Coming Out of the Dark: A Curriculum for Teaching and Evaluating Radiology Residents' Communication Skills Through Simulation

Carolynn M. DeBenedectis, MD, Jean-Marc Gauguet, MD, PhD, Joseph Makris, MD, Stephen D. Brown, MD, Max P. Rosen, MD, MPH

INTRODUCTION

The purpose of this pilot is to develop and implement a curriculum to teach radiology residents communication skills through simulation. Communication skills are a core competency for which radiology residents must be evaluated. As the practice of radiology evolves into a more patient-centered model, the importance of effective communication skills will continue to increase. There is evidence that effective communication skills can be acquired through appropriate training [1]. However, very few residency programs provide formal training and evaluation programs for teaching effective communication skills. The task of training radiology residents in effective communication skills is challenging, as this cannot be achieved by merely adding additional didactic lectures to our standard curriculum. Simulation has been shown to be an effective, and long-lasting, method for teaching physicians communication skills [1]. To our knowledge, there is no program that has been created to both teach and assess radiology residents' communication skills [2].

METHODS

Creating the Curriculum

The curriculum was developed and run in collaboration with our interprofessional Center for Experiential Learning and Simulation (iCELS) staff, who helped plan out the simulations, develop the teaching module, the individual scenarios, pre- and postsimulation evaluations, and resident evaluations. A teaching module was created based on the Gap-Kalamazoo Communication Skills Assessment Form (GKCSAF). It was designed as a self-teaching module using 19 PowerPoint slides (Microsoft, Redmond, Washington) that reviewed the essential elements of effective communication.

Two sets of six common radiology communication scenarios were created: (1) disclosing and apologizing for a medical error, (2) conveying bad news in breast imaging, (3) canceling an image-guided procedure, (4) radiation risk counseling, (5) communicating results in pediatric imaging, and (6) talking to an angry referring physician on the telephone. Two different versions of each scenario were needed for the pilot, as there would be a pretraining simulation (simulation 1) and a posttraining simulation (simulation 2). Each scenario included background information, enactment, and notes to the acting patient. A radiology faculty member trained in communication skills (faculty evaluator) and an acting coach coached each acting patient before the simulations about each scenario to make the simulation as realistic as possible.

A survey was administered postsimulation to assess how the residents felt about the training experience, as well as to assess any potential impact of the training on their comfort level with their communication skills (Appendix). An evaluation form, based on the GKCSAF, was also created to rate each resident on his or her competency on a 5-point Likert scale (1 = poor to 5 = excellent). The form included the ability to enter free text to allow comments on positive actions and areas to improve [3].

Implementing the Curriculum

The study population was composed of first-year (N = 5) and fourth-year (N = 3) radiology residents (postgraduate year 2 and postgraduate year 5). Residents each participated in two rounds of simulations as part of the pilot study (Fig. 1). The first simulation session was conducted before any communication skills training. Before participating in the second set of simulations, the residents participated in the debriefing sessions and underwent
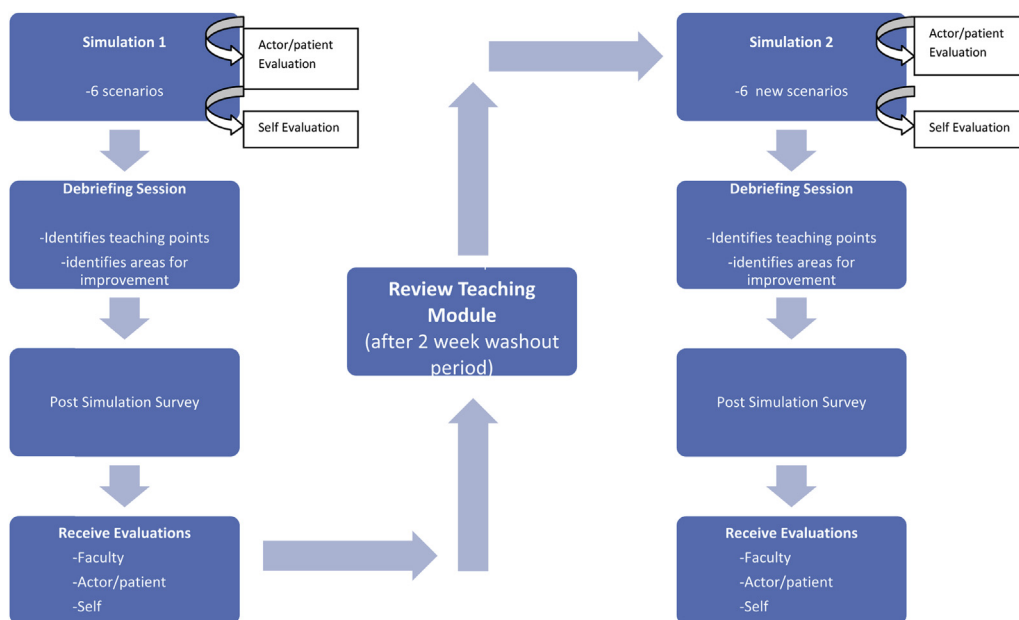
Fig 1. Flow chart describing the simulation-based communication skills curriculum.

our communication skills training module (Fig. 1).

The patient-actors prepared by reviewing a written script and attending a 4-hour training session. The training session was staffed by a professional acting coach, as well as one of the faculty raters, to allow for adequate preparation for the scenarios.

Before the first simulation, the residents completed an anonymous electronic survey about communication/simulation using Learning Space (CAE Healthcare, Quebec, Canada) software, which allows integration of the audiovisual component of simulation-based learning with performance assessment tools for health care education. The simulation took place as follows: (1) the resident is given 5 minutes to read the details of the scenario on a computer outside the simulation room before the simulated scenario, (2) the resident enters the simulation room and begins simulation with the patient-actor, (3) simulation concludes and the resident leaves the simulation room, (4) the resident completes a self-evaluation

and the patient-actor fills out an evaluation of the resident's performance (10 minutes). Twelve minutes were allocated for each scenario. The residents all participate in the simulation at the same time; however, each resident is doing a different scenario. Thus when resident 1 is doing scenario A, resident 2 is doing scenario B, etc. After completing each scenario, the resident advances to the next station, until all residents have participated in all six scenarios.

During the simulation, a single faculty evaluator watched one video for each scenario, involving different residents, and made written notes on the resident's performance. The video was then shown during the debriefing, in conjunction with the feedback from the faculty member. Immediately after completion of all six scenarios, the residents returned to the debriefing room to watch the six videos in which they participated. Teaching points from each debriefing were identified and recorded. Each resident participated in the six communication scenarios with

trained professional actor/patients. Resident performance in each scenario was evaluated by the three faculty evaluators after the simulation concluded. The residents also performed self-evaluations after each scenario. The residents received their actor/patient and faculty evaluations for review before the next simulation.

After a 2-week washout period, the residents participated in a second simulation with six new scenarios. The second set of new scenarios covered similar topics to the first. The residents again performed a self-evaluation and were also evaluated by both the patient-actors and faculty. A second debriefing session ensued. Again, the residents received their patient-actor and faculty evaluations for review. After both parts of the simulation/training were completed, the residents again filled out the anonymous electronic survey.

OUTCOMES

The results of the postsimulation survey showed that all eight residents agreed that practicing their