Training in Neurology: Objective Structured Clinical Examination Case to Teach and Model Feedback Skills in Neurology Residency

Joshua J. LaRocque, MD, PhD, Scott N. Grossman, MD, Arielle M. Kurzweil, MD, Ariane Lewis, MD, Sondra Zabar, MD, Laura Balcer, MD, MSCE, Steven L. Galetta, MD, and Cen Zhang, MD

Correspondence
Dr. LaRocque
jjlarocque@gmail.com

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Abstract

We describe an educational intervention for neurology residents aimed at developing feedback skills. An objective structured clinical examination case was designed to simulate the provision of feedback to a medical student. After the simulated case session, residents received structured, individualized feedback on their performance and then participated in a group discussion about feedback methods. Survey data were collected from the standardized medical student regarding residents' performance and from residents for assessments of their performance and of the Objective Structured Clinical Examination case. This article aims to describe this educational intervention and to demonstrate the feasibility of this approach for feedback skills development.

Introduction

Providing and receiving feedback is integral to education, particularly in academic medicine, a field that requires integration of knowledge, procedural expertise, and interpersonal skills.[1] The value of feedback is amplified because both learners and experienced practitioners can be inaccurate when assessing their own performance.[2,3] Provision of feedback, therefore, serves a critical role to facilitate improvement and growth.

Building on previous efforts to teach feedback skills,[4-6] we aimed to use an experiential, simulation-based approach to develop feedback skills for neurology residents by designing an Objective Structured Clinical Examination (OSCE) case at the New York Simulation center. This OSCE case permitted neurology residents to practice feedback communication skills in an immersive learning environment modeled on a common scenario encountered in residency. Previous research has identified that effective feedback should be specific and actionable, be delivered by a credible source, and emerge from a collaborative approach.[1,4,7] Therefore, an inherently collaborative feedback method, the Ask-Tell-Ask method,[6] was used to provide residents with immediate feedback after the OSCE case. This allowed residents to experientially learn the feedback delivery method and provided specific, actionable feedback on their communication skills.

Problem Statement/Objectives

OSCEs have been widely used in professional training, such as in the delivery of communication skills for end-of-life discussions[8] and in practicing teaching skills.[9,10] In this article, we show the feasibility of a feedback training initiative targeting neurology residents by describing the administration of the OSCE case, resident perceptions of the OSCE case, and standardized medical student (SMS) assessments of the residents' performance. The resident learners' objectives were as follows: (1) to develop communication skills by taking part in a simulated feedback scenario and then receiving individual feedback about their performance; and (2) to learn about the Ask-

From the Department of Neurology (J.J.L., S.G., A.M.K., A.L., L.B., S.L.G., C.Z.), New York University Langone Medical Center; Department of Neurology and Department of Neurosurgery (A.L.), New York University Langone Medical Center; Department of Medicine (S.Z.), New York University Langone Medical Center; Department of Ophthalmology (L.B., S.L.G.), Department of Neurology, New York University Langone Medical Center; and Department of Population Health (L.B.), New York University Langone Medical Center, New York, NY.

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Table 1 Standardized Medical Student Assessment of Resident Performance (N = 58)

		Frequency of each item, % (n)			
Category	**Checklist item**	**Not done**	**Partly done**	**Well done**	**Mean % well done (SD)**
Information gathering	Elicited your story using appropriate questions	7% (4)	16% (9)	78% (4)	62% (17)
	Managed the narrative flow of your story	3% (2)	29% (17)	67% (39)	
	Clarified information by repeating to make sure he/she understood you	28% (16)	33% (19)	39% (22)	
	Allowed you to talk without interrupting	7% (4)	28% (16)	66% (38)	
Relationship development	Communicated concern or intention to help	2% (1)	12% (7)	86% (50)	77% (12)
	Nonverbal behavior–enriched communication (e.g., eye contact and posture)	3% (2)	33% (19)	59% (34)	
	Acknowledged emotions/feelings appropriately	2% (1)	24% (14)	74% (43)	
	Was accepting/nonjudgmental	5% (3)	16% (9)	79% (46)	
	Used words you understood and/or explained jargon	2% (1)	10% (6)	88% (51)	
Education and counseling	Asked questions to see what you understood (checked your understanding)	14% (8)	41% (24)	45% (26)	61% (22)
	Provided clear explanations/information	2% (1)	26% (15)	72% (42)	
	Collaborated with you to identify and decide on possible next steps/plan	12% (7)	48% (28)	40% (23)	
Learning climate	Actively listened to your presentation	0%	14% (8)	86% (50)	74% (10)
	Asked effective questions to engage you	3% (2)	24% (14)	72% (42)	
	Encouraged you to express concerns and needs	7% (4)	19% (11)	74% (43)	
	Expressed respect for your experience and emotions	3% (2)	17% (10)	79% (46)	
Control of session	Set an agenda for session	7% (4)	34% (20)	59% (34)	71% (10)
	Paced session appropriately for your needs	0%	36% (21)	64% (37)	
	Avoided digressions/distractions	2% (1)	19% (11)	79% (46)	
	Did not miss important topics	0%	26% (15)	74% (43)	
Instruction quality	Presented material in a well-organized manner	0%	26% (15)	74% (43)	76% (18)
	Delivered information in small chunks	12% (3)	36% (9)	52% (13)	
	Illustrated points with examples/analogies	4% (1)	0%	96%(24)	
Feedback content	Gave specific positive feedback	3% (2)	14% (8)	83% (48)	78% (6)
	Gave specific actionable items	2% (1)	24% (14)	74% (43)	

Continued

Table 1 Standardized Medical Student Assessment of Resident Performance (N = 58) *(continued)*

Category	Checklist item	Frequency of each item, % (n)			Mean % well done (SD)
		Not done	Partly done	Well done	
Feedback techniques	Demonstrated sensitivity toward student	9% (5)	19% (11)	72% (42)	66% (19)
	Assessed your self-perceived learning needs	4% (1)	16% (4)	80% (20)	
	Summarized learning experience and takeaways	9% (5)	47% (2)	45% (26)	

		Recommended?				Mean % Yes, highly (SD)
		No	Yes, with reservations	Yes	Yes, highly	
Teaching recommendation	Would you recommend this person as a preceptor, attending, teacher?	2% (1)	10% (6)	43% (25)	45% (26)	62% (28)
	How would you rate this person's professionalism?	0%	2% (1)	4% (2)	95% (54)	
	Overall, would you recommend this person to a family member or friend?	2% (1)	9% (5)	43% (24)	46% (26)	

Tell-Ask method by receiving feedback delivered using this method and by subsequently receiving instruction on this approach during a group discussion session.

Description of Program

A team of neurology faculty worked with the New York Simulation Center for the Health Sciences to design an OSCE case in which a neurology resident (the learner) interacts with a SMS (an actor) in a mock feedback session. Overall, 58 residents from the Adult Neurology, combined Neurology-Psychiatry, and Pediatric Neurology residency programs at the NYU Grossman School of Medicine participated in this OSCE case across 3 academic years. Twenty-five residents were in their third year of neurology training (postgraduate year [PGY]4), and 33 were in their second year of neurology training (PGY3).

The resident learners received no formal training in feedback provision before the OSCE. They were instructed to provide feedback to the SMS, with the premise that they had been working together on the neurology wards for 1 week. The learner was advised that the SMS was enthusiastic, well-liked by patients, and frequently stayed after hours to help the team; however, the SMS was often late to rounds and gave disorganized presentations in which he read a resident's note aloud.

Before the OSCE, the single SMS was trained for 2 hours by a neurologist and simulation specialist to provide standardized responses to a variety of approaches (eAppendix available from Dryad, doi.org/10.5061/dryad.280gb5mpx). He was instructed to portray an eager medical student who felt overwhelmed by the amount of knowledge presented and had difficulty with time management, resulting in tardiness and disorganized notes. The SMS was instructed to provide reasons for each of these areas targeted for feedback and to appear mildly nervous though eager to improve. For example, if his tardiness was addressed, he would explain that he was late because he spent extra time with patients on prerounds. Last, he was told that if the learner gave him an opportunity to ask questions, he should inquire about learning strategies, time management skills, and how to give better presentations. The same scenario was used for all residents.

The encounter was observed by a neurology faculty member through a 1-way mirror. The learner had 10 minutes to provide feedback to the SMS, followed by 5 minutes for feedback from the faculty member and SMS. For this feedback session, the faculty member used the Ask-Tell-Ask method. In the Ask-Tell-Ask method, the learner is first asked to reflect on their performance, then given specific observations on performance, and finally asked to outline strategies for improvement.[6] This promotes active discussion among both parties and encourages a collaborative experience. The post-case feedback accomplished 2 educational objectives: (1) providing specific, individual feedback and (2) teaching the

Table 2 Resident Surveys: Selected Free Responses and Survey Item Ratings (N = 58)

What was most challenging about this station?	How could we improve this station?
• I did not have good previous experience in providing a structured feedback before. • Giving candid feedback to someone I just met. • Not having enough of experience providing feedback. • Finding specific ways in which to help the student improve. • Pretending I had known and worked with the student, who in reality was a complete stranger. • Encouraging the student to come up with their own strategies or ideas for improvement (I fed him these ideas!) • Delivering difficult feedback to someone so likeable and with good intentions. • Normally, when I have this conversation, I've known the student for a week - I have rapport to fall back on. • Felt official (more so than other stations). • Trying not to discourage the student. • Balancing not leaving them down on themselves and motivation to improve. • Giving an enthusiastic medical student difficult feedback. • Breaking to an enthusiastic medical student that he is doing poorly. • Telling the student the things he was doing poorly. • Remembering all his problems that had to be addressed. • Giving concrete suggestions. • I feel like I would have more time to gain a rapport in real life before telling them criticism not really knowing the student and having an established relationship. • Addressing un-professionalism because it feels like a personal attack. • Figuring out the best way to frame negative feedback and come up with actionable learning plan. • Transition from good feedback to bad feedback. • Addressing aspects that need improvement without being too harsh • Being explicit about negative feedback. • Speaking with colleague. • Giving negative feedback—and being concrete—and not throwing too much on the plate at once coming up with specific feedback suggestions. • Being specific, covering all points in 10 minutes. • Struggled giving specific examples of how to improve.	• Make the feedback points on the prompt in bullet points so they are easily digested before entering the room. • Maybe provide more specific events in the description during which the student underperformed to allow for more in-depth discussion rather than generalizing. • The main shortcoming is intrinsic to the testing environment. • This was a great station. Felt very realistic, was straightforward, and had a clear concise strategy to offer at the end. It will be something I incorporate into my service weeks going forward. • I think if you wanted to make it more challenging, you could have the medical student resist the advice more (sometimes I have encountered this). • Thought this was easier than the other stations, maybe more difficult negative feedback? e.g. bad attitude. • Do in N1 or N2 year. • Earlier in training. • Less wording on prompt (I kept having to refer to it). • Have name of resource student can use. • Techniques to tell students would also be useful. • Not sure. It was really realistic. • This is the best case: someone who needs work but also cares. • No ideas—well thought out and realistic. • Shorter prompt. • Similar scenario with coresidents as seniors. • Some information from real medical students about how they perceive feedback.

Survey item	Mean rating (SD)	% Rated "5" (most/best)
On a scale of 1–5 (least to most), how prepared did you feel for this station?	3.8 (0.9)	25.9
On a scale of 1–5 (worst to best), how would you rate your performance at this station?	3.8 (0.6)	9.3
On a scale of 1–5 (least to most), how useful was this station?	4.6 (0.6)	72.2
On a scale of 1–5 (least to most), how much did you learn from this station?	4.4 (0.6)	50.0

Ask-Tell-Ask method by demonstrating its use. The SMS assessed the learner's performance with 28 items on a behaviorally anchored checklist using a "well done," "partly done," or "not done" scale and with an additional 3 items with a "not recommend," "recommend with reservations," "recommend," or "highly recommend" scale. Last, the learners completed a survey to evaluate the OSCE case using a Likert scale of 1–5 (from least/worst to most/best) and free text responses. After all residents in the group completed the OSCE station, they participated in an informal group debriefing session to further discuss the Ask-Tell-Ask method.

Program Evaluation and Outcomes

Standardized Medical Student Assessment

The SMS checklist ratings revealed that overall, resident performances were rated highly (Table 1); a particularly high percentage of residents were rated "well done" at communicating concern or intention to help (86%), actively listening to the presentation (86%), and illustrating points with examples/analogies (96%). However, less than 50% of residents were rated "well done" for asking clarifying questions about the SMS's story (39%), checking on the SMS's understanding of the conversation (45%), collaborating with the SMS to develop a plan (40%), and summarizing the takeaway messages from the discussion (45%). When assessing residents' teaching ability, professionalism, and overall performance, the SMS rated more than 80% of residents as "recommend" or "highly recommend."

Resident Self-Assessment

Residents rated themselves on preparedness (3.9/5) and performance self-assessment (3.8/5) (Table 2).

Resident Assessment of OSCE Case

Overall, residents reported that this OSCE case was useful and that they learned from it (Likert scale averages 4.7/5 and 4.4/5, respectively—Table 2). In written comments, residents described the scenario as challenging due to the

difficulty of "delivering the flaws" to the SMS, that is, "breaking to an enthusiastic medical student that he is doing poorly," (Table 2). They also suggested improvements, including shifting the OSCE case to earlier in training, and requested more feedback learning resources.

Lessons Learned and Future Directions

We have demonstrated that an OSCE case designed to develop feedback skills is feasible, provides individualized learner assessments and feedback, and is valued by residents. Providing feedback can be challenging and awkward, and a lack of experience may lead to fear about damaging the teacher/learner relationship or regarding hurting the feelings of the feedback recipient.[1] There has been relatively little research analyzing different methods of teaching feedback skills; the optimal method remains uncertain. The approach we have described, comprising an immersive feedback scenario, immediate faculty feedback modeling the Ask-Tell-Ask method, and a subsequent group discussion session, was judged to be effective by residents. Residents found the entire OSCE, including this case scenario, to be so helpful that they requested for the session to be moved to an earlier stage of residency training; this has been performed.

There are limitations to the use of an OSCE for practicing delivery of feedback. A simulation center is not accessible to every program and can be costly. However, it is feasible to develop observed encounters in which residents practice feedback in the absence of a simulation center. In addition, some residents noted that the OSCE format introduces cognitive strains that do not exist in real-life feedback sessions, such as following the instructions for the encounter, recalling details of the scenario, and monitoring the passage of the allotted 10 minutes. In response to these concerns, the instructions for the OSCE were shortened and placed inside the simulation room in 2019 and 2020. In the future, we will also provide advance instructions in the Ask-Tell-Ask feedback method so that residents can approach the case with more preparation. All residents interacted with the same male SMS, so we are unable to comment on any potential impact of sex. Further studies are needed to assess the longitudinal effects of this OSCE case. The current approach used resident surveys; ideally, future studies would use both surveys of resident perspectives and objective evaluations of residents' ability to give feedback before and after the OSCE. This could provide more objective evidence for efficacy in feedback skill development. Last, it is important to note that a number of different factors contribute to good feedback, some of which cannot be addressed in an OSCE; these include factors extrinsic to the session itself, such as the learner's confidence in the feedback giver and the duration of direct observation before feedback.[7]

Using a simulated, structured encounter to train residents to provide feedback is a feasible, valued, and easily implemented method to teach, practice, improve, and assess the provision of feedback. This approach could serve as a model for neurology residency programs seeking to provide an opportunity to practice feedback skills in a safe environment while being observed and provided with their own feedback. Further research is needed to address whether this approach leads to better neurology resident feedback to learners in real time and may serve as a future direction for our study.

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Appendix Authors

Name	Location	Contribution
Joshua J. LaRocque, MD, PhD	Department of Neurology, New York University Langone Medical Center	Drafting/revision of the article for content, including medical writing for content; and analysis or interpretation of data
Scott N. Grossman, MD	Department of Neurology, New York University Langone Medical Center	Drafting/revision of the article for content, including medical writing for content; and analysis or interpretation of data
Arielle M. Kurzweil, MD	Department of Neurology, New York University Langone Medical Center	Drafting/revision of the article for content, including medical writing for content; and study concept or design
Ariane Lewis, MD	Department of Neurology, New York University Langone Medical Center; Department of Neurology and Department of Neurosurgery, New York University Langone Medical Center	Drafting/revision of the article for content, including medical writing for content; and study concept or design
Sondra Zabar, MD	Department of Medicine, New York University Langone Medical Center	Drafting/revision of the article for content, including medical writing for content; major role in the acquisition of data; and study concept or design
Laura Balcer, MD, MSCE	Department of Neurology, New York University Langone Medical Center; Department of Ophthalmology, Department of Neurology, New York University Langone Medical Center; Department of Population Health, New York University Langone Medical Center, New York, NY	Drafting/revision of the article for content, including medical writing for content

Appendix *(continued)*

Name	Location	Contribution
Steven L. Galetta, MD	Department of Neurology, New York University Langone Medical Center; Department of Ophthalmology, Department of Neurology, New York University Langone Medical Center	Drafting/revision of the article for content, including medical writing for content
Cen Zhang, MD	Department of Neurology, New York University Langone Medical Center	Drafting/revision of the article for content, including medical writing for content; major role in the acquisition of data; and study concept or design

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