Patient, Faculty, and Self-Assessment of Radiology Resident Performance: A 360-degree Method of Measuring Professionalism and Interpersonal/Communication Skills

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Rationale and Objectives. To develop and test the reliability, validity, and feasibility of a 360-degree evaluation to measure radiology resident competence in professionalism and interpersonal/communication skills.

Materials and Methods. An evaluation form with 10 Likert-type items related to professionalism and interpersonal/communication skills was completed by a resident, supervising radiologist and patient after resident-patient interactions related to breast biopsy procedures. Residents were also evaluated by faculty, using an end-of-rotation global rating form. Residents, faculty, and technologists were queried regarding their reaction to the assessments after a 7-month period.

Results. Fifty-six complete 360-degree data sets (range, 2–14 per resident) and seven rotational evaluations for seven residents were analyzed and compared. Internal consistency reliability estimates were 0.85, 0.86, and 0.87 for resident, patient, and faculty 360-degree evaluations, respectively. Correlations between resident-versus-patient, resident-versus-faculty, and patient-versus-faculty ratings for the 56 interactions were $-0.06 (P = .64)$, $0.31 (P < .02)$, and $0.45 (P < .0006)$, respectively. Pearson correlation coefficients approached significant correlation ($0.70$) between the faculty global rating and patient 360-degree scores ($P = .08$) but not with faculty 360-degree scores. Residents and faculty felt that completing the 360-degree forms was easy, but the requirement for faculty presence during the consent process was burdensome.

Conclusion. Results from this pilot study suggest that self, faculty, and patient evaluations of resident performance constitutes a valid and reliable assessment of resident competence. Additional data are needed to determine whether the 360-degree assessment should be incorporated into residency programs and how frequently the assessment should be performed. Requiring only a specified number of assessments per rotation would make the process less burdensome for residents and faculty.

Key Words. 360-Degree evaluation; evaluating radiology residents; evaluating professionalism; evaluating interpersonal/communication skills.

The Accreditation Council for Graduate Medical Education (ACGME) is placing increased importance on actual educational outcomes in the accreditation of residency programs. The action is a response to concerns regarding the new graduate’s ability to meet the demands of today’s practice environment. Previously, accreditation was focused on the potential of the residency program to educate residents through assessment of written objectives, an organized curriculum, and performance evaluations of residents and the program. However, just as giving a resident the opportunity to learn does not ensure that he or
she will learn, the structure and process of a residency program does not necessarily correlate with the desired eventual educational outcomes. As a result, the accreditation process is now focused on the assessment of program outcomes (ie, whether residents achieve the stated objectives, whether the program provides evidence of this achievement, and whether it demonstrates continuous improvement in its educational process).

The ACGME Outcome Project Advisory Committee identified six general competencies that were subsequently endorsed by the ACGME in February 1999: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Several of these general competencies have not been emphasized in the curriculum of radiology residency programs. In particular, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice have not been areas of focus and may be perceived as difficult to objectively evaluate. Formal education and assessment of resident competence in these areas will represent a change in most radiology residency programs as program directors are challenged to be in compliance with the ACGME requirements. The Education Committee of the Association of Program Directors in Radiology published a consensus document describing the six competencies, resident skills and education, and resident assessment as they relate specifically to radiology residency (1). Within this document, 360-degree evaluations were included as a potential assessment method for measuring professionalism and interpersonal/communication skills. The same committee also developed a global rating form with items related to each of the six competencies (2). The committee recommended that this form be used in conjunction with other evaluation tools to provide a complete assessment of resident competence.

The ACGME and the American Board of Medical Specialties collaborated to develop a “Toolbox of Assessment Methods,” which included the use of a 360-degree evaluation instrument (3). The 360-degree evaluation is an assessment tool consisting of information gathered from a variety of people in the worker’s sphere of influence (ie, superiors, peers, subordinates, and patients). We know of no efforts to evaluate this tool in radiology residency programs. However, resident evaluation by faculty, peers, and support staff has been studied in many other specialties including obstetrics/gynecology, physical medicine and rehabilitation, and emergency medicine (4–6).

A search of radiology literature for publications related to dependable assessment methods to measure radiology resident competence in professionalism and interpersonal/communication skills revealed only one article that looked at objective structured clinical examinations to assess the reporting skills of radiology residents (7). Suggested best methods for evaluation of the six competencies (8) and pilot work in implementation of these methods (9,10) is available, but is not directly related to the evaluation of radiology residents.

The Residency Review Committee Think Tank, composed of members or former members from eight Residency Review Committees and a representative from the American Board of Medical Specialties, has identified a minimum set of techniques to be used in assessing the competencies (11). The suggested techniques include global ratings of all the general competencies, focused faculty assessment of multiple resident-patient encounters, and a modified 360-degree assessment including ratings from at least one professional associate and patients regarding resident professionalism and interpersonal/communication skills.

In summary, the 360-degree evaluation approach is clearly seen as one of the more promising approaches to assessing the more subjective elements of the competencies. While there is preliminary data to support its use, it will take multiple studies across multiple disciplines to determine its strengths and weaknesses, especially as to whether the approach generalizes to all or at least a majority of medical specialties. The purpose of this study was to develop and test the reliability, validity, and feasibility of a 360-degree evaluation to measure radiology resident competence in professionalism and interpersonal/communication skills.

**MATERIALS AND METHODS**

A 360-degree evaluation form was developed to evaluate resident professionalism and interpersonal/communication skills. Length of the form was an issue because it was hoped that multiple evaluations could be performed on the same day without detracting from clinical duties and responsibilities. A number of specific ideas were proposed to assess the professionalism and interpersonal/communication skills exhibited during a resident/patient encounter. The final checklist of 10 items was determined by a consensus of the investigators (including a radiology resident, a non-radiologist medical educator, and six breast imaging specialists), and a review of the current
At University of Wisconsin Hospital and Clinics we’re committed to providing the very best care and service possible. This means examining every aspect of the service that we provide. Please take a moment and complete this survey relating to the care and service you received from your Resident Physician.

Feel free to express your opinions and comments freely as all information will be kept confidential. We thank you in advance for completing this survey.

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1) Resident identified self and role clearly ........................................ 1 2 3 4 5
2) You were addressed in an appropriate manner by resident .................. 1 2 3 4 5
3) Resident demonstrated good listening skills ...................................... 1 2 3 4 5
4) Information communicated by resident was easy to understand ............ 1 2 3 4 5
5) Resident addressed questions and/or concerns to your satisfaction ........... 1 2 3 4 5
6) Need for your procedure was explained clearly by resident ................. 1 2 3 4 5
7) Resident explained risks and benefits of procedure .......................... 1 2 3 4 5
8) Resident discussed alternative procedures ...................................... 1 2 3 4 5
9) Resident showed concern for your comfort during the procedure ............ 1 2 3 4 5
10) Resident appeared knowledgeable about how to perform procedure ....... 1 2 3 4 5

How many minutes did you spend completing this form? __________

Comments:
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Figure 1. 360-Degree evaluation form.

literature (9,10). Each item was rated from 1–5 using a Likert-type scale with 1 = strongly disagree, 3 = neutral, and 5 = strongly agree (Fig 1). The form included an inquiry of how long (in minutes) it took to complete the form and space for comments. It also included the statement that the patient’s opinions and comments would be kept confidential and would not affect the patient’s care. The form was designed in conjunction with the institu-
tion’s Hospital Decision Support Group. This project was submitted to the institutional Internal Review Board before data collection and was given an exemption from the University of Wisconsin Human Subjects Committee.

During a 7-month period, seven radiology residents rotated through the Breast Imaging service at the University of Wisconsin Hospital and Clinics (Madison, WI). Each resident was given an 8-page document describing the 360-degree project before implementation. This document, which included specific criteria for rating each of the 10 items, was discussed between each resident and one of the investigators (J.C.) before the time each resident rotated through the breast imaging service. Residents were requested to participate in the 360-degree evaluation process whenever involved in a resident/patient encounter during the rotation. A resident/patient encounter involved discussing the radiologic findings with the patient, obtaining informed consent, and performing an interventional procedure. One of six breast imaging specialists monitored each encounter and evaluated the resident using the 360-degree form. The patient was informed of the evaluation process by the breast imaging technologist before meeting the resident or faculty. The patient was asked to volunteer to evaluate the resident using a different copy of the same form. Finally, the resident was asked to evaluate his/her own performance using a third copy of the same form. Each form had a unique coding number and the date of the encounter was recorded on the form by either the rater or the technologist. The data was entered into an excel spreadsheet and then imported into SAS for statistical analysis of the ratings by each group.

Once the initial data had been processed and feedback was provided to each resident regarding how he/she was rated, individual “personal quality improvement” interviews were conducted between one of two supervising faculty (J.C., P.A.P.) and each resident. Specific questions were asked of the residents as to how the evaluation data may help them improve patient care and what they thought of the value and feasibility of the 360-degree assessment. Additionally, short questionnaires were given to the participating faculty and breast imaging technologists to elicit further opinions about the ease or difficulty of administering such an evaluation.

Traditionally, radiology residents on the breast imaging service were evaluated only once by the faculty at the end of the rotation with a global rating form. This global rating form included items related to the six previously mentioned general competencies, had a rating scale identical to the 360-degree form, and provided an overall rating. We used data from the global rating forms pertaining to professionalism and interpersonal/communication skills as the “gold standard” and compared it with data from the 360-degree forms. This comparison provided a measure of validity.

Comparison of ratings between the patient, faculty, and resident for each encounter provided a measure of concurrent validity. Feasibility was evaluated based on the time and training required to implement the assessment, compliance with the data collection protocol, and any other perceived obstacles. Interview and questionnaire feedback also provided information pertaining to feasibility and the potential for education and behavior change in residents.

Correlations among the 360-degree evaluations were computed using both the patient encounter and the resident as the unit of analysis for comparison purposes. Comparison of resident performance on the 360-degree evaluation with the end-of-rotation global rating relied solely on the resident as the unit of analysis. Pearson correlations were used in all cases.

Estimation of the internal consistency reliability of scores on the 360-degree evaluation used the patient encounter as the unit of analysis. Cronbach’s alpha for the 10 items was computed separately for each respondent group. Scores were reported as mean item scores to facilitate comparisons.

Comparisons among mean ratings by patients, residents, faculty, and the end-of-rotation global ratings were computed by a one-factor analysis of variance using the resident as the unit of analysis. A sub-analysis of the patients, residents, and faculty mean ratings on the 360-degree evaluations was conducted using patient encounter as the unit of analysis. A P value of <.05 was considered statistically significant.

RESULTS

Of approximately 100 resident-patient interactions occurring over the 7-month study period, we were able to obtain complete 360-degree data sets with scores from all three raters from 57 interactions. The 57 resident-patient interactions were from seven different residents (range, 12–14 per resident). One set was not included in the analysis because it was believed that the patient misunderstood the Likert scale and scored the resident very low, when the other observers thought the interaction had gone well.
360-Degree and Global Rating Data

The internal consistency reliability estimates for the 360-degree ratings were 0.85, 0.86, and 0.87 for residents, patients, and faculty, respectively. This established adequate internal consistency to simply average the scores of the 360-degree items for analysis. Table 1 shows the mean, maximum, and minimum scores given by each of the three rating groups in the 360-degree evaluation (10 items per form), as well as the mean of the five items from the global rating form pertaining to professionalism and interpersonal/communications skills (as previously stated, the value reported is the mean item score on each form, so each mean reported in Table 1 is the mean of the mean item score). Patients reported the highest mean interaction scores (4.86), while the residents and faculty reported slightly lower scores (4.67 and 4.66, respectively). The analysis of these differences using the patient interaction as the unit of analysis showed a statistically significant difference for the patient ratings ($F = 9.62$, $P < .0002$). The global rating score was somewhat lower yet (4.49), suggesting the faculty were more critical of resident performance at the end of the rotation when summative evaluation and decision-making takes place. The analysis of the global rating score using the resident as the unit of analysis showed no statistical significance for any group ($F = 2.00$, $P = .1412$).

Table 2 shows correlations among the 360-degree ratings for the three groups of raters with the resident (n = 7) as the unit of analysis. No correlation exceeded .32, nor was any statistically significant. When the correlations were computed using the patient interaction as the unit of analysis (Table 2), a somewhat different picture emerged. The resident-patient correlation remained essentially zero and the resident-faculty correlation remained approximately .30, but was now statistically significant. A major change occurred for the patient-faculty correlation. While the correlation was only .06 when computed at the resident level, it rose to .45 ($P < .0006$) when computed at the patient interaction level.

Table 3 compares the correlation coefficients of the global ratings versus the 360-degree ratings for each of the three groups of raters. The only correlation that approached statistical significance was between the global rating and the patient 360-degree score, with a correlation of .70, at $P = .08$. This relationship is somewhat strong and in a positive direction, suggesting that as residents received higher patient ratings, they also received higher global rating scores from the faculty. It is interesting that the faculty 360-degree score was not significantly correlated with the faculty global rating score, which may be a result of more critical scoring at the end of the rotation.

Resident Interview Results

Many valuable comments were gathered from the quality improvement interviews with residents. The residents were provided with the mean ratings from themselves, patients, and faculty. The residents were asked about their reaction to the ratings they received, how this information would help them improve the quality of patient care, and what they thought the value of the 360-degree evaluation was to quality improvement.

The majority of the residents felt positive about the experience. Many felt that the evaluations increased their awareness of how they interact with patients and would help them communicate more effectively with patients. During one encounter a resident felt that he had conveyed the description of the procedure and obtained informed consent adequately, but received negative ratings from the
patient. This feedback helped the resident realize that he must tailor his discussion to ensure that the information is fully understood by the patient. Some residents reported a higher self-awareness of how they identify themselves to patients and how they discuss alternatives during the informed consent process. These statements mirrored the rating criteria that were reviewed by residents and faculty before the start of the rotation. Having written criteria was also appreciated by the faculty, one of whom stated, “Having criteria for rating resident’s performance provided to the resident at the beginning of the rotation made it easier to objectively evaluate the resident.”

Most residents felt it was good to get feedback from the patients, and commented that it was rare for them to receive this type of feedback. However, one of the seven residents did not feel it was a positive experience. He thought that the interaction was artificial because of the “grading sheet” and that the technologists had an inaccurate perception of the resident’s role as more of a student than doctor. He felt this was conveyed to the patient when the technologist informed the patient of the 360-degree evaluation and that this hindered the patient-doctor relationship. A few residents had concerns that the breast imaging center was already a high-stress environment for women having biopsies, aspirations, and other procedures. They did not like giving the impression through this study that the residents were “practicing on women.” They thought this could cause women more anxiety and possibly affect the way the resident is evaluated. One resident felt that it was not appropriate for patients to evaluate residents, while another felt that patients are the ones who really matter in the whole process and that this empowers patients. The majority of all raters felt that the 360-degree evaluation did not take much time to complete. However, procedures were delayed when the supervising faculty were busy with other duties because faculty presence was required throughout the pre-procedural discussion and they were not always readily available.

Faculty and Technologist Questionnaire Results

Questionnaires completed by the faculty included items inquiring about the difficulty in having to be present for the resident/patient interaction, time spent completing the evaluation, and interference with other clinical duties. Four (80%) of the five responding faculty felt it was not difficult to remember to complete the evaluation, the evaluation did not require much time, and it did not interfere with their clinical duties. In fact, over 90% of the 360-degree forms were completed by all raters in less than 1 minute. However, three (60%) of the five faculty felt it was difficult to be present for the entire interaction and all felt that, while not necessarily interfering with other clinical duties, it took time away from performing other tasks such as supervising and reading diagnostic exams. It was suggested that the 360-degree evaluation be performed less often during the rotation. Three (60%) of the five faculty felt it was burdensome to assure that all raters completed the form. This likely contributed to the low number of completed data sets.

Five breast imaging technologists stated that informing the patients of the evaluation process and distributing evaluation forms to the patients did not increase the technologist’s workload and did not detract from other responsibilities. All five reported that it was difficult to remember to always do this, which was related to the uncertainty that they had in knowing when a resident would be involved in a procedure.

DISCUSSION

Global ratings are the most widely used method of assessment in graduate medical education (12). However, the desired product of the ACGME Outcome Project is more credible, accurate, reliable, and useful educational outcome data. Research has shown that global ratings can exhibit systematic rater errors of leniency/severity, range restriction (failure to use the entire rating scale), failure to distinguish among dimensions (halo effect), and cognitive distortion (inappropriate weighting to form judgments) (13). The content validity of global ratings is also questionable. Because ratings represent an aggregate across time, there is no way of determining what content (knowledge, skills, behaviors) is actually being evaluated or the extent to which it is representative of the larger domain (12). Our study focused on the 360-degree evaluation. Professionalism and interpersonal/communication skills are particularly well suited to be evaluated by such a tool. Patients may not know whether the resident caring for them is medically competent. However, patients do know how they have been treated and how the resident has interacted with them on a human level.

The use of 360-degree instruments to evaluate resident competency is not common practice in graduate medical education, and to our knowledge, has not been reported as a tool used in radiology residency programs. Although rarely cited in the medical literature, 360-degree feedback is currently in widespread use in the business sector (14). In fact, it is estimated that 8% of major companies are
Currently using this method of feedback for all levels of employees (15). Many 360-degree feedback instruments are commercially available, although they are limited by cost, lack of validation in medical education, potential for information overload, selection bias, discoverability, and the potential for less-than-honest feedback (eg, from patients whose unrealistic expectations go unmet) (16). In business, military, and education settings, reliability estimates have been reported as high as 0.90 for 360-degree evaluation instruments (17).

An evaluation form was developed and tested at the University of Florida College of Medicine, Department of Obstetrics and Gynecology (Jacksonville, FL), that contained 16 items related to clinical competency, interpersonal skills, and overall assessment (4). The evaluations were completed by self (ie, residents), peers, faculty, and nurses. Ratings provided by the nurses were the least reliable of the groups rating the residents. There was a low degree of correlation between attending and self-evaluations and attending and nurse evaluations. The study showed that residents benefited from doing self-evaluations to improve their ability to honestly appraise their clinical and interpersonal skills. In fact, self-ratings are known to be an important and recommended part of 360-degree assessment (12). The study was limited in that it was based on a year-end evaluation, which made it difficult for raters to provide specific evaluations of each rated characteristic for residents they worked with 6–12 months previously. Also, the evaluation form was not tested for reliability or validity.

In another pilot study of a 360-degree assessment instrument for physical medicine and rehabilitation residency programs, a 26-item rating instrument was developed for use by therapists, nurses, social workers, case managers, and psychologists to rate inpatient residents (5). The tool was found to be a useful way to provide formative feedback to residents regarding professional and performance. The study had numerous limitations, including small sample sizes, inability to analyze inter-rater reliability because of the anonymity of the raters, inability to compare resident performance based on the 360-degree ratings with other measures of resident knowledge or clinical skills as a means of increasing confidence in the construct validity of the ratings instrument, lack of data from resident physicians regarding their reaction to this type of evaluation process, exclusion of physical medicine and rehabilitation faculty as raters, and inability to distinguish between ratings based on “real time” observation of clinical skills versus what the investigators labeled “resident reputation.”

Needs assessment data from the Medical College of Wisconsin showed that less than 20% of their residency programs used raters who were non-physicians. This institution is currently piloting a 360-degree evaluation form, one emphasizing the assessment of faculty by multiple raters (eg, nurses, supervisor, self) and the other an assessment of residents by faculty, other residents, nurses, program administrative staff, and patients (18).

Our study sought to show the reliability, validity, and feasibility of the 360-degree model for resident evaluation with regard to professionalism and interpersonal/communication skills. While reliability (internal consistency) was relatively high for all groups of raters, correlations between raters from different groups were relatively low. The resident-versus-faculty and patient-versus-faculty comparisons showed only moderate, albeit statistically significant, positive correlation. Unexpectedly, the patient and resident evaluations showed no correlation. Because patients, residents, and faculty each have a different perspective on a given patient interaction, the correlation between their assessments probably best represents an estimate of the concurrent validity of scores in a 360-degree evaluation. Even though patients and residents completed essentially identical forms, it is apparent that they often interpreted events in quite different ways. The fact that faculty ratings correlated with patient ratings to a higher degree when analyzed at the patient interaction level and again when globally assessed at the end of the rotation suggests that it is the resident’s self-assessment that may be the least accurate. Perhaps residents are so focused on the technical aspects of the patient interaction that they do not get a very good perspective on the interpersonal aspects. It also suggests that patient ratings of resident performance need to be considered at the individual interaction level to provide the best information. Averaging overall patient interactions apparently loses some information value. However, the small number of residents that participated in our study must temper this observation. Replication with a larger number of residents might clarify this issue.

Moderate correlations were seen between the global ratings and the 360-degree ratings by each of the three groups. The highest correlation was between the faculty global rating and the patient 360-degree rating. The faculty assessment during the procedures (ie, 360-degree ratings) only moderately correlated with the faculty global rating. This may indicate that the faculty are less likely to
evaluate critically when they have just completed an interaction and are more willing to be honest and critical when they are evaluating the resident’s performance remotely. The 360-degree model has been included in the ACGME Toolbox (3) as a way to provide formative feedback that would hopefully be more critical and informative than that given in an end-of-rotation summative evaluation. Faculty in a hurry to return to other duties may contribute to inflated scores on the 360-degree evaluations as well.

We have shown that the 360-degree model may be feasible in our specific setting. While the evaluation process may not interfere directly with other duties, it does seem to slow the efficiency of radiology services by occupying faculty and resident time for the full extent of the pre-procedural discussion and procedure. Feasibility of a 360-degree assessment is known to be limited by the need to obtain a sufficient number of assessments, and the administrative challenge of notifying evaluators, and aggregating and reporting the results (12). The 360-degree model may be best used intermittently throughout a rotation or a resident’s training. One suggestion offered by the participating faculty would be to require each resident to obtain a certain number of 360-degree evaluations during each rotation involving direct patient care duties. This would give the resident the chance to be evaluated by faculty and patients from multiple different sections in radiology and assess resident progress over the extent of his/her residency training.

There are other challenges in using a 360-degree instrument to assess resident competence. Well-defined scoring or rating criteria, the training of observers/raters to use the criteria, and assessment of specific tasks rather than an amalgam of performances are all associated with higher reliability (19–22). Numerous factors may affect patient ability to provide objective information (ie, diagnosis, pain of procedures, long pre-procedural wait). Also, not all potential raters are able to comment intelligently on all of the general competencies. Therefore, it is important to select the proper raters. Some sources have stated that nurses/support staff are the most reliable (3), and some have shown nurses to be the least reliable raters (4). Clearly, more investigation is needed with larger samples to determine who the best groups will be in each specialty. Research studies indicate that ratings from 20–50 attending physicians, one to five nurses, and 20–50+ patients are needed to yield a stable rating of resident’s humanistic qualities (23–27). The greatest informational yield of the 360-assessment comes from the inclusion of multiple perspectives across groups on the resident’s performance and the potential of comparing perspectives and detecting patterns (12).

The value of the 360-degree instrument as a means to provide direct feedback to residents must not be overlooked. The majority of residents stated that this was information they had not received from patients in the past and that it made them more conscious of how they interact with patients. Admittedly, it may be difficult to measure professionalism and interpersonal/communication skills because different groups have different thoughts as to what constitutes professional behavior and good communication skills, but the bottom line in medicine is to provide the best possible patient care and the 360-degree model gives the patient a voice.

One of our residents was uncomfortable being evaluated by patients and thought the process compromised the resident/patient interaction. This is likely in part because the process represents a change from the way residents have traditionally been evaluated. It has not been part of the culture of radiology residency programs for patients or anyone other than faculty to participate in resident assessment. In a study of emergency medicine residents evaluated by nurses (6), the residents’ attitudes toward the evaluations were not entirely favorable, although their behavioral interactions improved markedly. Some of the residents reported feeling uncomfortable or threatened by the evaluation process and desired to evaluate the nursing staff in turn. Although resident reactions were not formally obtained, anecdotal comments from physical medicine and rehabilitation residents rated with a 360-degree instrument revealed resident misgivings and skepticism when the results were discussed with the program director (5).

In summary, this study suggests that our 360-degree evaluation tool is a reliable measurement of resident professionalism and interpersonal/communication skills. Moderate correlation was shown between ratings given by patients and faculty as well as between residents and faculty. Although there was a statistically significant positive correlation between patient 360-degree ratings and faculty global ratings, there was poor correlation between faculty 360-degree ratings and faculty global ratings. Further studies with larger samples are needed to further evaluate the validity of the tool. The method was shown to be feasible, as regards to time to complete the form, but imposed organizational challenges regarding distribution and collection of forms and analysis of the results. Periodic use might prove to be preferable to using it for every en-
Further study is needed to determine the minimum number and timing of 360-degree assessments necessary to provide reliable and valid evaluations. The most important finding was that the evaluation by patients provided valuable feedback that residents do not typically receive, nor do they independently perceive, which may aid them in becoming better physicians.

REFERENCES