

Promotion Criteria for Clinician-Educators in the United States and Canada

A Survey of Promotion Committee Chairpersons

Brent W. Beasley, MD; Scott M. Wright, MD; Joseph Cofrancesco, Jr, MD, MPH; Stewart F. Babbott, MD; Patricia A. Thomas, MD; Eric B. Bass, MD, MPH

Context.—Clinician-educators have concerns about their ability to be promoted and the criteria used by medical school promotion committees.

Objective.—To discover the criteria and methods that medical school promotion committees use to make decisions about the promotion of clinician-educators.

Methods.—In June 1996 we mailed a questionnaire to chairpersons of all medical school promotion committees in the United States and Canada.

Results.—Of 142 schools surveyed, 115 (81%) responded; 45% of respondents had a clinician-educator promotion track. On a scale from 1 (minimally important) to 7 (extremely important), the mean importance ratings of aspects of clinician-educators' performance were the following: teaching skills (6.3), clinical skills (5.8), mentoring (5.7), academic administration (5.3), developing educational programs (5.3), nonresearch scholarship (5.1), clinical research (4.8), service coordination (4.7), and education research (4.5). Methods to evaluate each aspect of performance were rated by respondents for importance and frequency of use. The 4 most important methods for evaluating teaching were awards, peer evaluation, learner evaluation, and teaching portfolio; 70% or more of schools used these frequently or always. The 4 most important methods of evaluating clinical skills were peer evaluation, awards, trainee evaluation, and objective measures, which were used frequently or always by 78%, 65%, 58%, and 29% of schools, respectively. Clinician-educators were expected to have fewer peer-reviewed publications to be promoted than investigators (5.7 vs 10.6, $P < .001$). Schools with separate clinician-educator tracks differed little in survey responses from schools without such tracks.

Conclusion.—Most, but not all, promotion committees now assign high importance to the special contributions of clinician-educators and use a variety of methods to assess these, regardless of whether they have a separate clinician-educator promotion track.

MEDICAL SCHOOLS have recognized the need to retain clinician-educators.¹ However, little is known about the methods promotion committees use to evaluate clinician-educators as unique members of the medical faculty. Junior faculty members have complained that institutions fail to recognize their contributions in medical education and that promotion criteria too often are vague and lack specific goals toward which they can strive.²

Moreover, the emphasis placed on original research in order to be promoted during this era after the Flexner report has made achieving the rank of associate professor, let alone professor, difficult for clinician-educators.^{3,4}

The overall goal of this study was to better understand how medical school promotion committees in the United States and Canada currently are making decisions about the promotion of clinician-educators. The specific aims of the study were to determine how promotion committees view the importance of specific aspects of a clinician-educator's performance when making decisions about promotion to the rank of associate professor and to determine what methods promotion committees find most important and use most frequently to evaluate each aspect of a clinician-educator's performance.

METHODS

Targets of Survey

The chairs of all promotion committees of medical schools in the United States and Canada were targeted for inclusion in this study. A list of all the medical school deans was obtained from the Association of American Medical Colleges, and each school was contacted by telephone to determine the name of the chairperson of the appropriate promotion committee.

Survey Content

For this survey, we developed a detailed questionnaire focusing on the promotion of clinician-educators to the rank of associate professor. A clinician-educator was defined as a faculty member whose primary responsibilities are patient care and education and whose research represents only a minor portion of his or her academic contribution. This definition theoretically could include part-time as well as full-time faculty. We focused on promotion to associate professor because many clinician-educators believe that this rank is difficult for them to achieve.

The questionnaire was organized into 4 main sections. The first section elicited background information about the respondents and their promotion committees, including the composition and roles of the committee, the existence of separate promotion tracks for clinician-educators and clinician-investigators, and the institution's previous record in promoting to the level of associate professor. We did not make an effort to discern which schools offered tenure tracks to clinician-educators because prior data indicated that the percentage of schools that do so is very low (unpublished data, the Association of American Medical Colleges, 1997). The second section asked promotion committee chairpersons to indicate the importance of various aspects of a clinician-educator's performance when considering a clinician-educator for promotion to the rank of associate professor, using a 7-point scale from 1 (minimally important) to 7 (ex-

From the Division of General Internal Medicine, Johns Hopkins University School of Medicine (Drs Beasley, Cofrancesco, Thomas, and Bass), and Johns Hopkins Bayview Medical Center (Dr Wright), Baltimore, Md; and Baystate Medical Center and Tufts University School of Medicine, Boston, Mass (Dr Babbott). Dr. Beasley is now with the Department of Internal Medicine at the University of Kansas School of Medicine, Wichita.

Reprints: Brent W. Beasley, MD, Department of Internal Medicine, University of Kansas School of Medicine, 1010 N Kansas St, Wichita, KS 67214-3199 (e-mail: bbeasley@kumc.edu).

Table 1.—Characteristics of the Respondents and Their Committees and Schools (N=115)

Characteristics	No. (%)
Respondents who were chairs of promotion committees	93 (81)
Respondents who were responsible for promotion to	
Assistant professor	61 (53)
Associate professor	115 (100)
Professor	105 (91)
Respondents who were responsible for all departments within medical schools	105 (91)
Respondents who were responsible for the promotion of clinician-investigators as well as clinician-educators	110 (96)
Schools with a clinician-educator promotion track	52 (45)
Schools with specific promotion criteria for clinician-educators	60 (52)
Schools with either a clinician-educator promotion track or specific promotion criteria for clinician-educators	66 (57)

tremely important). Relevant aspects of a clinician-educator's job performance were identified by reviewing published literature on the role of clinician-educators,⁵⁻¹¹ reviewing the Society of General Internal Medicine's Guidelines for the Promotion of Clinician-Educators,¹² and by conducting interviews with current or former chairpersons of promotion committees at 5 US medical schools. Eleven broad performance areas were identified and were felt to encompass nearly all important aspects of a clinician-educator's job.

The third section asked respondents to rate the frequency of use (never, sometimes, frequently, always) and importance (using the same 7-point scale) of various methods by which a given aspect of job performance might be evaluated. In the interest of survey brevity, the 11 aspects of a clinician-educator's performance from the second section were collapsed into only 8 subsections (ie, "medical education research," "clinical research," and "other written scholarship" became "research skills"; and "coordinating a clerkship/program" and "coordinating a practice" became "administrative abilities"). Each subsection listed a variety of potential methods for evaluating the given area of performance, which were presented in an arbitrary order to avoid implying that any criterion was more desirable than any other. Finally, the fourth section asked about the minimum number of peer-reviewed publications that were expected for clinician-educators and clinician-investigators being considered for promotion to associate professor.

Survey Administration

After pilot testing the questionnaire with selected former promotion committee chairpersons, the questionnaire was mailed to each school along with a cover letter indicating the support of the So-

cietty of General Internal Medicine. Reminder cards were sent 3 weeks later, and a second mailing was sent to those who did not respond within 6 weeks. Finally, for those who still did not respond, follow-up telephone calls and facsimile transmission of the questionnaire were used to encourage full participation.

Data Analysis

Each survey was reviewed and entered into a database by 1 of 2 teams of 2 study investigators using SPSS 7.5 Base for Windows 95 (SPSS Inc, Chicago, Ill). Then, a team of 2 investigators reviewed each record to look for errors in data entry. For each question, we also examined the frequency distribution of responses to look for irregularities in the data.

Basic descriptive statistics (eg, mean, median, range, SD) were used to summarize the responses to all questions. Bivariate analyses were used to assess differences in responses between subgroups defined by characteristics of the promotion committees, including the following: the presence or absence of a clinician-educator promotion track, the presence or absence of separate criteria to evaluate clinician-educators for promotion, the commitment of the school to biomedical research as evidenced by the ranking of the medical school in extramural awards received from the National Institutes of Health (NIH), and nationality (United States vs Canada). Independent sample *t* tests or analysis of variance were used to assess the statistical significance of differences between groups in the importance scores and other continuous variables, such as the number of publications expected for promotion. Pearson χ^2 analyses were used to assess the significance of differences between groups in the frequency of use ratings of evaluation methods.

In addition, Spearman correlation analyses were performed to assess the relationship between the importance scores and the frequency of use ratings assigned to the methods of evaluating specific aspects of a clinician-educator's performance. Analysis of variance also was used to assess the statistical significance of differences in importance scores between each item within a set of methods for evaluating a particular aspect of a clinician-educator's performance. The Tukey rating for honestly significant difference was used for the most accuracy and power post hoc to demonstrate homogeneous subsets of items within each set of methods for evaluating one aspect of job performance.¹³ Finite sampling corrections were not applied since we were interested in the underlying generalizable characteristics of the population. For each test, we used a *P* value of .05.

RESULTS

Characteristics of Responding Promotion Committees

One hundred fifteen (81%) of the 142 medical schools in the United States and Canada responded to the survey. There were no significant differences between respondents and nonrespondents in the percentage of schools that were in Canada (11% vs 7%, *P* > .05); nor were there significant differences in the percentage of US schools listed in the top quartile of schools receiving extramural awards from the NIH (24% vs 31%, *P* > .05).

The pertinent characteristics of the respondents and their promotion committees are summarized in Table 1. In addition, the responding promotion committees had a median of 10 members (range, 3-126) on the committee. The median number of faculty considered for promotion to associate professor in the last year was 21 (range, 0-220), and the median number promoted to associate professor was 16 (range, 0-210).

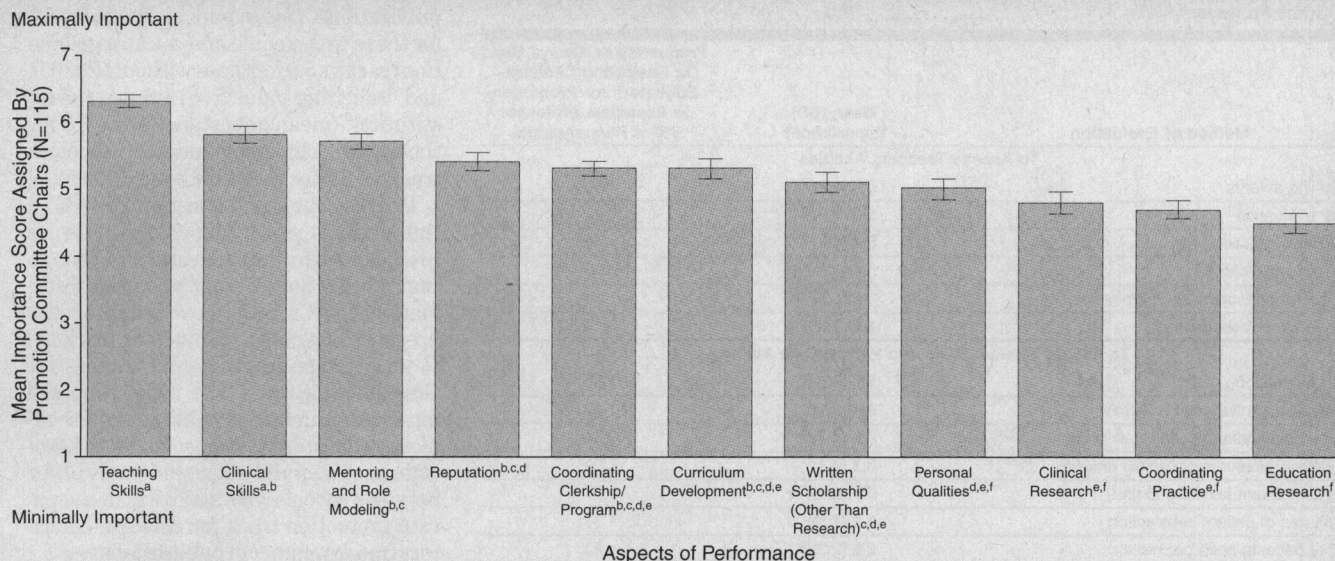
Importance of Specific Aspects of Clinician-Educators' Performance

In decisions to promote clinician-educators to the rank of associate professor, promotion committee chairpersons rated the importance of various aspects of clinician-educators' jobs, as shown in the Figure. All 11 aspects of a clinician-educator's performance that were included in our survey were given a mean importance score greater than 4 on the scale from 1 to 7. Teaching skills had the highest importance score, and this score was significantly greater than the importance assigned to all other aspects of a clinician-educator's performance except for clinical skills. Clinical research, coordination of a practice or consultation service, and medical education research were considered the least important.

Importance and Frequency of Use of Methods for Evaluating Specific Aspects of a Clinician-Educator's Performance

In Table 2, the various methods that may be used to evaluate each specific aspect of a clinician-educator's performance are presented in descending order of their mean importance to the promotion committees, along with information about how frequently the methods are reportedly used by the committees.

In general, there was a significant correlation between the importance score assigned to a method of evaluation and the frequency with which that method reportedly was used by the promotion committee, with Spearman correlation coefficients ranging from 0.44 to 0.88 (*P* < .05).



Importance of specific aspects of a clinician-educator's performance when the promotion committee makes decisions about promotion to associate professor. Superscript letters refer to homogeneous subsets of items whose means are not significantly different from others in the subset according to the Tukey rating for honestly significant difference. For example, the mean scores assigned to clinical skills, mentoring and role modeling, reputation, coordinating clerkship/program, and curriculum development were not significantly different from each other and are designated as subset "b." However, the mean score assigned to clinical skills also falls into subset "a" and was not significantly different from the mean score assigned to teaching skills. Error bars indicate SE.

Nearly 70% or more of the promotion committee chairpersons indicated they always or frequently use "teaching awards," "peer evaluation," "learner evaluation," and "teaching portfolios" to evaluate clinician-educators' teaching performance. "Videotaping and direct observation" and "other objective measures" of teaching were used infrequently and were generally felt to hold much less importance.

The 3 most important methods for evaluating a candidate's clinical skills were "peer evaluation," "awards for clinical performance," and "trainee evaluation of clinical skills"; these methods were reportedly used by 50% or more of the committees either frequently or always. "Objective measures of clinical practice" were used frequently or always by only 29% of the respondents. Likewise, specific objective measures such as the "number of inpatient service months," "measures of patient satisfaction," and the "number of patients seen per month" were rarely used. The mean importance rating of "income generated from practice" was significantly lower ($P < .05$) than the mean ratings of the other methods for evaluating clinical performance and was never used by 68% of the schools.

Sixty percent or more of the committees reported that they are frequently or always using 3 potential methods for evaluating mentoring skill—peer input, outside institution input (eg, external assessments of the faculty member's trainees), and trainee input—and find all 3 methods highly important. The method

considered most important for evaluating a clinician-educator's reputation was a national, peer-reviewed award. This criterion was reportedly used frequently or always by 90% of the promotion committees. More than half of the committees report they frequently or always use "institutional committee involvement," "success in administering a course/clerkship," "success in administering a clinical service/practice," and "success in administering a training program" as measures of a clinician-educator's administration skills. Sixty percent or more of the committee chairpersons report using each of the listed methods of evaluating personal qualities frequently or always and find each of them very important.

More than 80% of promotion committee chairpersons indicated they use 4 methods frequently or always to evaluate the research and scholarly work of clinician-educators, including "grant support," "the journal in which a publication appears," "the number of peer-reviewed publications," and "serving on an editorial board." The "impact of a publication" was not deemed to have as much importance as the other methods, and only 39% of respondents reported using it frequently or always as a method of evaluation.

Publication Expectations

Survey responses regarding the minimum number of peer-reviewed publications a clinician-investigator or a clinician-educator candidate was expected to have to be promoted to the rank of associate

professor are summarized in Table 3. More than half of the respondents answered this question by filling in a number, and among those respondents, nearly twice as many publications were expected from clinician-investigators as from clinician-educators ($P < .001$). About one quarter of the respondents wrote in responses indicating there was no expected minimum number of publications for clinician-investigators or clinician-educators. The remaining respondents wrote in responses that could not be translated into a specific minimum number.

Comparisons Between Subgroups of Schools

Selected subgroup comparisons were performed to determine whether survey responses differed according to specific characteristics of respondents and their schools. When we compared responses from schools that had and did not have a special promotion track for clinician-educators, we found that the importance ratings assigned to all 11 aspects of a clinician-educator's performance were not significantly different between the 2 subgroups except for the ratings of importance for "written scholarship other than original research" (mean importance score 4.7 for those with a clinician-educator promotion track vs 5.5 for those without; $P < .05$). There also were very few differences between the 2 subgroups in ratings of the importance of the 48 methods for evaluating specific aspects of a clinician-educator's performance, the only differences being in the importance scores

Table 2.—Importance and Frequency of Use of Methods to Evaluate Clinician-Educators for Promotion to Associate Professor*

Method of Evaluation	Mean (SD) Importance†	Frequently or Always Used in Evaluating Clinician-Educators for Promotion to Associate Professor (% of Respondents)
To Assess Teaching Abilities		
Teaching awards	6.0 (1.1) ^a	80
Peer evaluation	5.9 (1.2) ^a	85
Learner evaluation	5.4 (1.8) ^a	72
Teaching portfolio	5.4 (2.2) ^a	73
Objective measures (eg, learner scores)	3.5 (2.6) ^b	34
Video/direct observation	1.4 (2.0) ^b	5
To Assess Clinical Skills and Patient Care Abilities		
Peer evaluation	5.7 (1.6) ^a	78
Awards for clinical performance	5.4 (2.1) ^a	65
Trainee evaluation of clinical skills	4.8 (2.1) ^a	58
Objective measures of clinical practice	3.3 (2.4) ^b	29
No. of inpatient service months	3.1 (2.4) ^b	37
Measures of patient satisfaction	2.6 (2.5) ^b	13
No. of patients seen per month	2.6 (2.3) ^b	23
Income generated from practice	1.6 (2.1) ^c	8
To Assess Role Model/Mentor Abilities		
Peer input	5.9 (1.2) ^a	84
Outside institution input	5.3 (1.8) ^b	65
Trainee input	5.1 (1.9) ^b	65
To Assess Reputation		
National, peer-reviewed awards	6.3 (0.9) ^a	90
Soliciting input from outside the institution	5.8 (1.6) ^{a,b}	79
Regional/national office in academic society	5.7 (1.2) ^b	90
Invited lectures	5.6 (1.2) ^b	93
Soliciting input from within the institution	5.6 (1.3) ^b	76
Service on committee for professional organization	5.5 (1.2) ^b	93
To Assess Administrative Abilities		
Institutional committee involvement	5.3 (1.5) ^a	87
Success in administering a course/clerkship	5.3 (1.7) ^a	70
Success in administering a clinical service/practice	4.8 (1.8) ^a	68
Success in administering a training program	4.7 (2.1) ^a	58
Committee comments	3.6 (2.3) ^b	29
To Assess Abilities in Developing Educational Programs		
Publications related to a curriculum	5.2 (1.9) ^a	57
Curriculum innovation	5.2 (1.9) ^a	61
No. of curricula developed	5.1 (1.7) ^a	57
Results of evaluation of a curriculum	4.9 (2.1) ^a	48
Presentation of curriculum at national meeting	4.4 (2.1) ^a	41
No. of learners receiving a curriculum	3.7 (2.0) ^b	39
To Assess Personal Qualities		
Ethical conduct	5.8 (1.6) ^a	69
Leadership qualities	5.6 (1.4) ^a	84
Building collaborative relationships	5.5 (1.3) ^a	78
Effectiveness in working with others	5.2 (1.6) ^a	77
Enthusiasm at work	4.3 (2.2) ^b	58
To Assess Research/Scholarly Abilities		
Grant support	5.8 (1.6) ^a	86
Journal name	5.7 (1.5) ^a	87
No. of peer-reviewed publications	5.6 (1.4) ^a	86
Service on editorial board	5.3 (1.5) ^{a,b}	82
Development of workshop for national meeting	4.9 (1.5) ^{b,c}	71
Book chapters, reviews	4.8 (1.3) ^{b,c}	80
Review of articles' quality	4.4 (1.9) ^{c,d}	44
Presentation of abstract at national meeting	4.0 (1.7) ^d	67
Publication impact (measured by citation index)	3.7 (2.3) ^d	39

*Superscript letters refer to homogeneous subsets of items whose means are not significantly different from others in the subset according to the Tukey rating for honestly significant difference. See the Figure legend for further explanation.

†1 indicates minimally important; and 7, extremely important.

assigned to “the number of peer-reviewed publications” (mean importance score 5.3 for those with a clinician-educator promotion track vs 5.9 for those without; $P < .05$), and “soliciting input from outside the institution” (mean importance score 6.3 for those with a clinician-educator promotion track vs 5.6 for those without; $P < .05$).

Because our study question focused on the methods promotion committees use to evaluate clinician-educators for promotion, we did not attempt to gather information that would show whether the presence of a clinician-educator track led to an increase in promotion success for clinician-educators. The mean reported minimum number of publications for clinician-educators to be promoted to associate professor did not significantly differ between schools with and without a separate promotion track for clinician-educators (mean number of publications was 5.1 for those with a clinician-educator promotion track vs 6.6 for those without; $P = .30$).

The results were similar when we compared responses from schools that used specific criteria for the promotion of clinician-educators with those not using such criteria. In this subgroup comparison, there were no significant differences in the importance ratings of any of the 11 aspects of a clinician-educator's performance. There also were no significant differences between these 2 subgroups in the importance scores assigned to specific methods for evaluating a clinician-educator's performance except for 3 methods for evaluating research skill and 1 method for evaluating clinical skill: “grant support” (mean importance score 5.5 for those with specific clinician-educator promotion criteria vs 6.2 for those without; $P < .05$), “the journal in which publication appears” (mean importance score 5.4 for those with specific clinician-educator promotion criteria vs 6.0 for those without; $P < .05$), “the number of peer-reviewed publications” (mean importance score 5.3 for those with specific clinician-educator promotion criteria vs 6.0 for those without; $P < .05$), and “the number of patients seen per month” (mean importance score 2.1 for those with specific clinician-educator promotion criteria vs 3.1 for those without; $P < .05$).

When we compared schools according to the amount of extramural awards they received from the NIH in 1996, we found no significant differences in mean importance scores assigned to the 11 different aspects of a clinician-educator's performance. One of the only significant differences in survey responses between those with large vs small amounts of NIH funding was in the importance assigned to the category “review of articles' quality” when evaluating research skills (mean importance score 5.1 for

those in the top quartile of NIH funding vs 3.8 in the bottom quartile; $P = .01$).

When we compared the responses from Canadian schools ($n = 13$) with those from US schools ($n = 102$), we found no significant difference in the ratings of the importance of specific aspects of a clinician-educator's performance. Again, despite multiple comparisons and a liberal P value of .05, there were very few differences between the ratings of the importance of specific methods for evaluating a clinician-educator's performance. Two of the exceptions were that Canadian schools assigned higher importance scores than US respondents to "teaching portfolios" (6.5 vs 5.3; $P < .001$) and the "journal in which a publication appears" (6.4 vs 5.6; $P = .009$).

COMMENT

Overall, the results of this study should be very encouraging for clinician-educators. It certainly is not surprising that teaching and clinical skills would have the greatest importance when evaluating a clinician-educator. However, the ratings of the importance of these 2 skill areas provide a benchmark for understanding the importance of the other aspects of a clinician-educator's performance that some people have feared are not being explicitly considered when promotion committees evaluate clinician-educators. The fact that nearly all aspects of a clinician-educator's job performance were considered highly important by promotion committees undoubtedly reflects the forces that have increased the demand for clinician-educators on today's medical school campuses.^{9,14} These results give the impression that promotion committees appreciate the critical roles that clinician-educators play in academic medical centers—an impression about which current and aspiring clinician-educators need to feel assured.¹⁵ A study 10 years ago at one institution showed that when the faculty who resigned were counted as nonpromoted, the rate of promotion for clinician-educators was significantly lower than that for clinical researchers or basic science researchers.¹⁶

Although it is possible that the views of promotion committees about the promotion of clinician-educators to associate professor may not apply to promotions to the rank of full professor, we felt it was important to focus on the jump to associate professor because this has been the stumbling point for many clinician-educators in the past. Since our study was not designed to determine whether promotion committees act in full accordance with the reported views of our respondents, it is possible that respondents may have overstated the importance and frequency of use of the criteria listed in our questionnaire. We made an effort to minimize this

Table 3.—Minimum Number of Peer-Reviewed Publications That Clinician-Educators and Clinician-Investigators Are Expected to Have for Promotion to Associate Professor ($N = 115$)

Title	No. (%) of Respondents Providing a Numerical Response	Minimum No. of Peer-Reviewed Publications Expected, Mean (Range)	No. (%) of Respondents Indicating No Expected Minimum*	No. (%) of Respondents Providing Other Nonquantifiable Responses
Clinician-investigator	66 (57)	10.6† (0-33)	28 (24)	21 (18)
Clinician-educator	69 (60)	5.7† (0-33)	27 (23)	19 (17)

*Although the question asked for a number, many respondents wrote phrases indicating that they have "no minimum requirement."

† $P < .001$ by t test for the difference in means between clinician-investigators and clinician-educators.

potential problem by assuring the committee chairs that their responses would be confidential. Also, we included a variety of criteria for evaluating each aspect of performance, regardless of whether we thought they were desirable or undesirable. We believe this approach helped us to reasonably differentiate the relative importance of different criteria for evaluating clinician-educators. Indeed, the consistency of responses between schools is reassuring and should help to establish more uniform standards for the promotion of clinician-educators that can be used by individual schools.

Medical educators as well as medical administrators have indicated a great need for the academic medical community to develop more appropriate methods for evaluating clinician-educators.^{2,17} Many also feel a need to reconsider how scholarship is defined, so that it is not limited to traditional forms of scholarship that may fit better with research activities than with other job aspects that are equally important to medical schools.² For this redefinition, many medical schools have been turning to Boyer's¹⁸ view of scholarship, which includes the scholarship of teaching, the scholarship of integration (eg, review articles, book chapters), the scholarship of application (eg, clinical practice), and the scholarship of discovery (eg, traditional research).

For example, a cardiologist who provides exemplary care for her patients, practices cutting-edge medicine, runs an efficient practice that generates income for the medical center, and serves as an important role model for trainees can be evaluated for her "scholarship of application." Schools have reported developing strategies for evaluating clinician-educators based on this expanded view of scholarship that reflects acknowledgment of the many important job characteristics of clinician-educators.^{9,10} Our results, which highlight the importance of all aspects of a clinician-educator's job and the many methods being used to evaluate them, provide evidence that, indeed, most medical schools are using an expanded view of scholarship and do not have a single "make or break" criterion for promotion of clinician-educators. This expanded view of clinician-educators' scholarly contributions

would help to explain why medical school promotion committees now indicate they do not expect as many peer-reviewed publications from clinician-educators as from clinician-investigators.

An important finding gleaned from Table 2 is that most committees are frequently or always using a variety of explicit methods to evaluate each of the many specific aspects of a clinician-educator's performance and generally view these methods as very important. It is particularly encouraging to see such widespread use of teaching portfolios. The value of teaching portfolios is that they call for a variety of different types of information about a clinician-educator's performance, such as specified teaching dates, curricula designs, precepting roles, and objective evidence of teaching achievements.¹⁹ We did not directly ask about the importance of the category "amount of teaching," but we provided blanks for written responses and no respondent wrote that this was an important criterion, perhaps because it falls under the purview of a teaching portfolio. Many methods for evaluating clinician-educators that were listed in our survey can actually be incorporated into a teaching portfolio, thereby providing a way for clinician-educators and promotion committees to systematically collect information needed for promotion decisions.

We were surprised to find that the presence or absence of a clinician-educator promotion track made little difference in the methods used to evaluate candidates for promotion, especially since some promotion committees use criteria for clinician-educator tracks that are more strictly defined than for other tracks.²⁰ One explanation for our results could be that discussions about the desirability of having such tracks has, in fact, caused a cultural change at medical institutions even when such tracks have not been instituted. It also is possible that all faculty members, not just clinician-educators, are now being evaluated by a broadened definition of scholarship. Clinician-educators at schools that have a major research emphasis, with or without a clinician-educator track, may be particularly worried about being judged by promotion committees that histori-

cally have placed great emphasis on research contributions. Thus, it is noteworthy that we found virtually no significant differences between schools with large vs small amounts of NIH funding for research. Further investigation is needed to determine whether the reported methods for evaluating clinician-educators are actually applied in the same way by schools with and without a separate track for clinician-educators. Nevertheless, our results suggest that it is more important to ensure that appropriate methods are in place to evaluate clinician-educators than to worry about whether a school has a separate promotion track for clinician-educators, regardless of whether a school has a major research emphasis.

Despite these encouraging aspects of our findings, the survey points out some potential areas of concern about the promotion process of clinician-educators that need to be further addressed. First, our study indicates that direct observation and video review are rarely, if ever, used in the evaluation of clinician-educators. On the other hand, peer review is used quite frequently. Irby¹¹ recommends a peer review system that includes direct observation. Although it is time-intensive, direct observation provides an opportunity to decrease the subjectivity and potential unreliability of peer review. The second area of concern is that the 3 methods rated least important and used least frequently by promotion committees for evaluating clinical skills—measures of patient satisfaction, number of patients seen per month, and income generated from practice—are increasingly used by managed care organizations and medical centers

to evaluate clinicians.²¹⁻²³ These types of measures of clinical performance, which often are viewed as inversely related to scholarship, are likely to be increasingly important to medical schools and should be considered more frequently by promotion committees if faculty and their trainees are to highly value patient satisfaction and clinical productivity. Indeed, the Society of General Internal Medicine's recently developed promotion guidelines for clinician-educators encourage the use of these types of measures of clinical practice in promotion decisions so that greater attention is given to the scholarship of application.²⁴

A third area of concern is that several methods used frequently to evaluate aspects of a clinician-educator's merit involve peer-reviewed awards, of which there are relatively few. The development of rigorous, peer-reviewed awards for clinician-educators has been encouraged to increase clinician-educators' opportunities for recognition.²⁵ A fourth area of concern is that many schools seem to devote relatively little attention to the evaluation of a clinician-educator's ability to develop educational programs, even though there is a tremendous demand for ongoing curriculum development in most medical schools. We hope to encourage schools to develop and use more explicit methods for evaluating a clinician-educator's ability in developing educational programs.

The final area of concern is that most schools seem to rely on indirect markers of the quality of research skill such as grant support, the names of certain trusted journals, and the number of peer-reviewed publications and seem less interested in conducting a more di-

rect assessment of the quality and impact of a faculty member's work. While it makes sense to use these types of markers that are derived from an external peer review process, overdependence on measures such as publication volume may simply represent "administrative laziness."²³

The good news for clinician-educators is that schools are using and finding important a number of methods to evaluate their contributions and skills. We hope that this information can help put to rest much of the angst clinician-educators have in approaching their reviews for promotion by letting them know that their committees are, in general, making allowances for their acknowledged decreased opportunity to generate the quantity of peer-reviewed publications expected from other faculty and are looking in greater detail at the other major aspects of their performance, particularly teaching and clinical skills.

Promotion committees function not only to reward faculty but to maintain the quality of faculty effort. The reliance on the peer review process has successfully engendered high-quality medical research in a number of institutions. Promotion criteria that further careers of clinician-educators should also advance institutional goals of high-quality patient care and medical education. As medical schools redefine and implement new promotion criteria, further research examining the impact of such criteria will be necessary.

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