

Improving Resident Communication Skills with a Customizable Curriculum

John D. Mitchell, MD – Beth Israel Deaconess Medical Center

Cindy M. Ku, MD – Beth Israel Deaconess Medical Center

Brendan Lutz, BS – Edward Via College of Osteopathic Medicine

Dr. Sajid Shahul, MD, MPH – University of Chicago Medical Center

Vanessa Wong, BS – Beth Israel Deaconess Medical Center

Dr. Stephanie B. Jones – Beth Israel Deaconess Medical Center

Introduction: Communication skills remain challenging to teach and evaluate.¹ Existing curricula and evaluation tools for non-technical skills in anesthesiology, including communication skills, do not include direct patient feedback.² We hypothesized that the communication skills of anesthesia residents (postgraduate years 2-4) not already performing at the highest level, as measured by a patient survey, would improve after a customized, simulation-based reflective curriculum.

Methods: In this prospective cohort study, we developed an online ambulatory surgical patient survey based on the Four Habits Coding Scheme to assess the communication skills of residents (Figure 1).³ A research assistant administered the survey on an Apple iPad in the post-anesthesia care unit before discharge from August 2014 to July 2015. In December 2014, we designed a simulation-based reflective curriculum customized for each resident based on his/her survey results. For the curriculum, we developed reflective questions for each survey question and assigned residents the reflective questions corresponding to their three lowest scoring questions (Table 1). As part of the intervention, residents received their survey results and subsequently completed the curriculum. We compared residents' average ratings for the overall survey and for each question before and after the intervention using the Wilcoxon signed-rank test for residents who were not performing at the highest level at baseline.

Results: 1162 patients (83% of included patients) responded to the survey. Of the 54 residents in the program, 41 had survey data in both the pre- and post-intervention periods. For residents not performing at the highest level at baseline, the median post-intervention average rating was higher than the median pre-intervention average rating for the overall survey ($p = 0.005$, Figure 2) and for seven questions ($p \leq 0.02$, Table 1).

Discussion: After the intervention, resident performance, as rated by their patients on the survey, improved for residents who were not receiving the highest ratings at baseline. This study is a step toward tailoring educational interventions to learners' needs. Future studies should test this approach with other learners, specialties, and training programs.

References:

1. Rhoton MF, Barnes A, et al. Influence of Anesthesiology Residents' Noncognitive Skills on the Occurrence of Critical Incidents and the Residents' Overall Clinical Performances. *Acad Med.* 1991;66(6):359–361.
2. Flin R, Patey R, et al. Anaesthetists' non-technical skills. *Br J Anaesth.* 2010;105(1):38–44.
3. Krupat E, Frankel R, et al. The Four Habits Coding Scheme: Validation of an instrument to assess clinicians' communication behavior. *Patient Educ Couns.* 2006;62(1):38–45.

Figure 1:

Figure 1


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HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

ANESTHESIA RESIDENT PHYSICIAN COMMUNICATION SURVEY

Resident doctors are physicians who have graduated medical school and are now seeking specialty training, in this case in anesthesiology. We would appreciate your valuable feedback so that these doctors may continue to improve their professional and communication skills. The 10 questions below should take less than 5 minutes of your time. Thank you for helping us continuously improve patient care.

Please answer the questions below regarding your procedure today at Beth Israel Deaconess Medical Center. If a question is not applicable, please select "N/A".

Regarding the physician pictured on the previous page:	Select a response between 1 and 4, or select "N/A" if the question is not applicable:
Did the anesthesia resident introduce him/herself and explain his/her role in your care?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
Did the anesthesia resident seem to know the important information about your medical history?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
Did the anesthesia resident seem interested in finding out what <u>you</u> thought about the health concerns?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
Did the anesthesia resident ask about your expectations for the anesthetic?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
Did the anesthesia resident provide ample opportunity for you to express your emotions?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
Did the anesthesia resident do anything to help you feel okay about whatever emotions you were feeling?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
Did the anesthesia resident give you information that directly addressed the concerns you had expressed?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
After the anesthesia resident gave you information, did s/he make sure to find out how well you understood the information?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
Did the anesthesia resident encourage you to be as much involved as you would like in the decisions about your anesthetic plan?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A
Prior to your procedure, did the anesthesia resident help set expectations regarding your stay in the recovery room?	Definitely no (1) <input type="radio"/> Definitely yes (4) <input type="checkbox"/> N/A

Comments or Suggestions

Figure 2:

Figure 2

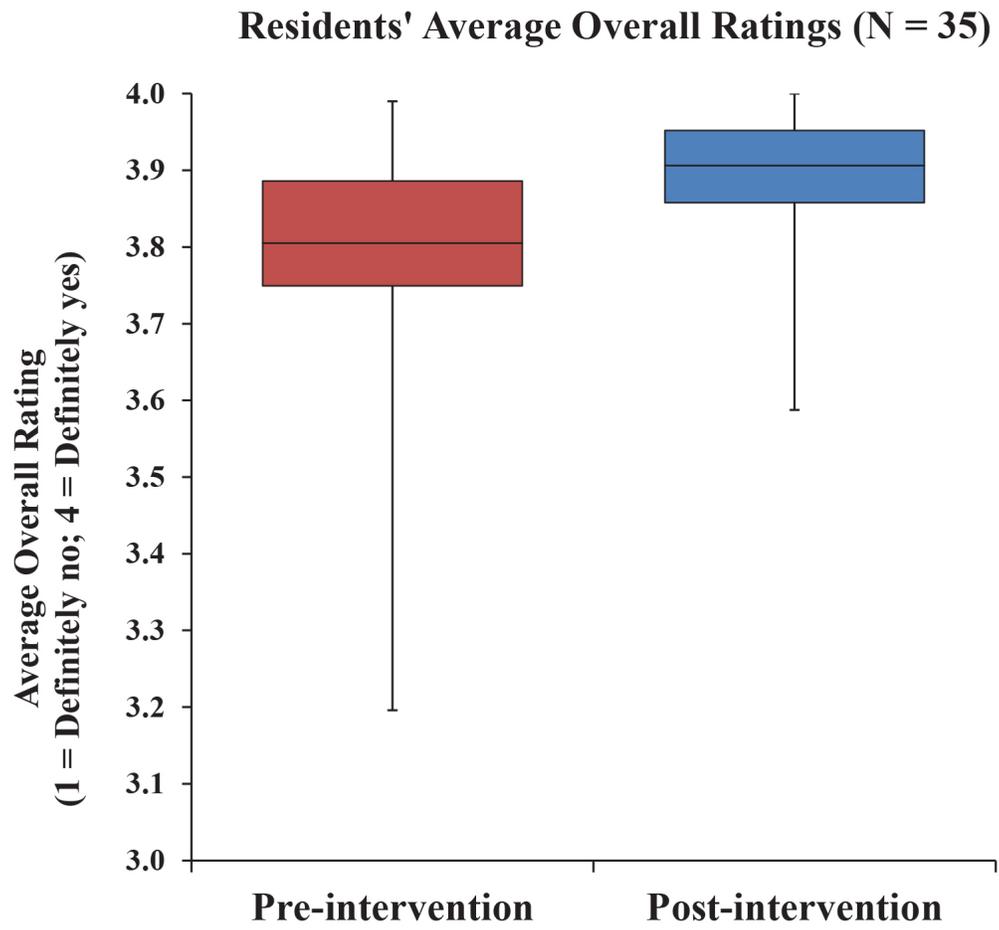


Table 1:

Table 1

Question	Corresponding reflective questions*	N**	Pre-intervention Median (IQR)	Post-intervention Median (IQR)	p-value
1. Did the anesthesia resident introduce him/herself and explain his/her role in your care?	None (not a lowest scoring question)	9	3.96 (3.94 to 3.98)	4 (3.96 to 4)	0.21
2. Did the anesthesia resident seem to know the important information about your medical history?	A. Did the resident demonstrate knowledge of important elements of the medical history?	23	3.89 (3.8 to 3.95)	4 (3.91 to 4)	0.0097***
	B. Do you have suggestions to improve?				
3. Did the anesthesia resident seem interested in finding out what you thought about the health concerns?	A. Did the resident demonstrate a willingness to explore the patient's health concerns?	26	3.87 (3.8 to 3.95)	4 (3.94 to 4)	0.0026***
	B. How do you approach this?				
4. Did the anesthesia resident ask about your expectations for the anesthetic?	A. What approaches did the resident employ to understand patient expectations of the anesthetic?	31	3.74 (3.37 to 3.85)	3.92 (3.76 to 4)	0.0021***
	B. What would you have done differently?				
5. Did the anesthesia resident provide ample opportunity for you to express your emotions?	A. How did the resident allow the patient to express their emotions?	23	3.87 (3.82 to 3.93)	3.97 (3.9 to 4)	0.01***
	B. What is your approach to managing patient emotions?				
6. Did the anesthesia resident do anything to help you feel okay about whatever emotions you were feeling?	A. How did the resident help the patient to manage their emotions in this case?	24	3.91 (3.75 to 3.94)	4 (3.9 to 4)	0.0093***
	B. What do you suggest to help manage patient emotions?				
7. Did the anesthesia resident give you information that directly addressed the concerns you had expressed?	A. Did the resident provide information that addressed concerns that the patient expressed?	18	3.91 (3.82 to 3.96)	4 (3.89 to 4)	0.06
	B. How do you manage patient expectations?				
8. After the anesthesia resident gave you information, did s/he make sure to find out how well you understood the information?	A. How did the resident verify patient understanding of information discussed?	22	3.9 (3.83 to 3.95)	4 (3.97 to 4)	0.0001***
	B. How would verify information with the patient?				
9. Did the anesthesia resident encourage you to be as much involved as you would like in the decisions about your anesthetic plan?	A. How did the resident involve the patient in plans regarding the choice of anesthetic?	30	3.52 (3.3 to 3.79)	3.83 (3.51 to 4)	0.02***
	B. What approaches do you use to involve the patient in anesthetic planning?				
10. Prior to your procedure, did the anesthesia resident help set expectations regarding your stay in the recovery room?	A. What did the resident do to set expectations regarding the stay in the recovery room?	30	3.65 (3.32 to 3.79)	3.73 (3.5 to 3.93)	0.18
	B. What do you suggest to set recovery expectations?				

*In these questions, "the resident" refers to the resident in the simulation scenario.

**N = Number of residents with pre-intervention average ratings below 4

***Significant at $\alpha = 0.05$