The Ochsner Journal 13:319–321, 2013

Implementation of a Faculty Development Curriculum Emphasizing Quality Improvement and Patient Safety: Results of a Qualitative Study

Christopher Rodrigue, MD,* Leonardo Seoane, MD, FACP,†‡ Rajiv B. Gala, MD,*‡ Janice Piazza, MSN, MBA,§ Ronald G. Amedee MD‡¶

**Department of Obstetrics and Gynecology,*
†Department of Pulmonary and Critical Care,
§Academic Division,
¶Department of Otolaryngology, Head and Neck Surgery, Ochsner Clinic Foundation, and
‡The University of Queensland School of Medicine, Ochsner Clinical School, New Orleans, LA

ABSTRACT

Background: We developed a faculty development curriculum emphasizing quality improvement and patient safety. Our project focused on developing a learning environment that fosters resident education in quality improvement and patient safety.

Methods: A multidisciplinary team developed a survey to assess baseline perceptions of quality improvement tools and training and resident participation in quality improvement and patient safety programs. We then developed a curriculum to address deficiencies. The curriculum paired residents with faculty. At the completion of the first curriculum cycle, we asked faculty and residents to complete the same survey.

Results: Our pilot survey revealed a need for a comprehensive program to teach faculty and residents the art of teaching. Our follow-up study showed an increase in the number of residents and faculty who reported that their programs were extremely or very good at providing tools to develop skills and habits to practice quality improvement. We also had a statistically significant decrease (15.8%, P=0.0128) in faculty who reported their program as not at all effective at providing resident quality improvement tools and skills. Among residents and faculty, we had a 12% (P=0.2422) and a 38.2% (P=0.0010), respectively, improvement in reported monthly resident involvement in quality improvement and patient safety projects.

Conclusion: We demonstrated that developing a sustainable and practical faculty development program within a large academic medical center is feasible. Our postimplementation survey demonstrated an improvement in perceived participation in quality improvement, patient safety, and faculty development among faculty and residents. Future targets will focus on sustaining and spreading the program to all faculty and residents in the institution.

Address correspondence to
Leonardo Seoane, MD, FACP
Section of Palliative Care
Department of Pulmonary and Critical Care
Ochsner Clinic Foundation
1514 Jefferson Hwy.
New Orleans, LA 70121
Tel: (504) 842-3925
Fax: (504) 837-0191
Email: lseoane@ochsner.org

Keywords: Faculty development, graduate medical education, performance improvement, quality improvement

The authors have no financial or proprietary interest in the subject matter of this article.

INTRODUCTION

The Accreditation Council for Graduate Medical Education (ACGME)'s Next Accreditation System and Clinical Learning Environment Review (CLER) emphasize the ability of academic medical centers to provide a learning environment that focuses on performance improvement, quality improvement, and patient safe-

ty.[1] Previous quality residency training programs have been tied to improvements in posttraining patient outcomes.[2]

We defined goals for developing physician thought leaders, redefining faculty competencies, ensuring compliance with ACGME standards, and aligning graduate medical education (GME) with institutional priorities regarding performance improvement, quality improvement, and patient safety as outlined by the CLER.

We hypothesized that a need existed within our institution to improve our faculty's knowledge of and ability to teach quality improvement and patient safety concepts to the next generation of physicians. By developing a practical and sustainable faculty development curriculum, we aimed to improve resident and faculty understanding and participation in performance improvement, quality improvement, and patient safety projects.

METHODS

The study received an exemption from the Ochsner Clinic Foundation Institutional Review Board as an educational quality improvement project.

Ochsner Medical Center is a large tertiary care facility. Its GME program included, at the time of this project, 17 sponsored core and fellowship training programs with approximately 250 trainees. Expansion to 23 programs has occurred since the start of the project.

A multidisciplinary team representing all stakeholders in GME developed a survey to assess faculty and resident baseline perceptions of their experience with faculty development opportunities, performance improvement and quality improvement tools and training, and resident participation in performance improvement, quality improvement, and patient safety programs at our institution.[3]

We then developed a curriculum to address these 3 areas. The curriculum consisted of 5 online modules that resident and faculty pairs completed as a team. The first 2 modules were offered through the Institute for Healthcare Improvement (IHI) Open School and focused on performance improvement, quality improvement, and patient safety. The other 3 modules were internally developed and focused on teaching and learning.[3] Staff in 17 GME training programs developed quality improvement projects while completing the first learning module. These projects were listed in detail in a prior publication of our preliminary results.[3]

We asked faculty and residents to complete the same survey at the end of our first curriculum cycle. We used 2-sample *z* tests and a significance level of 0.05 to compare our pilot and follow-up responses.

RESULTS

Our pilot survey revealed a need for a comprehensive program to teach faculty and residents the art of teaching. Two other areas of need were regular resident participation in quality improvement and patient safety efforts and effective tools for developing skills and habits to analyze practice using quality improvement methods. We distributed 50 each of the pilot and follow-up surveys. A total of 38 residents and 38 faculty members completed the pilot survey. Forty-two residents and 36 faculty members completed the follow-up survey.

The Table shows pilot and follow-up responses, including the change in resident and faculty responses and the statistical significance, for 2 pertinent questions. The first question was "How effective is your program at providing tools to help develop skills and habits to systematically analyze practice using quality improvement methods and implement changes with the goal of practice improvement?" Although not statistically significant, we found increases in the number of residents who answered extremely or very effective. We also found a statistically significant decrease in the number of faculty (15.8% to 0%, $P=0.0128$) who reported that the program was not at all effective in providing tools to develop skills and habits. The second question was "How often do residents participate in departmental or institutional quality improvement and/or patient safety?" Residents reported a 12% increase ($P=0.2422$), and faculty reported a 38.2% increase ($P=0.0010$) in monthly resident involvement in quality improvement and patient safety projects.

Additionally, we found increases of 5% of residents and 21% of faculty reporting faculty as extremely or very interested in resident education.

DISCUSSION

Our pilot results clearly demonstrated a need for faculty education in performance improvement, quality improvement, and patient safety. While our larger goal was to increase resident participation in and understanding of quality improvement and patient safety, we felt that education of faculty in a train-the-trainer approach would best serve in sustaining a culture of performance improvement/quality improvement/patient safety within our institution.

When developing our curriculum, we used valuable, well-developed, existing resources. The IHI Open School provides educational modules on a wide range of health improvement topics. We found that asking resident/faculty teams to identify areas of improvement during the initial IHI quality improvement lessons significantly aided teams in successfully completing plan-do-study-act cycles. As we previous-

Table. Changes in Responses to Two Questions on the Quality Improvement/Patient Safety Survey

	Residents			Faculty		
	Pilot, n=38	Follow-up, n=42	*P*	Pilot, n=38	Follow-up, n=36	*P*
How effective is your program at providing tools to help develop skills and habits to systematically analyze practice using quality improvement methods and implement changes with the goal of practice improvement?						
Extremely effective	2 (5.2%)	5 (11.9%)	0.2888	2 (5.2%)	7 (19.4%)	0.0613
Very effective	13 (34.2%)	17 (40.5%)	0.5611	9 (23.7%)	13 (36.1%)	0.2434
Somewhat effective	19 (50.0%)	16 (38.1%)	0.2840	15 (39.5%)	15 (41.7%)	0.8472
Slightly effective	4 (10.5%)	4 (9.5%)	0.8815	6 (15.8%)	1 (2.7%)	0.0539
Not at all effective	0 (0%)	0 (0%)	n/a	6 (15.8%)	0 (0%)	0.0128
How often do residents participate in departmental or institutional quality improvement and/or patient safety programs?						
Monthly	9 (23.7%)	15 (35.7%)	0.2422	14 (36.8%)	27 (75.0%)	0.0010
Every other month	2 (5.2%)	4 (9.5%)	0.4647	0 (0%)	4 (11.1%)	0.0347
Quarterly	6 (15.8%)	10 (23.8%)	0.3717	4 (10.5%)	2 (5.5%)	0.4299
Semiannually	5 (13.2%)	3 (7.1%)	0.3637	3 (7.9%)	0 (0%)	0.0851
Annually	4 (10.5%)	3 (7.1%)	0.5903	6 (15.8%)	0 (0%)	0.0128
Never	0 (0%)	1 (2.4%)	0.3365	2 (5.3%)	0 (0%)	0.1614
I don't know	12 (31.5%)	6 (14.3%)	0.0657	9 (23.7%)	3 (8.3%)	0.0724

ly reported, each of our GME programs conducted meaningful performance improvement/quality improvement research.[3]

The first cohort of individuals in our program tested our curriculum. We encountered a number of challenges and successes. Challenges included limited protected time for course participation among residents and faculty. In addition, we experienced a major hurricane and the implementation of a new electronic medical record system during the implementation period. Considering these challenges, we had considerable success in getting programs to complete meaningful performance improvement/quality improvement projects. We noted increased enthusiasm for performance improvement, quality improvement, and patient safety projects, not only among course participants but also among other residents, faculty, and medical students. Faculty also benefitted from the program by including quality improvement work in their maintenance of certification.

Our study was limited in showing statistical significance for many responses on our pilot and follow-up surveys because of a low number of surveys. Although we have perceived an increase in quality improvement participation among residents at our institution, we would like to quantify the number of projects before and after the curriculum was introduced.

CONCLUSION

We are focused on sustaining and spreading this program to the remainder of the faculty and residents at our institution. We believe that through this training program we will develop a faculty core that excels in training the next generation of physicians and that in return we will see improved clinical outcomes in patient care and safety.

REFERENCES

1. Nasca TJ, Philibert I, Brigham T, Flynn TC. The next GME accreditation system—rationale and benefits. *N Engl J Med*. 2012 Mar 15;366(11):1051-1056. Epub 2012 Feb 22.
2. Asch DA, Nicholson S, Srinivas S, Herrin J, Epstein AJ. Evaluating obstetrical residency programs using patient outcomes. *JAMA*. 2009 Sep 23;302(12):1277-1283.
3. Rodrigue C, Seoane L, Gala RB, Piazza J, Amedee RG. Developing a practical and sustainable faculty development program with a focus on teaching quality improvement and patient safety: An Alliance for Independent Academic Medical Centers National Initiative III Project. *Ochsner J*. 2012 Winter;12(4):338-343.

This article meets the Accreditation Council for Graduate Medical Education and the American Board of Medical Specialties Maintenance of Certification competencies for Patient Care, Medical Knowledge, Professionalism, and Practice-Based Learning and Improvement.