

# Education Research: Communication skills for neurology residents

## Structured teaching and reflective practice

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### ABSTRACT

**Objective:** Despite the importance of communication skills for neurologists, specific training in this area at the residency level is often lacking. This study aimed to enhance learning of these skills and to encourage reflective practice around communication skills.

**Methods:** A group of 12 neurology residents participated in a series of six case-based communication skills workshops. Each workshop focused on a particular clinical scenario, including breaking bad news, discussing do-not-resuscitate orders, communicating with “difficult” patients, disclosing medical errors, obtaining informed consent for neurologic tests and procedures, and discussing life-and-death decisions with families of critically ill patients. Residents also kept reflective portfolios in which real examples of these interactions were recorded.

**Results:** The program was well accepted, and residents rated the workshops as effective and relevant to their practice. Analysis of residents’ portfolios revealed three themes relevant to patient–physician communication: 1) communication is more successful when adequate time is allowed, 2) the ability to empathize with patients and their families is essential to successful interactions, and 3) the development of specific approaches to challenging scenarios can facilitate effective interactions. The portfolios also demonstrated that residents would engage in reflective practice.

**Conclusions:** Targeting of communication skills training around specific clinical scenarios using neurologic cases was well accepted and was deemed relevant to practice. The use of portfolios may promote lifelong learning in this area. *Neurology*® 2007;69:E20–E26

### GLOSSARY

**ALS** = amyotrophic lateral sclerosis; **DNR** = do-not-resuscitate; **ER** = emergency room; **ICU** = intensive care unit; **MS** = multiple sclerosis; **tPA** = tissue plasminogen activator.

The development of effective methods of teaching and assessing communication skills should be a high priority in residency training. Both the Royal College of Physicians and Surgeons of Canada and the Accreditation Council on Graduate Medical Education have identified communication skills as a core competency for practicing physicians.<sup>1,2</sup> Surveys consistently show that patients want better communication from their physicians.<sup>3</sup> Unfortunately, patient–physician communication remains inadequate much of the time.<sup>4,5</sup>

Time and experience alone often fail to produce improvements in physicians’ communication skills,<sup>6–8</sup> but there is compelling evidence for a positive effect of communication skills training.<sup>9</sup> Residency programs should therefore develop specific educational interventions that address communication skills.

The practicing neurologist must be able to rely on a repertoire of communication skills to facilitate effective, patient-centered care. To date, the area of communication skills training has been largely neglected in the neurologic literature.<sup>10</sup> The objectives of this pilot project were to develop a communication skills training program specifically for neurology residents, directed at some of the most challenging clinical scenarios that they will face in practice, and to foster reflective practice as a tool for enhancement of communication skills.

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**METHODS** The University of Western Ontario has a 5-year neurology residency program accredited by the Royal College of Physicians and Surgeons of Canada. All 12 residents enrolled in the program during the 2005 to 2006 academic year participated in this project, which received approval from the University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects.

**Educational intervention.** Residents participated in a series of six 2-hour workshops over the course of a single academic year. Each workshop focused on a specific clinical scenario of particular relevance to neurologic practice. Workshop topics were as follows: 1) breaking bad news, 2) discussing do-not-resuscitate orders, 3) communicating with “difficult” patients or family members, 4) obtaining informed consent for neurologic tests, procedures, or therapies, 5) communicating with families around life-and-death decision making for patients with critical illness, and 6) disclosing medical errors.

All workshops followed a four-part format. Part 1 was a video clip chosen to trigger discussion on the workshop topic. Part 2 was a facilitated discussion among the residents, providing them with an opportunity to discuss with peers their experiences in the topic area of the workshop. Part 3 was a didactic session that reviewed the literature and the relevant ethical and medicolegal principles guiding patient–physician communication in the scenario being covered, and provided strategies for effective communication. Part 4 involved role-play exercises with peers or standardized patients using neurology cases relevant to the workshop topic. These role-plays allowed residents to practice the communication techniques discussed in the workshop and receive immediate feedback from peers, workshop facilitators, and standardized patients.

Further detail regarding course content is contained in appendix 1.

**Program evaluation.** Before the first workshop, residents completed a survey that assessed their level of prior training in each of the six scenarios targeted by the workshops. The survey also asked how stressful these scenarios were for them and how effective they usually felt in their communications with patients or their families on these topics. After all six workshops, residents completed a postcourse survey where they again rated the stressfulness of the scenarios and their self-perceived effectiveness when faced with these scenarios in practice. The precourse and postcourse surveys were identical in format. Residents were presented with a series of statements such as “I find it stressful to give bad news to patients and their families” or “I am usually satisfied that I have been effective when breaking bad news” and were asked to respond as strongly agree, agree, disagree, or strongly disagree.

After each workshop, residents completed a short evaluation form on which they rated the effectiveness of the video trigger, the usefulness of the facilitated discussion, didactic, and role-play components of the workshop, their comfort with role-playing as a learning technique, and the relevance of the workshop to their practice. In addition, the postcourse survey asked residents to provide overall ratings of the enjoyability and relevance to practice of the course, as well as the effectiveness of the teaching methods used.

Two additional methods of evaluation were used in an attempt to determine the extent to which this educational program influenced real-life patient–resident communication. Each resident was provided with a portfolio in which

they were asked to record examples of real clinical scenarios in each of the program’s six topic areas. Residents were asked to briefly describe the scenario without providing identifying data, to describe their own approach to communicating with the involved patient or family, and to reflect on how well the interaction went and how effective they were. Portfolios were collected by the investigators 1 month after the last workshop and were subjected to a content analysis to identify themes. The purpose of the portfolios was twofold. First, it was hoped the portfolios would provide a window on real-life patient–physician encounters and the extent to which residents were applying the techniques and skills from the workshops in their day-to-day practice. Second, the portfolios were intended as a tool to encourage reflection on the communication aspect of neurologic practice.

Residents were also provided with pocket-sized evaluation cards that they were encouraged to give to health professionals who had the opportunity to observe a discussion they had with a patient or family member relating to a topic covered by one of the workshops. Completed cards were then mailed directly to the principal investigator by the evaluator, whose name would not appear on the card. A copy of this evaluation card is provided in appendix 2.

**Time and resources.** Approximately 60 hours of the lead investigator’s time was required to create the six workshops. The workshops, totaling 12 hours, were slotted into the residents’ preexisting weekly academic half-day over the course of the year. Few additional resources were required for this program, apart from the purchase of notebooks for each resident to serve as portfolios and the copying of survey and evaluation forms.

**RESULTS** **Precourse and postcourse surveys.** Eleven of 12 residents completed the pre-course survey and all 12 residents completed the post-course survey. Results are shown in table 1.

**Residents’ evaluations of the program.** Workshops were well attended, though not all residents attended all sessions because of scheduling conflicts. Residents participated actively in the discussion and role-play portions of each workshop. All residents who attended a session completed an evaluation form for that session, and results of these evaluations are summarized in table 2.

Residents were also asked, in the postcourse survey, to provide feedback about the course as a whole. All 12 residents rated the course highly in terms of its enjoyability and effectiveness, and particularly in terms of its relevance to neurologic practice. Residents were split on the effectiveness of role-playing as a tool for practicing communication skills, with three-fourths of residents rating the technique effective and one-fourth rating it ineffective. Of the 10 residents responding to the question “Do you prefer role-playing with colleagues or with standardized patients?” 9 favored standardized

	Residents with prior training	Prior training setting	Residents finding the scenario stressful before the course*	Residents finding the scenario stressful after the course	Residents satisfied with their effectiveness in the scenario before the course†	Residents satisfied with their effectiveness in the scenario after the course
Breaking bad news	6/11	Medical school (6)	6/11	9/12	11/11	12/12
Discussing DNR orders	4/11	Medical school (1); mentoring/informal training (2); no response (1)	4/11	6/12	7/11	11/12
Dealing with "difficult" patients or families	3/11	Medical school (3)	10/11	10/12	7/11	9/12
Obtaining informed consent	7/11	Medical school (3); mentoring by senior residents (3); didactic session in residency (1)	0/11	1/12	10/11	11/12
Discussions with families of critically ill patients	3/11	Medical school (1); neuro-ICU rotation (1); no response (1)	6/11	10/12	10/11	11/12
Disclosing medical errors	3/10 (1 no response)	Medical school (2); didactic session in residency (1)	8/10 (1 no response)	10/11 (1 no response)	6/10 (1 no response)	8/11 (1 no response)

\*Residents were asked to respond to the statement "I find it stressful to (. . . e.g., give bad news to patients and their families)" by indicating strongly agree, agree, disagree, or strongly disagree. Numbers given are those responding agree or strongly agree.

†Residents were asked to respond to the statement "I am usually satisfied that I have been effective when (e.g., . . . breaking bad news)" by indicating strongly agree, agree, disagree, or strongly disagree. Numbers given are those responding agree or strongly agree.

DNR = do-not-resuscitate; ICU = intensive care unit.

patients. All 12 residents thought that the program should be offered again.

**Observations of residents' communication skills in practice.** Twelve evaluation cards from observers were received. Evaluators included three nurses, five nurse practitioners, and three social workers. Only 5 of the 12 residents submitted evaluation

cards. A numbering system was used to track how many different residents participated in providing evaluation cards to observers without revealing the identity of the residents to the investigators. Observed scenarios included two examples of do-not-resuscitate discussions, one example of obtaining informed consent, three examples of

	Breaking bad news	Discussing DNR orders	Dealing with "difficult" patients	Obtaining informed consent	Discussions with families of critically ill patients	Disclosing medical errors
Effectiveness of the video trigger	4.45	4.33	3.50	4.73	3.57	4.43
Usefulness of the facilitated discussion	4.55	4.55	4.44	4.73	4.29	4.25
Usefulness of the didactic portion of the workshop	4.36	4.27	4.22	4.55	4.00	4.13
Usefulness of role-playing	4.64	3.36	4.11	4.09	4.43	4.63
Comfort with role-playing	4.09	3.36	3.89	3.36	3.71	3.88
Relevance to practice	4.73	5.00	4.56	4.91	4.86	4.75

Residents were asked to rate various aspects of the workshops on a 5-point scale, where 1 = not effective/useful/comfortable and 5 = very effective/useful/comfortable. Numbers provided are mean scores.

DNR = do-not-resuscitate.

**Table 3** Content analysis of resident portfolios

Theme	Key points	Representative quotations from portfolios
Time is critical	Adequate time must be allowed for effective communication.	"The most beneficial thing for the family was to be allowed to have the time to discuss all of the new stresses they were facing."
	Difficult conversations occurring before a therapeutic relationship has had time to develop (e.g., on-call or emergency settings) are especially challenging.	"It would have been nice to know the patient and his wife longer than 20 minutes before having to give such bad news."
	Attempts to understand the unique perspective of the patient or family, particularly in cases of "difficult" patient or family interactions, can be valuable.	"I took extra time to listen and tried to empathize, which I think was helpful . . ."
The importance of empathy	An empathic approach may yield new insights that can enhance communication.	"I was so preoccupied with giving this unexpected diagnosis that I hadn't even thought of what else could be frightening or worrying this family."
	Failure to explore the patient's perspective may negatively impact the therapeutic relationship.	"I broke the bad news sort of matter-of-factly and not the most empathetically. She flipped out . . . I wasn't expecting it to be a bad news thing when I mentioned the [driver's license] and her response caught me off guard." (An unexpected reaction to the news that a recent seizure would result in loss of a driver's license)
	Portfolios revealed evidence of residents having developed specific approaches to certain scenarios.	"I usually explain what happens in a hospital when a code blue is called . . . then I discuss the probability of making a meaningful recovery."
Developing a scenario-specific approach	The use of a structured approach was particularly in evidence when medical errors were disclosed; the use of a specific approach to this most stressful of scenarios may result in a surprisingly positive outcome.	"I apologized and told them we were doing everything to rectify the problem . . . They were very understanding, to my surprise. This took place after the session, and the focus on openness was helpful and encouraging to divulge the error."
	Residents may feel hampered in their ability to follow through on all of the guidelines suggested in the workshops because of their lack of training and medical knowledge.	"I think there are different stages of communication when breaking bad news, from the initial "you have cancer," to listening and empathizing, to working together to develop a future plan. They each require a different skill set, and I think I did OK with the first and second, maybe could improve on the third as my knowledge base improves."

breaking bad news, five examples of discussions around life-and-death decision making for critically ill patients, and one example of an interaction with a difficult patient and family. In all instances, observers gave high scores to residents in all categories, but these evaluations likely reflect a highly selected sample.

**Analysis of portfolios.** All but one resident returned their portfolio to the investigators. Two of the 11 portfolios contained no entries. The 9 other residents described between 3 and 7 scenarios each, and a total of 36 different communication interactions were described in this format. Of these, 25 occurred after the relevant workshop, 6 occurred before the relevant workshop, and in 5 the timing was not specified. The key themes that emerged from analysis of the portfolios are summarized in table 3.

**DISCUSSION** The literature supports the need for communication skills training for physicians.<sup>4,5</sup> The challenge for any program targeting communication skill development is to create positive behavior changes in clinical practice. Al-

though this program was well received and was deemed relevant and valuable by participants, it is not clear that it rose to this challenge of impacting behavior. This study's main limitation, in fact, is its inability to demonstrate that participation in the program resulted in improvements in resident-patient communication. Although our residents' self-assessments of their effectiveness in the various scenarios improved modestly after this program, their self-efficacy was high at baseline, and self-assessment of competence may be unreliable.<sup>11</sup> To determine the magnitude, if any, of the behavioral effect of these workshops, a more objective measure of communication skill acquisition would be required. We might, in the future, require residents to complete an objective structured clinical examination targeting communication skills or a videotaped interaction with a real or standardized patient before and after the program, to collect evidence of program effectiveness.

Residents did not find, after completing this program, that their interactions with patients and their families around difficult issues were less stressful. On the contrary, residents came to view

certain scenarios, namely breaking bad news and meeting with families of critically ill patients to make care decisions, as more stressful. It may be that the workshops forced residents to reflect on the complexity of these challenging scenarios, permitting new insight into just how difficult effective patient–physician communication can be. If this explanation is accurate, we view this effect of the program as a positive one. The aim is less to make difficult situations less stressful and more to help residents become competent and effective in navigating these stressful interactions.

Role-playing may be a useful tool in communication skills training because it promotes active rather than passive learning, allows participants to experience the perspective of both physician and patient, and permits participants to practice approaches and responses in a safe environment with immediate feedback.<sup>12</sup> Although learner dislike of the technique has been cited as a challenge in the successful incorporation of role-playing into skill development programs,<sup>13,14</sup> the majority of residents participating in this program embraced role-playing as a method of practicing communication skills. A minority of residents neither enjoyed the technique nor thought that it was an effective learning tool. Although resident discomfort with this method may not imply that it was unhelpful, it does highlight the difficulty in gaining unanimous learner acceptance of new teaching methods. Because it requires a significant investment of time and effort to create effective and challenging role-play scenarios and to engage learners in the process, it would be important for future work to determine whether this technique is sufficiently effective in improving communication skills to justify these efforts.

The use of portfolios is gaining acceptance as a method of assessing the achievement of core competencies by medical students and residents. Portfolios also promote reflective practice, which may be important in directing successful lifelong learning strategies.<sup>15</sup> Here, the portfolios offered limited insight into the effect of the program, though we believe that the potential exists for portfolios to be quite powerful in this regard. For portfolios to become more helpful in measuring behavior change, greater efforts would be required to achieve consistent compliance with portfolio-keeping, with particular attention to the recording of entries both before and after communication skills training.

The portfolios did demonstrate, however, that

most residents would engage in reflective practice. Many of the portfolio entries provided evidence of residents critically assessing their own approaches to challenging communication scenarios. A key aspect of residency training is the development of skills of lifelong learning and self-assessment, and for this purpose even a simple portfolio such as the one used in this project can be a valuable tool.

Encouraging compliance with portfolio-keeping is challenging, however, as evidenced by the fact that some residents did not record even a single interaction over the course of the year. The successful use of portfolios requires new skills and a “cultural transformation.”<sup>15</sup> Given the time investment required of both residents and educators to incorporate portfolios into residency education, future work will need to address whether the promotion of reflective practice regarding patient–physician interactions really leads to durable improvements in skill, and on whether the use of portfolios is superior to other, less labor-intensive methods of encouraging reflection. The facilitated discussion portion of each workshop in this program, for example, provided another opportunity for reflection, and by encouraging each resident to bring to the discussion a critical appraisal of one of their own recent interactions, one might achieve a similar level of self-reflection without the effort required to create compliance with portfolios.

There were several key lessons learned from this project. First, neurology residents embraced the devotion of valuable time and effort to the development of better communication skills, and most engaged in active reflection on their own communication interactions in practice. These observations are critical because the success of any such program depends on the willingness of the participants to learn and improve, and on their buying into the concept that communication is a learned skill and not simply a personality trait.<sup>16</sup> Second, the targeting of communication skills training around specific scenarios using neurologically authentic cases was well accepted and was deemed highly relevant to clinical practice. Finally, the introduction of new educational tools, such as role-playing and portfolios, can be challenging and labor-intensive. With limited time and resources, it is critical that we choose our educational strategies wisely for maximum impact. Future research should therefore objectively examine which educational interventions are most effective in developing better communication skills for residents.

**Appendix 1** Content of communication skills workshops

	Video trigger	Key points from didactic session	Role-play scenarios
<b>Breaking bad news</b>	Scene from <i>Wit</i> <sup>1</sup> (woman receives a diagnosis of ovarian cancer from her oncologist)	Ethical and legal principles related to truth-telling SPIKES protocol for delivering bad news <sup>2</sup>	Discuss a new diagnosis of: a) Glioblastoma in a 49-y-old man b) MS in a 26-y-old woman
<b>Discussing DNR orders</b>	Scene from <i>Wit</i> <sup>1</sup> (conversation about code status between a woman with advanced cancer and her nurse)	Ethical framework for considering DNR orders Strategies for approaching DNR discussion: incorporate code status into discussion of treatment goals, seek to understand patient's values, focus on palliative/supportive care Palliative care physician invited to speak	Discuss resuscitation with: a) A 54-y-old man with ALS who accepts the irreversibility of his illness, and his adult daughter who feels DNR equates to "giving up" b) The husband and son of an elderly woman who is aphasic, incontinent, and hemiplegic after her third stroke
<b>Dealing with "difficult" patients</b>	Scene from <i>A Practical Guide to Communication Skills in Cancer Care</i> video series: "Difficult Situations" <sup>3</sup>	Reframe from "difficult patient" to "difficult encounter" Appreciate both patient and physician factors that contribute to difficult interactions  Importance of empathy Tips for managing hostile patients	Negotiate a plan of action with: a) A 63-y-old retired nurse with myriad symptoms, frustrated by the lack of diagnostic answers and hostile toward previous physicians b) A 41-y-old woman with dermatomyositis who wants to consider homeopathy in preference to corticosteroids c) A 47-y-old man with medication-induced headache, angry that you will not prescribe more opioids
<b>Obtaining informed consent</b>	Scene from <i>House</i> <sup>4</sup> (woman browbeaten into consenting to treatment for her child)	Essential elements of valid consent Determining capacity to consent to treatment Standards of disclosure	Discuss consent for: a) Lumbar puncture with a 38-y-old man with thunderclap headache and normal CT head b) tPA with the husband of a 66-y-old woman rendered globally aphasic by stroke c) Prednisone treatment with a 45-y-old woman with myasthenia gravis
<b>Discussions with families of critically ill patients</b>	<i>Compassionate Care in the ICU</i> video <sup>5</sup>	Ethical and legal principles around surrogate decision making Strategies for conducting effective family meetings in the ICU setting	A 64-y-old man with large intracerebral bleed deteriorates 24 h after admission and is intubated. Investigations reveal multiple brain metastases with a likely lung primary. He is showing signs of impending herniation. <i>Conduct a family meeting with the patient's husband and son, aiming to negotiate a treatment plan that is acceptable to the family and medically reasonable.</i>
<b>Disclosing medical errors</b>	Scene from <i>A Practical Guide to Communication Skills in Cancer Care</i> video series: "Error Disclosure" <sup>3</sup>	Ethical principles relevant to error disclosure: patient autonomy, truth-telling, justice, fairness	A 71-y-old woman with cardioembolic stroke; Holter report after TIA 6 mo earlier had shown atrial fibrillation but had been overlooked, and anticoagulation that might have prevented the current stroke had never been initiated. <i>Decide what should be disclosed, and discuss with patient and family.</i>  A 59-y-old woman presents to ER with seizures and receives phenytoin, then develops Stevens-Johnson syndrome. Old charts indicated a phenytoin allergy but had not been reviewed before prescribing the drug. <i>Her son wants to know how this could have happened—discuss.</i>

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MS = multiple sclerosis; DNR = do-not-resuscitate; ALS = amyotrophic lateral sclerosis; tPA = tissue plasminogen activator; ICU = intensive care unit; ER = emergency room.

**Appendix 2** 360-Degree Assessment Form

You have just observed an interaction between a neurology resident and a patient or patient's family. As part of the evaluation of an educational research project aimed at enhancing resident communication skills, we are interested in your feedback regarding the resident's performance.

1. Please rate the resident's attitude toward the patient or family (respect and courtesy).	1	2	3	4	5
	Poor			Excellent	
2. Please rate the resident's ability to communicate in language understandable to the patient or family.	1	2	3	4	5
	Poor (lots of jargon)			Excellent (jargon avoided)	
3. Please rate how well the resident's ability to allow and respond to questions from the patient or family.	1	2	3	4	5
	Poor			Excellent	
4. Please rate the overall effectiveness of the resident's communication skills in the scenario you observed.	1	2	3	4	5
	Not at all effective			Very effective	
5. What is your position?	_____				
6. What was the purpose or nature of the interaction you observed (i.e., what was discussed)?	_____				
	_____				

Thank you for your time in filling out this form. Please place this postcard in interhospital mail. Your responses will remain anonymous.

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