following: Influencing treating nurses to notify nurse team leader of deteriorating patients; Influencing to achieve consistent patient involvement in clinical and flow rounds; How to influence a team and the expectations of that senior doctor in achieving the clinical and flow goals on a shift; Extra departmental influence and team work with colleagues outside the ED; Effective coaching and mentoring of registrars in handling escalations. Table 3 outlines the developed pilot training programme content. A facilitative training approach informed the training programme, where the trainer facilitates interaction between the participants and involves the participants in the design and content of the training programme.[27]

Results from phase 3: Training programme pilot

Diverse interdisciplinary training has been shown to increase understanding of roles, reduce interpersonal conflict and improve collaborative outcomes within the workplace,[28] and this has been mirrored in this programme. An early outcome of the programme has seen improved interdisciplinary relationships reported anecdotally by the training participants and also within the post-training survey (Appendix S1). Through the programme health professionals commented on the value of being able to have conversations, which typically are outside of the scope of their daily work interactions.

The second key strength of the programme was the coaching component, which accompanied the action learning projects. Many of the participants expressed in-session how they really valued learning the GROW coaching model[25] (also see results from the post-training survey in Appendix S1), which enabled them to engage colleagues in a different and more motivating form of performance conversation.

The most significant challenge the programme encountered was rostering and scheduling conflicts, which saw the average attendance to the sessions being around 70% of participants, with some sessions down to as low as 40% attendance. The COIN core team is working with these learnings, so future programmes can see a higher level of participation and fewer rostering conflicts.

Discussion

Communication and Influencing for ED Professionals™ is a unique training programme with two key design features that distinguish it from other ED training programmes that target health professionals' communication.

First, it is the only specific communication training programme that has been developed in the ED for the ED. The most well-known teamwork training programmes for EDs that include communication training, such as CRM and TeamSTEPPS, were imported and adapted for the ED from the defence and aviation industries. Other specific communication training programmes generally focus on didactic approaches where participants are similarly encouraged to standardise their practice with a primary focus on being the speaker in the interaction.[8,9,11,29,30]

Second, unlike other ED communication and teamwork training programmes, the COIN for ED Professionals™ programme leverages an action research and action learning approach in programme design, development and delivery. In this way, the programme is distinct from other ED training programmes in that it is tailored not only to the needs of the

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TABLE 3. *COIN pilot training programme content*

Pilot training programme				
Session	Content	Duration	Key areas of the RESPECT model addressed	Training approach
1	Orientation Introduction to programme Communication and influencing challenges in the ED Identification of action learning projects	2 h	Introduction to the RESPECT model [R][E]	Facilitative training
2	‘Listen, really listen’ Understanding the three levels of listening The Emotional Bank Account[23] My action learning project	2 h	[P][R]	Facilitative training
3	‘Respond rather than react’ Hot buttons – What are your triggers? The Kraybill Conflict Style Inventory[24] My action learning project	2 h	[R][S][P]	Facilitative training
4	‘Ask questions and clarify’ Exploring the skills of asking questions Feedback for high performing teams GROW coaching model[25] for my action learning project	2 h	[E][C][T]	Facilitative training
5	‘Understand influencing styles’ Influencing styles diagnostic[26] Learning about different influencing styles My influencing situation My action learning project	2 h	[S]	Facilitative training

COIN, communication and influencing; ED, emergency department; GROW, goal, reality, options and will; RESPECT, relationships, expectations, styles, partnerships, enquiry, coaching and teamwork.

ED and the hospital but also to the needs of the individual learner/health professional. As the programme is conducted across multiple sessions, which spans several months, participants engage in a learning journey, and through implementing their action learning projects, they have the opportunity to plan, act and reflect on how to improve their communication and influencing skills within the ED.

Finally, it is worthwhile reflecting on the specific communication and influencing skills challenges that emerged for health professionals within this study (Table 2). There is a growing body of research describing issues with handover communication in the ED, particularly in regard to information communicated during handover.[31,32] Some studies have noted limited patient involvement in handover.[9] It is curious to note that although all the themes from Table 2 have been described in previous studies of communication within the ED, the first two themes focussing on handover have received far more coverage in the literature yet were the least chosen themes by health professionals to focus on within their action learning projects.

With respect to the challenges of being assertive in asking ED colleagues to do work and better understanding other's roles, expectations and assumptions, these were similarly identified as challenges in the ED and other specialty hospital settings in a study of pharmacists' interprofessional medication communication.[33]

Moreover, in regard to ED health professionals' interdepartmental communication, apart from some research describing problems with interdepartmental handover communication and doctors making referrals to interdepartmental colleagues,[34] there is little research that describes issues with other interdepartmental communication events, and yet this was one of the key areas of choice for participants' action learning projects.

Limitations

The current study has several limitations. First, as the study was a pilot conducted in one ED, and was tailored to meet the specific needs of this ED, it is unclear whether or not the findings are applicable to other EDs. Future research in other EDs is needed in order to ascertain the generalisability of the identified COIN skill challenges and

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the training curriculum that was designed to address them. Second, although a strength and unique feature of the training programme is a design in which participants undertake a learning journey across multiple training sessions, this design feature poses a challenge in the hospital context in that it is difficult to schedule sessions at suitable times that health professionals from multiple disciplines can attend. As such, a smaller than anticipated number of participants attended the training, and not all training participants could attend all sessions.

Conclusions

This study contributes to filling a gap in research on specific communication training programmes in the ED by describing the design, development and implementation of the first stage of a pilot action learning communication and influencing skills programme purpose built in the ED for the ED. Future research will evaluate the impact of the programme in the QEII ED using the qualitative research methodology, the most significant change technique.[35] This will occur after the completion of the second stage of the pilot programme, in which participants from the first training cohort are trained to be trainers, and the subsequent delivery of training by these trainers to a second and third cohort of ED health professionals.

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Author contributions

AR and SR were responsible for conception and design of the study. AR, SR, AB, HA and MD were responsible for aspects of data collection. AR, AB and HA were responsible for supervision of the project. AR and SR were responsible for drafting the article. AB, MD and HA were responsible for critically revising the article. AR and SR take responsibility for the paper as a whole.

Competing interests

Babel Fish Group Pty Ltd were engaged by QEII Jubilee Hospital under contract to provide action research leadership, in the development of a bespoke communication training programme, that drew on their specific organisational change management and training expertise from other industry sectors. The staff engagement, pilot programme development and delivery occurred within an ethically approved research programme. This programme was developed as no suitable 'off the shelf' options existed. It has the potential to be translated to other ED but would only be appropriate to do so if effectiveness of the programme can be established, hence the importance of a peer-reviewed process. Individual departments seeking to uptake this or other communication programmes would do so as part of a market exploration or tender process. All support from QEII Jubilee Hospital staff was in kind, with no financial benefits being received.

References

1. Spencer R, Coiera E, Logan P. Variation in communication loads on clinical staff in the emergency department. *Ann. Emerg. Med.* 2004; **44**: 268–73.
2. Laxmisan A, Hakimzada F, Sayan OR, Green RA, Zhang J, Patel VL. The multitasking clinician: decision-making and cognitive demand during and after team handoffs in emergency care. *Int. J. Med. Inform.* 2007; **76**: 801–11.
3. Cosby KS, Roberts R, Palivos L *et al.* Characteristics of patient care management problems identified in emergency department morbidity and mortality investigations during 15 years. *Ann. Emerg. Med.* 2008; **51**: 251–61, 261.e1.
4. Fordyce J, Blank FSJ, Pekow P *et al.* Errors in a busy emergency department. *Ann. Emerg. Med.* 2003; **42**: 324–33.
5. Eisenberg EM, Murphy AG, Sutcliffe K *et al.* Communication in emergency medicine: implications for patient safety this study was funded by a generous grant from the national patient safety foundation. *Commun. Monogr.* 2005; **72**: 390–413.
6. Taylor DM, Wolfe R, Cameron PA. Complaints from emergency department patients largely result from treatment and communication problems. *Emerg. Med.* 2002; **14**: 43–9.
7. Flowerdew L, Brown R, Vincent C, Woloshynowych M. Identifying nontechnical skills associated with safety in the emergency department: a scoping review of the literature. *Ann. Emerg. Med.* 2012; **59**: 386–94.
8. Iedema R, Ball C, Daly B *et al.* Design and trial of a new ambulance-to-emergency department handover protocol: 'IMIST-AMBO'. *BMJ Qual. Saf.* 2012; **21**: 627–33.
9. Wilson R. Improving clinical handover in emergency departments. *Emerg. Nurse* 2011; **19**: 22–6.
10. Härgestam M, Lindkvist M, Brulin C, Jacobsson M, Hultin M. Communication in interdisciplinary teams: exploring closed-loop communication during *in situ* trauma team training. *BMJ Open* 2013; **3**: e003525.
11. Kessler CS, Afshar Y, Sardar G, Yudkowsky R, Ankel F, Schwartz A. A prospective, randomized, controlled study demonstrating a novel, effective model of transfer of care between physicians: the 5 Cs of consultation. *Acad. Emerg. Med.: Off. J. Soc.* 2012; **19**: 968–74.
12. Capella J, Smith S, Philp A *et al.* 2010 APDS spring meeting: teamwork training improves the clinical care of trauma patients. *J. Surg. Educ.* 2010; **67**: 439–43.
13. Turner P. Implementation of TeamSTEPPS in the emergency department. *Crit. Care Nurs. Q.* 2012; **35**: 208–12.
14. Morey JC, Simon R, Jay GD *et al.* Error reduction and performance improvement in the emergency department through formal teamwork training: evaluation results of the MedTeams project. *Health Serv. Res.* 2002; **37**: 1553–81.
15. Sweeney LA, Warren O, Gardner L, Rojek A, Lindquist DG. A simulation-based training program improves emergency department staff communication. *Am. J. Med. Qual.* 2014; **29**: 115–23.

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16. McGill I, Beaty L. *Action Learning: A Guide for Professional, Management and Educational Development*. London: Kogan Page, 1995.
17. Marquardt MJ. *Optimizing the Power of Action Learning: Solving Problems and Building Leaders in Real Time*. Boston, MA: Davies-Black, 2009.
18. Whyte WF, ed. *Participatory Action Research*. Newbury Park, CA: Sage, 1991.
19. Belzer EJ. *Skills Training in Communication and Related Topics Part 1: Dealing With Conflict and Change*. Oxford: Radcliffe Publishing, 2009.
20. Bendaly L, Bendaly N. *Improving Healthcare Team Performance: The 7 Requirements for Excellence in Patient Care*. Toronto: John Wiley and Sons Canada, 2012.
21. Dick B. *Learning to Communicate: Activities, Skills, Techniques and Models*. Interchange: Brisbane, 1982.
22. Tough A. *The Adult's Learning Projects*. Toronto: Ontario Institute for Studies in Education, 1979.
23. Covey S. *The Seven Habits of Highly Effective People: Restoring the Character Ethic*. New York: Simon and Schuster, 1989.
24. Braz ME, Lawton B, Kraybill RS, Daly K. Validation of the Kraybill Conflict Style Inventory. *96th Annual Convention of the National Communication Association*. San Francisco, 2010.
25. Alexander G. Behavioural coaching —the GROW model. In: Passmore J, ed. *Excellence in Coaching: The Industry Guide*. London: Kogan Page, 2010; 83–93.
26. Bolton R, Bolton DG. *People Styles at Work : Making bad Relationships Good and Good Relationships Better*. New York: AMACOM, 1996.
27. Schwarz R. *The Skilled Facilitator: A Comprehensive Resource for Consultants, Facilitators, Managers, Trainers, and Coaches*. San Francisco, CA: Jossey-Bass, 2002.
28. Perry JS, Wears RL, McDonald SS. Implementing team training in the Emergency Department: The Good, The Unexpected, and the Problematic. In: *Improving Patient Safety through Teamwork and Team Training*. Brisbane: Oxford University Press, 2013.
29. Dojmi Di Delupis F, Pisanelli P, Di Luccio G *et al*. Communication during handover in the pre-hospital/hospital interface in Italy: from evaluation to implementation of multidisciplinary training through high-fidelity simulation. *Intern. Emerg. Med*. 2014; **9**: 575–82.
30. Talbot R, Bleetman A. Retention of information by emergency department staff at ambulance handover: do standardised approaches work? *Emerg. Med. J*. 2007; **24**: 539–42.
31. Bost N, Crilly J, Patterson E, Chaboyer W. Clinical handover of patients arriving by ambulance to a hospital emergency department: A qualitative study. *Int. Emerg. Nurs*. 2012; **20**: 133–41.
32. Ye K, McD Taylor D, Knott JC, Dent A, MacBean CE. Handover in the emergency department: deficiencies and adverse effects. *Emerg. Med. Australas*. 2007; **19**: 433–41.
33. Rixon S, Braaf S, Williams A, Liew D, Manias E. Pharmacists' interprofessional communication about medications in specialty hospital settings. *Health Commun*. 2014; 1–11.
34. Hilligoss B. Selling patients and other metaphors: a discourse analysis of the interpretive frames that shape emergency department admission handoffs. *Soc. Sci. Med*. 2014; **102**: 119–28.
35. Dart J, Davies R. A dialogical, story-based evaluation tool: the most significant change technique. *Am. J. Eval*. 2003; **24**: 137–55.

Supporting information

Additional supporting information may be found in the online version of this article at the publisher's web site:

Appendix S1. The post-training survey questions and responses.

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