From Communication Skills to Skillful Communication: A Longitudinal Integrated Curriculum for Critical Care Medicine Fellows

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Abstract

Problem
Communication with patients and families in critical care medicine (CCM) can be complex and challenging. A longitudinal curricular model integrating multiple techniques within classroom and clinical milieus may facilitate skillful communication across diverse settings.

Approach
In 2014–2015, the authors developed and implemented a curriculum for CCM fellows at the Cumming School of Medicine, University of Calgary, to promote the longitudinal development of skillful communication. A departmental needs assessment informed curriculum development. Five 4-hour classroom sessions were developed: basic communication principles, family meetings about goals and transitions of care, discussing patient safety incidents, addressing conflict, and offering organ donation. Teaching methods—including instructor-led presentations incorporating a consistent framework for approaching challenging conversations, simulation and clinical practice, and feedback from peers, trained facilitators, family members, and clinicians—supported integration of skills into the clinical setting and longitudinal development of skillful communication. Seven fellows participated during the first year of the curriculum.

Outcomes
CCM fellows engaged enthusiastically in the program, commented that the framework provided was helpful, and highly valued the opportunity to practice challenging communication scenarios, learn from observing their peers, and receive immediate feedback.

Next Steps
More detailed accounts of fellows’, patients’, and family members’ experiences will be obtained to guide curricular development. The curriculum will be expanded to involve other members of the multidisciplinary intensive care unit team, and faculty education initiatives will be offered to enhance the quality of the feedback provided. The impact of the curriculum on initial skill development, retention, and progression will be assessed.

Problem
Communication with patients and families in critical care medicine (CCM) can be complex and challenging. Rapport must be established rapidly and decisions impacting life and death made within a compressed time frame. Patients and families experience strong emotions, and interpersonal conflicts and ethical dilemmas are not uncommon. These conversations also have a significant impact on health care providers, who may experience emotional and moral distress.1 While the Royal College of Physicians and Surgeons of Canada (RCPSC) and the Accreditation Council for Graduate Medical Education describe desired competencies for communicating with patients and families,2,3 how to best facilitate the development of these competencies in CCM has not been clearly delineated.

Vicarious learning has proven insufficient for the development of skillful communication. Prior educational interventions to teach communication skills to CCM fellows have addressed several topics within a workshop format4,5 or through family meetings within the clinical setting.6 As CCM fellows need to be skilled in discussing many issues with patients and their families during family meetings, such approaches may not support ongoing learning or the development of a comprehensive set of communication skills. When considering communication as both a skill and an art with no bounds, role modeling, reflection, discussion, deliberate practice, and specific feedback may foster continuous learning.7 A longitudinal curricular model integrating multiple techniques within classroom and clinical milieus may facilitate the contextualization of communication skills across diverse settings. Our objective was to develop such a curriculum for CCM fellows that promotes the development of skillful communication.

Approach
In 2014–2015, we developed and implemented a longitudinal curriculum for CCM fellows at the Cumming School of Medicine, University of Calgary. We adopted Kern’s model for curriculum development and proceeded through the six steps of problem identification; assessment of learning needs; development of goals and objectives; identification of educational strategies; implementation; and evaluation and feedback.8

We obtained ethical approval for this project from the University of Calgary conjoint health ethics research board.

Needs assessment survey
The CCM fellowship program at our institution, a two-year subspecialty training program accredited by the...
RCpsc, historically approached communication skills teaching and assessment through small-group, instructor-led presentations and periodic general in-training evaluation reports (ITERs), respectively. Recognizing that didactic teaching alone does not promote effective learning and that general ITERs do not address specific communication skills, we conducted a targeted needs assessment to inform our curriculum development; we used the FluidSurveys (Ottawa, Ontario, Canada) platform to distribute surveys to all fellows, attending physicians, bedside nurses, and social workers within the Department of Critical Care Medicine in April 2014. We sent two reminders at two-week intervals to maximize response rates. The surveys consisted of multiple-choice and free-text questions based on a literature review and the CanMEDS Communicator role competencies, and feedback from local experts contributed content validity (see Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/A397).

The overall survey response rate was 79/445 (7/7) fellows, 15/29 attending physicians, 56/404 nurses, and 1/5 social workers; see Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/A397). Aggregated responses from fellows, attending physicians, nurses, and social workers indicated several areas of need for fellows’ education in communication: counseling about the emotional impact of emergency situations, family meetings, discussing goals and transitions of care, patient safety incident disclosure, addressing conflict, and offering organ donation. Survey results showed that CCM fellows tended to focus on giving information over building rapport, with the free-text responses suggesting that these tendencies may be related to the absence of a prior relationship with the patients and their families and discomfort with discussing death and dying. The fellows’ preferred learning methods included simulation and feedback in clinical practice.

Program structure

The literature review and needs assessment survey results informed the design of a communication skills curriculum integrated longitudinally into classroom and clinical settings, which we implemented within our CCM fellowship program from July 2014 to June 2015. Five 4-hour classroom-based sessions with desired learning outcomes were developed: basic principles of communication; family meetings to discuss goals and transitions of care; discussing patient safety incidents; addressing conflict; and offering organ donation (Chart 1). This sequence was selected to reflect progressive levels of difficulty, as suggested by fellows’ self-rated comfort with these topics. Each classroom session consisted of a 45-minute interactive presentation that provided a framework for the topic, followed by 3 hours of small-group simulation practice. The SPIKES (setting, perception, invitation, knowledge, empathy, summarize & strategize) protocol for discussing serious news was the framework used for all five sessions; serious news was conceptualized as any situation that may threaten hope, well-being, or freedom of choice, and thus broadly applicable to many situations in the intensive care unit (ICU). We developed the scenarios for the simulations from challenging clinical events that the fellows had encountered. An actor for each session was recruited from a pool of actors trained for undergraduate medical education communication courses. We provided the actors with a detailed character profile and description of the scenario, which included guidance on how to respond to verbal and nonverbal cues. To reflect the fluidity of communication, we specifically did not provide scripts, requiring actors and fellows to respond to nuances of interpersonal interaction in the moment.

To help promote the integration of skills learned in the simulated setting into the clinical environment and ongoing skills development, we required fellows to obtain feedback on two family meetings during each ICU rotation, both from an interprofessional clinician present at the meeting and from the patient’s family members. The clinician and family member each completed a structured form that they returned anonymously to the program director. As introducing new forms was an added stress for the fellows, we emphasized that the feedback would be formative, that it would not contribute to summative assessment, and that future analysis of the feedback would be used to evaluate the effectiveness of the curriculum.

The longitudinal nature of our CCM communication curriculum is unique, providing opportunity for both horizontal and vertical integration within the curriculum. Horizontal integration—through introducing the SPIKES protocol within the first session and adapting it to different topics within subsequent sessions—provided fellows with a consistent framework for approaching challenging conversations, highlighting that a similar approach can be used for a variety of topics. Although mnemonics can be a helpful scaffold for challenging conversations, multiple mnemonics and scripts could lead to cognitive overload and interfere with creativity and the ability to respond fluidly; adapting the SPIKES protocol to the different topics covered in our communication curriculum provided both simplicity and flexibility.

Relegating communication skills education to a single workshop risks communication being perceived as a separate topic to be addressed during a confined point in residency training, removed from the remainder of the curriculum and the clinical sphere. Vertical integration or, in this case, longitudinally weaving communication skills education throughout multiple levels of the curriculum may have pedagogical, cultural, and political benefits over time. From an educational perspective, addressing communication at multiple points and in various settings allows for scaffolding, reinforcement, skill development, and the translation of skills from the safety of the classroom into the complexity of the clinical environment. Integration within the clinical setting through structured forms may impact the culture of medical education over time by routinizing direct observation and contextualized feedback, and encouraging learners to reflect on the impact of their words and actions on ICU patients and their families. Politically, devoting time to communication skills throughout the year draws attention to communication as a domain that warrants the same amount of attention as other aspects of training and conveys that skillful communication develops over time.

Program implementation

Our CCM fellowship program includes a weekly full educational day as part of the academic program. Attendance at the educational day is mandatory, with the exception of absences for illness, holidays, or conferences. In addition, CCM fellows in our program lead family meetings...
The curriculum consisted of five 4-hour classroom-based sessions with desired learning outcomes. Each session included a 45-minute interactive presentation that provided a framework for the topic, followed by 3 hours of small-group simulation practice.

### Chart 1
**Curriculum Map for a Longitudinal Integrated Curriculum on Communication Skills for Critical Care Medicine Fellows, Cumming School of Medicine, University of Calgary, July 2014 to June 2015**

<table>
<thead>
<tr>
<th>Classroom session topic</th>
<th>Learning outcomes</th>
<th>Instructional methods</th>
<th>Evaluation approach</th>
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</thead>
<tbody>
<tr>
<td>Basic principles of communication (rapport, responding to emotion, and serious news conversations)</td>
<td>1. Develop an approach to building rapport 2. Describe the SPIKES protocol 3. Demonstrate the skills used to build rapport, including active listening, responding to requests for information, and responding to emotion 4. Apply the SPIKES protocol in discussing serious news with a patient’s family member</td>
<td>Presession reading materials Instructor-led presentations Personal reflections Role-playing in pairs Simulated practice with an actor playing the role of an ICU patient’s family member</td>
<td>Kirkpatrick Level 1: Reaction—Trainee satisfaction with reading materials, presentation, simulated scenarios, and feedback for each classroom session Kirkpatrick Level 2: Learning—Not assessed within classroom sessions to avoid the perception that knowledge reflects ability to communicate; knowledge related to patient safety and organ donation assessed elsewhere in curriculum Kirkpatrick Level 3: Behavior—Peer and facilitator feedback on interactions with actors playing family members Kirkpatrick Level 4: Results—Family member and clinician feedback on family meetings in clinical setting, guided by structured forms</td>
</tr>
<tr>
<td>Family meetings to discuss goals and transitions of care</td>
<td>1. Develop an approach to family meetings 2. Describe how the SPIKES protocol can be adapted to guide goals of care conversations 3. Demonstrate the skills described by the SPIKES protocol in discussing goals of care with a patient’s family member</td>
<td>Feedback from peers and trained facilitators in the classroom setting Feedback from ICU patients’ family members and clinicians in the clinical setting</td>
<td></td>
</tr>
<tr>
<td>Discussing patient safety incidents</td>
<td>1. Define the terms near miss, no harm incident, and harmful incident 2. List five stages of patient safety incident disclosure described by the CMPA and CPSI 3. Describe how the SPIKES protocol can be adapted to initial disclosure of a patient safety incident conversation 4. Disclose a patient safety incident to a patient’s family member</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addressing conflict</td>
<td>1. Describe four principles in addressing conflict, including recognizing disagreement, self-awareness, understanding the issues, and finding common ground 2. Describe how the SPIKES protocol can be adapted to conflict management 3. Apply principles of conflict management within the SPIKES protocol to address conflict with a patient’s family member</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offering organ donation</td>
<td>1. Distinguish how the process of discussing organ donation after brain death differs from discussing organ donation after cardiac death 2. Describe how the SPIKES protocol can be adapted to offering organ donation 3. Discuss organ donation after brain death and organ donation after cardiac death with a patient’s family member</td>
<td></td>
<td></td>
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</tbody>
</table>

**Abbreviations:** SPIKES indicates setting, perception, invitation, knowledge, empathy, summarize & strategize; ICU, intensive care unit; CMPA, Canadian Medical Protective Association; CPSI, Canadian Patient Safety Institute.

*The curriculum consisted of five 4-hour classroom-based sessions with desired learning outcomes. Each classroom session included a 45-minute interactive presentation that provided a framework for the topic, followed by 3 hours of small-group simulation practice.

*Principles from these sessions were reinforced in subsequent sessions.*

during ICU rotations; the bedside nurse is typically present, and usually an ICU attending physician and/or social worker is also present. This structure lends itself well to integrating a longitudinal curriculum for communication teaching and feedback. We scheduled a classroom communication session every 2 to 4 months (i.e., during five educational days throughout the academic year). Each session was facilitated by a medical educator with extensive training in simulation debriefing and feedback on challenging conversations (A.L.R.), with some sessions cofacilitated by a second CCM educator with simulation experience (P.C.), and was attended by both first- and second-year CCM fellows. Following the interactive presentation, principles of maintaining a safe learning environment were reviewed and chairs were arranged in a semicircle with two at the front of the room. The actor was brought into the room, and one of the fellows would volunteer to begin the scenario. The scenarios were interspersed with feedback, discussion, practicing new approaches, and different fellows rotating in and out within a given scenario. The facilitators adopted a blended approach to feedback, including guided self-assessment, peer feedback, directive feedback, and facilitated focused discussion. Two to three scenarios were completed per session.
Within the clinical setting, feedback forms completed by ICU clinicians and patients’ family members following CCM-fellow-led family meetings were returned to the fellows in aggregated format, after at least three forms had been received, to preserve confidentiality. Seven fellows participated during the first year of the curriculum.

We plan to repeat the curriculum each year to ensure that fellows attend at least one session on a given topic over their two years of training, facilitate reinforcement for second-year fellows, and provide an opportunity for first-year fellows to learn from the skills modeled by second-year fellows. Furthermore, with communication as an art, new learning emerges in repeated sessions as different issues unfold and new points of discussion arise.

Outcomes

As communication is an interactional process, we did not believe that knowledge tests would be suitable for assessing the fellows’ abilities; rather, we chose to elicit the perspectives of family members who interacted with the fellows and of clinicians who observed those interactions. Furthermore, given the inaccuracy inherent in self-assessment of communication, we elected to focus on changes in performance observed and documented on feedback forms over the course of an academic year as a measure of curricular impact.

We observed that CCM fellows were enthusiastic participants, as exemplified by willingly participating, observing their peers intently during the scenarios, and readily engaging in feedback conversations. Comments provided on evaluation forms for each classroom session indicated that the framework provided was helpful; the simulation scenarios and actors’ skills provided a sense of realism; and the opportunity to practice challenging communication scenarios, learn from observing their peers, and receive immediate feedback was highly valued (Table 1). The fellows were grateful for the opportunity to have formal learning dedicated to communication skills, with the majority indicating that they had not had such an opportunity since medical school. They also appreciated receiving feedback from clinicians and patients’ family members after family meetings in the ICU.

Contextual factors contributing to program success included dedicated resources and a learner-centered approach. Essential resources included program director support for curriculum time, financial support for hiring actors, access to skilled and experienced actors, and ICU clinicians willing to offer feedback on the application of these skills in clinical practice. Engaging the fellows in developing the simulations contributed to the realism of the scenarios and to the fellows’ enthusiastic participation. For example, fellows indicated on their evaluation forms that they appreciated the opportunity to revisit challenges from their own experiences in the scenarios, observe how others might approach them, and try new approaches themselves in a safe learning environment.

In implementing our curriculum, we have encountered some challenges. Feedback provided on family meeting forms has been of variable quality, as clinicians occasionally do not follow the form completion instructions. With encouragement and faculty development over time, we anticipate that the forms will become more routine and will be completed as intended. Multiple clinicians completing the forms without an assessment of interrater reliability, and the generally favorable nature of the feedback documented, have limited the potential for describing temporal trends in performance, although the forms may be useful for identifying fellows experiencing challenges with specific aspects of communication.

Next Steps

The initial development and implementation of our integrated longitudinal communication curriculum has been met with multiple successes and some challenges that have identified opportunities for progress. Considering curriculum development as an iterative process, the fellows’ feedback, patient and family perceptions of trainees’

### Table 1

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
<th>Illustrative quotes</th>
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</thead>
<tbody>
<tr>
<td><strong>Most helpful aspects of classroom sessions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor-led presentations</td>
<td>Framework approach</td>
<td>• Providing a framework for communication issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Process and scripts for very difficult situations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Review of techniques (i.e., SPIKES) with in-depth review of the components</td>
</tr>
<tr>
<td>Simulated practice with actors</td>
<td>Realistic cases and actors</td>
<td>• Cases we realistically deal with in ICU</td>
</tr>
<tr>
<td>Observation</td>
<td></td>
<td>• We will see such cases and difficult conversations</td>
</tr>
<tr>
<td>Debriefing</td>
<td>Small-group discussion and feedback from facilitators</td>
<td>• Discussion and feedback was helpful</td>
</tr>
<tr>
<td>General</td>
<td></td>
<td>• Learning different techniques and approaches to common issues</td>
</tr>
</tbody>
</table>

| **Aspects of classroom sessions to improve on** |                                |                                                                                     |
| Instructor-led presentation   | Too long                       | • Could be shorter                                                                 |
| Debriefing                   | Not enough feedback from simulated family member actors | • More feedback from simulated patients                                           |

Abbreviations: SPIKES indicates setting, perception, invitation, knowledge, empathy, summarize & strategize; ICU, intensive care unit.

The curriculum consisted of five 4-hour classroom-based sessions with specified learning outcomes. Each classroom session included a 45-minute interactive presentation that provided a framework for the topic, followed by 3 hours of small-group simulation practice.
educational needs, our own experiences, and innovations reported in the literature will guide ongoing adaptation of our curriculum. Additionally, with a significant proportion of communication in the ICU being interprofessional, future simulation scenarios will involve other members of the multidisciplinary ICU team. We will also offer faculty learning opportunities in communication skills and feedback to enhance the quality of the feedback provided. Finally, we plan to assess the impact of our curriculum on initial skill development, retention, and progression through a pre–post repeated-measures design and to obtain more detailed accounts of fellows’ experiences of the curriculum through interviews and focus groups. We anticipate that with faculty role modeling, observation of fellows during family meetings, and delivery of learner-centered developmental feedback, our curriculum will encourage whole-task learning in context, facilitating integration, reinforcement, maintenance, and enhancement of the skills taught in the classroom setting to achieve skillful communication in clinical practice.

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**Other disclosures:** None reported.

**Ethical approval:** Ethical approval for this project was obtained from the University of Calgary conjoint health research ethics board.

**Previous presentations:** A summary of this curriculum was presented as an oral presentation at the Canadian Society of Palliative Care Physicians Advanced Learning in Palliative Medicine Conference, May 29, 2015, Calgary, Alberta, Canada.

**References**