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Delivering Difficult News and Improving Family Communication: Simulation for Neonatal-Perinatal Fellows

Danielle Janice-Woods Reed, MD*, Jotishna Sharma, MD

*Corresponding author: djreed@cmh.edu

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Abstract

Introduction: This 3-hour simulation module provides a safe situation for neonatal-perinatal fellows to learn communication techniques and develop skills for delivering difficult news to patients' families. These skills are critical for a practicing neonatologist in an academic or private-practice setting yet are often underrepresented in the educational content of training programs. This module is intended for fellows who have had basic communication skills instruction, as well as interactions with parents as part of their pediatric residency training. **Methods:** The fellows practice delivering difficult news by interacting with standardized parents in scenarios designed for one to three learners at a time. Each scenario runs for approximately 10 to 15 minutes and is followed by a 25- to 30-minute debriefing. Those not participating in the scenario view the simulation in real-time video broadcast from another room so they can learn from the scenario and participate in the debriefing. The module also includes 10 to 15 minutes for discussion of literature. This publication includes an introductory slide presentation and a comprehensive compilation of communication recommendations from attending neonatologists. Also included are scripts for the standardized parents, background information for learners, guidelines and suggestions for discussion during the debriefing, and an evaluation form. **Results:** This module has been incorporated into the yearly simulation curriculum for our neonatal-perinatal fellowship. After completing the module, fellows have reported feeling more comfortable with delivering difficult news. The average score in fellows' comfort level for having these conversations rose from 5.8 to 7.5 on a 10-point scale. **Discussion:** This module was designed for use in a perinatal-neonatal fellowship training program, but it could be used in all pediatric residencies, as well as for support staff training (social work, nursing, chaplaincy) with the use of a confederate physician.

Keywords

Communication, Simulation, Difficult News, Neonatal-Perinatal, Standardized Parents

Educational Objectives

By the end of this module, learners will be able to demonstrate a 2-point improvement on a 10-point scale for measuring difficult conversation comfort level.

Introduction

Sharing difficult news is often a daily occurrence in medicine. However, few physicians feel that their training has prepared them to have these conversations.¹ The Accreditation Council for Graduate Medical Education (ACGME) lists "interpersonal and communication skills" as a core competency for fellowship education in neonatal-perinatal medicine and recommends a structured curriculum to fulfill this requirement.² Despite this recommendation, most residencies and fellowships in neonatal-perinatal medicine do not have a formalized training for these skills but use modeling as the primary instructional strategy.³ Emerging studies of formalized training in interpersonal and communication skills have been done in multiple specialties such as oncology,⁴ pediatric intensive care,⁵ emergency medicine,⁶ and even neonatology.⁷ Several other recent sources provide recommendations for how this training can and should be implemented in actual situations.^{3,8-10} Using these sources as well as previous studies, we

Appendices

- Difficult Conversations Prereading.docx
- Difficult Conversations Neonatal Attending Guidelines.docx
- Difficult Conversations PowerPoint.pptx
- Difficult Conversations Standardized Parent Scenarios.docx
- Difficult Conversations Scenario 3 Medical Error Chest X-ray.pptx
- Difficult Conversations Fellow Likert Scale.docx
- Difficult Conversations Self-Efficacy.docx
- Difficult Conversations Course Evaluation.docx
- Difficult Conversations Objectives and Discussion Points.docx

All appendices are peer reviewed as integral parts of the Original Publication.

created a formalized training session for neonatal-perinatal fellows to learn these important communication skills.

We first conducted this training module in 2013. At that time, we implemented a pilot simulation for our fellows in which they practiced breaking bad news to each other. The fellows took turns acting as the family members, reacting to the scenarios as they saw fit. The simulation was facilitated by a neonatal attending. Our learners indicated they felt standardized patients and scenarios would improve their experience and make the simulation more believable. In 2014, we formalized this curriculum, enhancing the simulation exercise by using trained standardized parents and interprofessional facilitators from chaplaincy, social work, and palliative care. Since then, the module has been implemented as an annual part of the Children's Mercy Hospital/University of Missouri-Kansas City perinatal-neonatal medicine fellowship simulation curriculum. The module is intended for use for all levels of fellowship (first through third year). Because the scenarios are different for each year of training, they can be run repeatedly in fellowship, with a new experience for learners each time.

Navigating difficult conversations is a near daily occurrence in neonatology, yet most neonatal-perinatal medicine fellowships do not have a formalized curriculum to educate and train fellows for this task. Due to the lack of such a program at our own institution, this curriculum was created to help our fellows learn these important communication skills. This training session is unique in its neonatal-specific scenarios, self-evaluation, and facilitator evaluation of learners, as well as the use of hired standardized parents.

Methods

The target audience for this resource is perinatal-neonatal medicine fellows at all levels (first through third year) who have communication skills through previous training in medical school, residency, and/or fellowship. They are also required to have introductory neonatology knowledge procured from residency and/or fellowship, including knowledge of the risks associated with preterm delivery, prognosis for extreme prematurity and trisomy 18, routine neonatal procedures (such as intubation and umbilical lines), and policies specific to their unit.

Logistics

Due to time constraints of our unit and trainees, we have held this module in a 3-hour block in the afternoon (so as not to conflict with rounds and other unit and educational responsibilities). Our module runs as follows:

- 10 minutes: pretest.
- 20 minutes: introduction (review simulation rules and guidelines, review prereading, address questions).
- 40 minutes: third-year scenario and debriefing.
- 40 minutes: second-year scenario and debriefing.
- 40 minutes: first-year scenario and debriefing.
- 20 minutes: additional discussion.
- 10 minutes: posttest.

The scenarios typically run for 10 to 15 minutes, with the remaining time for debriefing (see Appendix I). We have found that the length of the scenarios can vary depending on the experience of the fellows and the attitude of the standardized parents. If the fellow is not using the best communication technique, the standardized parents may react accordingly; for instance, if the fellow is using medical jargon, the standardized parents will act confused and ask additional questions. Often, the scenarios run long. We have begun limiting the scenarios, either by directing the standardized parents to wrap up the conversation after approximately 15 minutes (the standardized parents ask to be excused to go see their child, to have a few minutes by themselves, etc.) or by simulating an emergent phone call to the fellow indicating that he or she is needed in the unit.

Another consideration for keeping the module to a reasonable length is the number of fellows participating. More than one fellow may need to participate in a scenario at a time. In our program, two

fellows have participated in each scenario as a team. With one fellow assuming the role of on-call fellow and the other assuming the role of on-service fellow, they have tag-teamed the discussion.

Fellows can involve any available personnel (the facilitators) they feel may be useful, such as a social worker, a chaplain, or a palliative care physician, in the scenario, just as they would do in an actual conversation with a family. They can discuss their plan with their chosen team members prior to meeting with the standardized parents and even take them into the room to participate in the scenario. The facilitator personnel provide limited contributions during the scenario. They are instructed to answer the fellow's questions but not offer extra information or advice. In the scenario, they participate when spoken to directly but do not offer unsolicited support. In our program, fellows are not allowed to have an attending neonatologist assist in the scenario but can counsel with one prior to the simulation.

Equipment/Environment

The module typically takes place in two rooms, one with the fellow participants and standardized parents and one with the remaining fellows and facilitators. Live video is streamed from the simulation room to the observers so that those not directly participating can watch and learn from other fellows, discuss what is going well and what is not in real time, and contribute to the debriefing once the simulation is over. The learners then return to the observation room for debriefing. If video streaming is not available, a one-way mirrored window could be used. As a last resort, all participants (those in the simulation and those observing) could be in the same room.

For the first-year scenario, an adult-sized patient bed and hospital gown for the standardized parent portraying the mother are needed, as well as chairs for the father and fellows/care team. For the second-year and third-year scenarios, a table and chairs for the standardized parents and fellows/care team are needed.

Personnel

We hire standardized parents from the local university, the University of Missouri-Kansas City. The standardized parents participate in a yearly workshop where they are updated on our hospital's policies and procedures as well as on the school of medicine curriculum. They are educated about our assessment rubrics and trained on the evaluation and feedback of physician-patient communication. They must participate in a minimum number of hours per year in an effort to maintain a high-quality pool of committed standardized parents. The standardized parents are selected and trained for our specific simulation in advance by the standardized patient program coordinator based on their experience and expertise. We specify that we need standardized parents to play parents for neonatal communication training and send the scenarios for the coordinator's and standardized parents' review. We have used two standardized parents, a man and a woman, to assume the roles of the patient's parents. The scenarios could also be run with only one standardized parent if needed.

In our first year of this module, neonatology attendings ran the debriefings alone. In response to feedback, we now use an interprofessional group to lead the debriefing, including members of chaplaincy, social work, palliative care, and neonatology as well as the participating standardized parents. We have found this change has been useful for providing a variety of views and opinions on approaches to these conversations. An audiovisual specialist is needed as well to run the video broadcast.

Preparation

Two weeks before the module, the facilitators and fellows are sent a reading list (Appendix A) and the suggested guidelines (Appendix B) for both teaching and discussion purposes. The lead facilitator reviews the PowerPoint slides (Appendix C) before the module.

Standardized parents are sent the full scripts and material (Appendices D & E) a few days in advance to review. Additional copies of the scripts for standardized parents are available at the module. A premodule meeting to discuss goals and evaluation, as well as answer questions, is held with all facilitators and the standardized parents for approximately 15 minutes prior to the fellows' arrival.

The first section of the scenario (“For the fellow”) is read to the group at the start of each scenario so the fellows can prepare for the conversation and assemble the team they want to bring into the discussion with the standardized parents.

Assessment

To objectively assess the fellow’s performance during the simulation, we use the SPIKES steps (Set up the interview, assess the patient’s Perception, obtain the patient’s Invitation, give Knowledge and information, address the patient’s Emotions, and Strategy and Summary.) We rate these areas on a Likert scale, with 1 being *completely not done* (or *not done well*) and 5 being *completely done* (or *done well*) (Appendix F). As an overall assessment, the fellows are asked to complete a self-efficacy assessment before and after the simulation (Appendix G), as well as an evaluation of the entire module (Appendix H).

Debriefing

After each of the three scenarios, members of an interprofessional team participate in a debriefing. This team includes the participating and observing fellows, standardized parents, neonatology attendings, chaplain, social worker, and palliative care physician. We begin by asking the participating fellows to summarize the case and their approach to the conversation. Participating fellows are also asked general questions such as “What went well?” and “What could have gone better?” Questions are provided as suggestions for discussion in the debriefing (Appendix I).

Results

We have used this version of the module in our perinatal-neonatal fellowship curriculum in 2014 and 2015 for a total of two sessions, with five learners per session. A total of eight different fellows from all three years of training have participated in the module, two of whom completed the module twice. The module has been very well received, with an average rating of 5 out of 5 (*strongly agree*) to the statements “The content of this program was informative and interesting,” “The use of simulation enhanced my learning during this program,” “I am likely to utilize what I’ve learned during the program,” and “The skills emphasized during this program are important in the day to day operation of the NICU [neonatal intensive care unit].” Comments from the learners included “very realistic,” “super helpful being able to practice these difficult conversations,” and “loved the TV and video setup.” The most useful aspects of the modules were identified as the “feedback/discussion,” “real life scenarios,” and “helpful sim parents.” Fellows said they planned to “avoid medical jargon,” “use less stats in consults,” and “stay calm and use your resources” in real-life situations.

In both 2014 and 2015, fellows reported higher individual self-efficacy after completing the simulated exercise. In 2014, based on a scale of 1 to 10, with 1 being *completely uncomfortable* and 10 being *completely comfortable*, aggregate scores rose 32% from premodule to postmodule assessment (from an average of 5.8 to 7.5). Results were similar in 2015, with a rise in aggregate score of 34% (from an average of 4.4 to 6.8). When comparing results by scenario, we found the largest improvement in self-efficacy in 2014 was in the second-year (redirection of medical care) scenario group, with an increase of 36%. In 2015, the third-year (disclosing a medical error) scenario group had the biggest improvement, up by 39%.

The fellow Likert-scale evaluation on the utilization of SPIKES steps is a newer addition to the module, and data are being collected.

Discussion

This module was designed for use in a perinatal-neonatal fellowship training program, but it could be used in all pediatric residencies, as well as for support staff training (social work, nursing, chaplaincy) with the use of a confederate physician. We chose the three scenarios—edge of viability, redirection of care, and medical error—as they are some of the most common difficult situations encountered in neonatology. In addition, the attitudes and behaviors of the standardized parents were chosen as they are common reactions to events in the NICU. In the future, we plan to change the scenarios to include extracorporeal cardiopulmonary resuscitation/extracorporeal membrane oxygenation cannulation consent, fetal diagnosis counseling, massive intracranial hemorrhage, and updating a family by phone as they drive to the NICU.

The characteristics of the standardized parents will be changed as well to include an unengaged family, a same-sex couple, a non-English-speaking family, and a family with different cultural expectations.

Literature suggests that neonatologists often feel unprepared to lead family discussion and guide decision making.¹¹ It was therefore important to evaluate the fellows' self-assessment of comfort level with a variety of difficult topics and situations. A score improvement of 20% was arbitrarily chosen as an achievable and realistic goal.

To objectively assess the fellows' communication skills, a Likert scale based on the SPIKES steps was used. In this manner, we could collect a graduated assessment as each step has multiple facets; the more fully each step is completed, the higher the score. With progression through fellowship and increasing communication experience, this score would be expected to increase. The ACGME's core competencies state that trainees "must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, patients' families, and professional associates."² Ideally, all fellows would therefore obtain a 5, for completely done (and done well), for each of the communication guidelines on this assessment. A 3.5 was felt by our training program to be the minimum passing grade.

Our biggest challenge has been time. While individual participation is ideal, time constraints have required that fellows participate in pairs, which has pros and cons. The fellows can often play off each other, expanding on ideas and using each other for support. On the other hand, a quiet or unsure fellow may not get to practice his or her communication skills. We may develop this module into a 2-day event so all learners can have these conversations solo. Extending the module may also allow us to incorporate the suggestion of participants to "have an attending model good conversation skills," possibly as part of the introductory portion of the module. We would also like to adapt this program for our attending physicians as part of their continuing education.

Danielle Janice-Woods Reed, MD: Neonatologist, Children's Mercy-Kansas City

Jotishna Sharma, MD: Neonatologist, Children's Mercy-Kansas City

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Ethical Approval

Reported as not applicable.

References

1. Orgel E, McCarter R, Jacobs S. A failing medical educational model: a self-assessment by physicians at all levels of training of ability and comfort to deliver bad news. *J Palliat Med*. 2010;13(6):677-683. <http://dx.doi.org/10.1089/jpm.2009.0338>
2. ACGME program requirements for graduate medical education in neonatal-perinatal medicine. Accreditation Council for Graduate Medical Education Web site. http://www.acgme.org/portals/0/pfassets/2013-pr-faq-pif/329_neonatal_perinatal_peds_07012013.pdf. Updated July 1, 2013.
3. Izatt S. Educational perspectives: difficult conversations in the neonatal intensive care unit. *Neoreviews*. 2008;9(8):e321-e325. <http://dx.doi.org/10.1542/neo.9-8-e321>
4. Back AL, Arnold RM, Baile WF, et al. Efficacy of communication skills training for giving bad news and discussion transitions to palliative care. *Arch Intern Med*. 2007;167(5):453-460. <http://dx.doi.org/10.1001/archinte.167.5.453>
5. Vaidya VU, Greenberg LW, Patel KM, Strauss LH, Pollack MM. Teaching physicians how to break bad news: a 1-day workshop using standardized parents. *Arch Pediatr Adolesc Med*. 1999;153(4):419-422. <http://dx.doi.org/10.1001/archpedi.153.4.419>
6. Greenberg LW, Ochsenschlager D, O'Donnell R, Mastruserio J, Cohen GJ. Communicating bad news: a pediatric department's evaluation of a simulated intervention. *Pediatrics*. 1999;103(6):1210-1217.

7. Meyer EC, Brodsky D, Hansen AR, Lamiani G, Sellers DE, Browning DM. An interdisciplinary, family-focused approach to relational learning in neonatal intensive care. *J Perinatol*. 2011;31(3):212-219. <http://dx.doi.org/10.1038/jp.2010.109>
8. Rosenbaum ME, Ferguson KJ, Lobas JG. Teaching medical students and residents skills for delivering bad news: a review of strategies. *Acad Med*. 2004;79(2):107-117. <http://dx.doi.org/10.1097/00001888-200402000-00002>
9. Dosanjh S, Barnes J, Bhandari M. Barriers to breaking bad news among medical and surgical residents. *Med Educ*. 2001;35(3):197-205. <http://dx.doi.org/10.1111/j.1365-2923.2001.00766.x>
10. Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP. SPIKES—a six-step protocol for delivering bad news: application to the patient with cancer. *Oncologist*. 2000;5(4):302-311. <http://dx.doi.org/10.1634/theoncologist.5-4-302>
11. Boss RD, Hutton N, Donohue PK, Arnold RM. Neonatologist training to guide family decision making for critically ill infants. *Arch Pediatr Adolesc Med*. 2009;163(9):783-788. <http://dx.doi.org/10.1001/archpediatrics.2009.155>

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