

Facilitating Institutional Oversight and Program Improvement Through Educational Competency Committees

Kathryn M. Andolsek, MD, MPH
Rhea F. Fortune
Alisa Nagler, JD, EdD

Chrystal Stancil, MBA, MHA
Catherine Kuhn, MD
Diana McNeill, MD

ABSTRACT

Background The Accreditation Council for Graduate Medical Education (ACGME) requires programs to engage annually in program evaluation and improvement.

Objective We assessed the value of creating educational competency committees (ECCs) that use successful elements of 2 established processes—institutional special reviews and institutional oversight of annual program evaluations.

Methods The ECCs used a template to review programs' annual program evaluations. Results were aggregated into an institutional dashboard. We calculated the costs, sensitivity, specificity, and predictive value by comparing programs required to have a special review with those that had ACGME citations, requests for a progress report, or a data-prompted site visit. We assessed the value for professional development through a participant survey.

Results Thirty-two ECCs involving more than 100 individuals reviewed 237 annual program evaluations over a 3-year period. The ECCs required less time than internal reviews. The ECCs rated 2 to 8 programs (2.4%–9.8%) as “noncompliant.” One to 13 programs (1.2%–14.6%) had opportunities for improvement identified. Institutional improvements were recognized using the dashboard. Zero to 13 programs (0%–16%) were required to have special reviews. The sensitivity of the decision to have a special review was 83% to 100%; specificity was 89% to 93%; and negative predictive value was 99% to 100%. The total cost was \$280 per program. Of the ECC members, 86% to 95% reported their participation enhanced their professional development, and 60% to 95% believed the ECC benefited their program.

Conclusions Educational competency committees facilitated the identification of institution-wide needs, highlighted innovation and best practices, and enhanced professional development. The cost, sensitivity, specificity, and predictive value indicated good value.

Introduction

The Accreditation Council for Graduate Medical Education (ACGME) requires programs to engage in annual program evaluation and improvement by a designated team¹ and in some cases, stipulates follow-up.² While there are no requirements for sponsoring institutions to review the annual program evaluations, several programs^{3–8} and institutions^{9–11} reported benefits from internal reviews, which ACGME previously required for institutional oversight. Beginning in 2012, Duke University graduate medical education (GME) leadership revised an annual program evaluation template that it required programs to complete¹² and adapted beneficial elements from its prior internal review process.¹³ We reconceptualized our previous internal review teams as educational competency committees (ECCs), which we modeled after clinical competency committees

(CCCs). The ECCs are multi-person teams charged to judge program performance, just as CCCs regularly review and judge residents' performance.

This study seeks to answer 2 primary questions: (1) Does this new process add value? (2) Are the costs of the process acceptable? We believed 1 important metric of success was to preemptively identify programs before ACGME raised concerns, regardless of whether these would result in citations, require progress reports, or lead to data-prompted site visits. The concerns result in measureable additional time and effort for programs and institutions.

Methods

Duke University Hospital is the sponsoring institution for more than 80 ACGME-accredited and 70 non-ACGME accredited programs. Beginning in 2005, Duke's GME Committee required programs to submit their annual program evaluations for review by the section head of its Program Oversight Committee, who reports to the designated institutional official. In May 2012, in preparation for the next accreditation system, we streamlined our template to focus on the 5

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Editor's Note: The online version of this article includes an institutional dashboard of deidentified annual program evaluation summaries.

required components of the annual program evaluation. We used the GME management system (MedHub) for submission and review. In 2014, ACGME resident and faculty surveys and institutional duty hour data were provided to ECCs (TABLE 1).

Educational competency committees used the color codes from the hospital's clinical scorecards to judge each component: not compliant (red), minimum compliance (yellow), substantial compliance (green), and exceeds compliance (blue). The ECC composition mimics our previous internal review team structure and includes a program director, a program coordinator, a resident, and a member of Duke's Office of GME. That position rotates among a senior administrator, a doctoral trained educator, and a prior program director.

Like CCCs, ECCs utilize the wisdom of a team to reach consensus on performance. Each ECC member received 5 to 9 annual program evaluations electronically to review in advance of the meeting, using a checklist of performance criteria. At the meeting, the ECC developed a consensus that was entered directly into the GME management system. The Program Oversight Committee Section Head reviews the results, applies the special review (SR) criteria, and identifies programs that were required to have an SR. Programs received results through the GME management system. Deidentified annual program evaluation summaries were aggregated into an institutional dashboard and trended by year (provided as online supplemental material). Vertical rows indicate successes and opportunities for program improvement and horizontal rows indicate successes and opportunities for institutional improvement.

What was known and gap

The Accreditation Council for Graduate Medical Education requires programs to engage annually in program evaluation and improvement; the requirements for institutional oversight of this process are still evolving.

What is new

Use of educational competency committees for institutional oversight that adapts elements of the internal review.

Limitations

Single institution study; survey instrument lacks established validity evidence.

Bottom line

Educational competency committees offer good value by helping identify underperforming programs and institution-wide improvement needs and enhancing professional development.

Educational competency committee members were surveyed annually, and their feedback was used to improve the subsequent year's process. The survey asked questions, such as the amount of time spent on pre-review and whether the experience enhanced the participant's professional development and benefited their own program. The survey questions were developed by the authors (K.M.A., A.N.) without any testing.

The study was determined exempt by the Duke Medicine Institutional Review Board.

Calculating Sensitivity, Specificity, and Negative Predictive Value of Decision to Hold a Special Review

We considered the decision to require an SR as a "screening test." We analyzed if those programs that

TABLE 1
Items Used by Educational Competency Committees in Their Reviews

	2012	2013	2014	2015
Full template	✓			
Abbreviated template		✓	✓	✓
Board pass rate compared to national average	✓	✓	✓	✓
Faculty development	✓	✓	✓	✓
Types of assessment tools used by the program	✓	✓	✓	✓
Action plan(s) to improve 1 or more item(s) in the program	✓	✓	✓	✓
Progress on prior year's action plan(s)	✓	✓	✓	✓
Program's ADS		✓	✓	^a
Institutional Resident Survey	✓			
ACGME Resident Survey		✓	✓	✓
ACGME Faculty Survey		✓	✓	✓
Institutional duty hour reporting		✓	✓	^b

Abbreviations: ADS, Accreditation Data System; ACGME, Accreditation Council for Graduate Medical Education.

^a In 2015 the designated institutional official (DIO) reviewed all program ADS entries.

^b In 2015 the DIO reviewed all duty hours.

TABLE 2

Results of Annual Program Evaluation Reviews

Categories	2012	2013	2014
No. of programs	77	82	82
No. of annual program evaluations reviewed	74	81	82
No. of ECCs	9	12	11
No. of unique individuals participating on ECCs	28	40	37
Period of time over which all annual program evaluations were reviewed, (mos)	4	2	2.5
Percentage of ECC participants completing survey	79	70	48
Percentage of ECC participants indicating participation enhanced their professional development	95	86	94
Percentage of ECC participants indicating participation benefited own program	95	60	88
Time spent in prereview, (average hrs)	3	4	5
Time spent in ECC meeting, (hrs)	4	3.5	3
Special reviews, No. (%)	0	8 (10)	13 (16)
Programs which received "overall blue," No. (%)	13 (17)	12 (15)	1 (1)
Programs which received "overall red," No. (%)	6 (8)	2 (2)	8 (10)

Abbreviation: ECC, educational competency committee.

underwent SRs were more likely to have ACGME citations, required progress reports, or data-prompted site visits. We constructed 2×2 tables of SR + (SR required) or SR – (SR not required), and then correlated these with ACGME accreditation decisions (TABLE 2).

Cost of the Review

We calculated review costs using the educational relative value unit assigned by our medical school for the educational effort of faculty and administrative effort by coordinators. The section head received a small stipend for overseeing this process, as previously provided for overseeing internal reviews. Resident time was calculated by using the reimbursement model for internal moonlighting.

Results

TABLE 2 summarizes our experience from 2012 through 2014, the 3-year period of the next accreditation system's implementation. A total of 237 annual program evaluations were reviewed over this period, and more than 100 program directors, coordinators, and residents participated. The time ECC members utilized to review materials before the meeting increased from 3 to 5 hours, while the meeting time decreased from 4 to 3 hours.

Educational competency committee members reported via the annual survey that their participation enhanced their professional development (95% in 2012, 86% in 2013, and 94% in 2014); and the majority reported that participation benefited their program (95% in 2012, 60% in 2013, and 88% in 2014).

We created specific thresholds for noncompliance, for example, a difference in 0.1 on the resident or faculty survey, board performance below the national rate, or failure to evaluate progress on the prior year's action plan. Based on their annual program evaluation, 6 programs (8%) in 2012, 2 (2%) in 2013, and 8 (10%) in 2014 received an overall rating of noncompliant. In 2012, we did not conduct special reviews as criteria were in development. A total of 8 SRs (10%) were conducted in 2013, and 13 (16%) in 2014. Thirteen programs (17%) were judged to have *exceeded compliance* in 2012, compared with 12 in 2013 (15%) and 1 (1%) in 2014.

In 2013, the total cost of the review was calculated at \$23,081.33 (\$285 per review) and \$22,624.90 (\$276 per review) in 2014 (TABLE 3), or approximately \$280 per program over the 2-year period. The only additional funding required was \$95 per program to support resident participation.

In 2013 and 2014, the sensitivity of the special review was 50% and 83%, the specificity was 92% and 89%, and the negative predictive value was 97% and 99% (TABLE 4). The aggregated scorecard from 2012–2014 is provided as online supplemental material.

Discussion

We successfully modified the institution's prior internal review and oversight of the annual program evaluation processes to create ECCs. Educational competency committee members perceived value from participating and predicted future benefit to their programs. The activity itself served as professional development. One participant noted that "it provided . . . an opportunity to see behind the curtain."¹⁴

TABLE 3

Costs of Annual Program Evaluation Reviews^a

Annual Program Evaluation Reviews (2013)	No.	Calculated "True" Cost	"New Cost" for ECC Process
Supplemental pay for residents	12	\$7,724.06	\$7,724.06
Program director time 3-hr meetings; 7–8-hr prep	12 (Calculated at school of medicine \$62/hr educational RVU + fringe)	\$10,336.39	No new money was allocated. The institution already provides support for PD time. This was believed to be an appropriate, periodic role for a PD.
Program coordinator 3-hr meetings; 6-hr prep	12 (Calculated at school of medicine \$22.10/hr educational RVU + fringe)	\$3,024.08	No new money was allocated. The institution already provides support for PCs. This was felt to be an appropriate, periodic role for a PC.
GMEC program oversight head	1 (1.5 hr per week × 17 weeks)	\$1,996.80	No new money was allocated. This role was previously funded to oversee the IRP.
Total		\$23,081.30	\$7,724.06
Cost per program review by ECC	81 programs	\$284.95	\$95.36
Annual Program Evaluation Reviews (2014)	No.	Calculated "True" Cost	"New Cost" for ECC Process
Supplemental pay for residents	11 (Calculated at moonlighting pay \$75/hr × 8 hrs + fringe)	\$7,715.40	\$7,715.40
Program director time 3-hr meetings; 7–8-hr prep	11 (Calculated at school of medicine \$62/hr educational RVU + fringe)	\$9,475.03	No new money was allocated. The institution already provides support for PD time. This was believed to be an appropriate, periodic role for a PD.
Program coordinators	11 (Calculated at school of medicine \$22.10/hr educational RVU + fringe)	\$2,772.07	No new money was allocated. The institution already provides support for PCs. This was felt to be an appropriate, periodic role for a PC.
GMEC program oversight head	1 (2 hrs/week × 17 weeks)	\$2,662.40	No new money was allocated. This role was previously funded to oversee the IRP.
Total		\$22,624.90	\$7,715.40
Cost per program review by ECC	82 programs	\$275.91	\$94.09

Abbreviations: ECC, educational competency committee; RVU, relative value unit; PD, program director; PC, program coordinator; GMEC, Graduate Medical Education Committee; IRP, internal revenue process.

^a Only the supplemental pay for residents required "new funding." The program director and coordinator time is already paid for by a percentage of protected time paid institutionally for their roles. Duke's Office of GME and Section Head and GMEC Program Oversight Committee are already funded.

TABLE 4

Sensitivity, Specificity, and Negative Predictive Value of Annual Program Evaluation Reviews

	2014			2013		
	ACGME Interest ^a	ACGME No Interest	Total	ACGME Interest ^a	ACGME No Interest	Total
Test + (SR)	5 (a)	8 (b)	13	2 (a)	6 (b)	8
Test – (no SR)	1 (c)	68 (3)	69	2 (c)	71 (d)	73
Total	6	76	82	4	77	81
Sensitivity (a/a + c)	5/6	83%		2/4	50%	
Specificity (d/b + d)	68/76	89%		71/77	92%	
Positive predictive value (a/a + b)	5/13 = 38%			2/8 = 25%		
Negative predictive value (d/c + d)	68/69 = 99%			71/73 = 97%		

Abbreviations: ACGME, Accreditation Council for Graduate Medical Education; SR, special review.

^a ACGME interest defined as citations, progress reports, and early site visits.

We believed we captured the essential components of ACGME's published program evaluation template.¹⁵ Although there is no validity evidence for our ECC assessments, use of 9 to 12 assessments are known to increase validity in evaluating residents' performance.¹⁶ Our ECCs use at least 9 different assessments to evaluate program performance.

The ACGME has posted a resource for aggregating and monitoring action items from successive annual program evaluations.¹⁵ Our color-coded scorecards were valuable and familiar in our setting, as they are used widely for our health system's performance. They facilitate rapid visual identification of program and institutional successes, opportunities for improvements, and trends.

Experts in medical education suggest suboptimally performing residents fail to accurately assess their own performance, and their inability in accurately perceiving their performance impedes their ability to improve it.¹⁷ This also seemed true of our programs. Programs that reflected conscientiously on their performance submitted more robust action plans.

The number of SRs increased from 2012 through 2014, largely due to the inclusion of the resident survey and our selection of the threshold of concern as any deviation of ≥ 0.10 from the mean. We may have set the bar too high, in part because specialty-specific resident survey averages were not available. We continue to refine our calibration, minimize administrative burden on programs, and identify those that benefit from the deeper dive of an SR.

We found it reassuring that our ECCs require 1 to 2 hours less than the 10 to 12 hours required for the prior internal reviews, and that programs spend far less time in preparation. We believe we can further optimize efficiency by assigning the GME associate director to review all programs' ACGME Accredita-

tion Data System information and duty hour documentation, and report only concerns to the ECCs.

We have attempted to determine the "educational sensitivity and specificity" of our decision to require an SR. The educational sensitivity of the SR increased after we added resident and faculty surveys to the review. The specificity remained approximately 90%, and the negative predictive value was $\geq 97\%$. In 2014, the ACGME conducted an early site visit on 1 program that we did not identify as needing an SR. Other programs that subsequently underwent an ACGME site visit, or were asked to submit a progress report, benefited from the preparation facilitated through the SR. The positive predictive value rose slightly but was still low. We required 8 programs to have SRs that subsequently had no issue identified by the ACGME, but we prefer to set our standards somewhat higher.

There are limitations to our study. Our experience reflects only a single institution. Costs will vary across institutions based on different faculty and administrative compensation models. Our survey lacked validity evidence and ECC members may not have interpreted the questions as we intended.

In the coming year we will incorporate core faculty into ECCs, individually "debrief" ECC findings with all program directors as a mentoring tool, and add questions about program activities related to the Clinical Learning Environment Review to our template.

Conclusion

We merged elements of our prior internal review and annual program evaluation processes to create ECCs, which provided peer-review professional development and identification of innovation and best practices. Sensitivity, specificity, and predictive value were acceptable.

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Kathryn M. Andolsek, MD, MPH, is Professor of Community and Family Medicine, Assistant Dean, Premedical Education, and Graduate Medical Education Committee (GMEC) Section Head for Compliance, Duke University School of Medicine; **Rhea F. Fortune** is Manager and Administrative Coordinator, Office of Graduate Medical Education, Duke University Hospital; at the time of research, **Alisa Nagler, JD, EdD**, was Assistant Dean, Graduate Medical Education, Duke University Hospital, and is now Assistant Director, Accreditation, Validation, and Credentialing, American College of Surgeons, and Adjunct Associate Professor, Medical Education, Duke University School of Medicine; at the time of research, **Chrystal Stancil, MBA, MHA**, was MedHub Administrator, Graduate Medical Education, Duke University Hospital, and is now Client Success Manager, MedHub.com; **Catherine Kuhn, MD**, is Professor of Anesthesiology, Associate Dean for Graduate Medical Education, and Designated Institutional Official, Duke University School of Medicine and Health System; and **Diana McNeill, MD**, is Professor of Medicine, Division of Endocrinology, Metabolism, and Nutrition, Assistant Professor of Obstetrics and Gynecology, Director of Duke AHEAD and GMEC Section Head for Program Oversight, Duke University School of Medicine.

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Corresponding author: Kathryn M. Andolsek, MD, MPH, Duke University School of Medicine, 0159 Duke South Orange Zone, Box 3648 DUMC, Durham, NC 27710, 919.668.3883, kathryn.andolsek@duke.edu

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