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Evaluation of Resident Communication Skills and Professionalism: A Matter of Perspective?

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ABSTRACT

OBJECTIVE. Evaluation procedures that rely solely on attending physician ratings may not identify residents who display poor communication skills or unprofessional behavior. Inclusion of non-physician evaluators should capture a more complete account of resident competency. No published reports have examined the relationship between resident evaluations obtained from different sources in pediatric settings. The objective of this study was to determine whether parent and nurse ratings of specific resident behaviors significantly differ from those of attending physicians.

METHODS. Thirty-six pediatric residents were evaluated by parents, nurses, and attending physicians during their first year of training. For analysis, the percentage of responses in the highest response category was calculated for each resident on each item. Differences between attending physician ratings and those of parents and nurses were compared using the signed rank test.

RESULTS. Parent and attending physician ratings were similar on most items, but attending physicians indicated that they frequently were unable to observe the behaviors of interest. Nurses rated residents lower than did attending physicians on items that related to respecting staff (69% vs 97%), accepting suggestions (56% vs 82%), teamwork (63% vs 88%), being sensitive and empathetic (62% vs 85%), respecting confidentiality (73% vs 97%), demonstrating integrity (75% vs 92%), and demonstrating accountability (67% vs 83%). Nurse responses were higher than attending physicians on anticipating postdischarge needs (46% vs 25%) and effectively planning care (52% vs 33%).

CONCLUSIONS. Expanding resident evaluation procedures to include parents and nurses does enhance information that is gathered on resident communication skills and professionalism and may help to target specific behaviors for improvement. Additional research is needed to determine whether receiving feedback on parent and nurse evaluations will have a positive impact on resident competency.
COMMUNICATION AND PROFESSIONALISM are fundamental to the patient-physician relationship. Effective communication improves patient satisfaction and health outcomes, whereas poor communication and unprofessional behavior are linked to patient complaints and malpractice claims. Nonetheless, according to a nationally representative survey by the Agency for Healthcare Research and Quality, 1 in 3 parents reported that their child’s doctor did not always listen carefully, show respect, or explain things well. These findings highlight the need to ensure competence in communication skills, interpersonal skills, and professionalism among pediatricians.

The Accreditation Council for Graduate Medical Education Outcomes Project requires that residency-training programs assess 6 core competencies. Among these are interpersonal and communication skills that “result in effective information exchange and teaming with patients, their families, and other health professionals” and professionalism, “as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.” Traditionally, residents have been evaluated only by supervising attending physicians, but attending physicians often are asked to evaluate residents on behaviors that were not witnessed. Moreover, even when residents are observed directly, attending physicians still must infer how someone else is affected by the encounter to judge the effectiveness of the interaction.

Encountering similar problems in evaluating employee performance, business organizations have used the multisource evaluation process (also known as 360-degree evaluation) for nearly 30 years. Multisource evaluation is a questionnaire-based assessment that gathers perspectives from multiple people within an employee’s sphere of influence. The rationale for multisource evaluation is that a more comprehensive account of performance may help to guide improvement and learning.

Multisource evaluation has been adapted in a variety of internal medicine settings by using nurses and patients to evaluate residents and practicing physicians. Nurse and patient ratings have been compared with those that were obtained from physician raters. Most studies used different instruments for each rating source and found significant correlations between sources. These correlations, however, generally were low, suggesting that each rater provided a different insight. Incorporating multisource evaluation in pediatric residency training could involve creating a formal mechanism for nurses and parents, rather than adult patients, to evaluate residents. Recently, parent evaluations of interpersonal skills were shown to identify correctly medical students who subsequently performed poorly on a summative observed structured clinical skills examination. To our knowledge, no published reports have examined the relationship between resident ratings that are obtained from nurses and parents with those that are obtained from attending physicians in pediatric settings. Communicating with children and their parents is likely to be different from communicating with a single adult who is able to make independent decisions about health care. Whether this difference in communication dynamics has an impact on the concordance between rating sources is not known.

The purpose of this study was to determine whether parent and nurse ratings of specific pediatric resident behaviors differed from the ratings that were obtained from attending physicians. We hypothesized that parent and nurse ratings of resident performance would differ significantly from ratings that were obtained from attending physicians, who have served as the traditional source of evaluation during residency training.

METHODS

Study Design

This study used data that were collected at baseline for a randomized, controlled trial that was designed to evaluate the effectiveness of multisource feedback combined with tailored coaching to improve communication skills, interpersonal skills, and professionalism of pediatric residents. From June 28, 2004 to February 28, 2005, parents, nurses, and attending physicians evaluated pediatric residents at the completion of a 1-month rotation on 1 of 2 pediatric inpatient services. Residents were eligible when they were entering their first year of training and were scheduled for exclusively pediatric rotations, including the 2 inpatient wards where parent and nurse evaluations would be collected. Of the 44 residents who were scheduled for pediatric rotations, 8 were not eligible because they were not scheduled for the selected wards during the study time frame. Inpatient rotations that had the following characteristics were selected: (1) nearly all pediatric residents were scheduled for the rotation during the first year of training; (2) the rotation had high patient volumes and therefore large numbers of parents to survey; and (3) the majority of patients on the service were located on a specific ward, increasing the efficiency of survey efforts. During enrollment, residents were told that they would be evaluated by parents and nurses at some point during their first year, but they were not informed when or where these evaluations would occur. All 36 eligible residents participated. There were no participant incentives. The Institutional Review Board at Cincinnati Children’s Hospital Medical Center approved the study.

Potential parent evaluators were those whose child was assigned to a resident participant. For this study, “parent” refers to any caregiver who primarily was responsible for the child during the hospital stay. Only
English-speaking parents were eligible to participate. Potential nurse evaluators were those on the active staffing roster for the ward. No attempt was made to identify how much contact nurses had with a specific resident during a given month. Potential attending physician evaluators were identified from the published monthly call schedule. Attending physicians generally spent at least 2 weeks with each group of residents whom they subsequently were asked to evaluate.

**Evaluation Instruments**
Evaluation instruments for parents, nurses, and attending physicians were adapted from American Board of Internal Medicine (ABIM) surveys of communication skills and humanistic qualities (available from author on request). The Patient Satisfaction Questionnaire (PSQ) was developed and tested by the ABIM in 1989.27 Internal consistency (Cronbach’s α coefficient) for the PSQ is high (α = .98).28 The PSQ, which was designed for adult patients to rate their physicians, consists of 10 behavior-specific questions. The items relate to being friendly, showing interest, listening carefully, encouraging questions, communicating effectively during the physical examination, being respectful, using plain language, explaining problems, being truthful, and sharing decisions. The PSQ uses a rating format. Patients rate the performance of the physician by choosing among 5 ordinal responses (poor, fair, good, very good, and excellent). This survey tool was chosen as the primary outcome measure for the larger, randomized, controlled trial because of its known psychometric properties and the availability of published data from past applications. We made minor wording modifications to 3 of the 10 items, with the substitution of “your child” for “you” when appropriate so that the PSQ would be applicable to parent raters.

The nurse evaluation also was adapted from an ABIM instrument. It contains different items than the PSQ. Although it has been used by internal medicine residency training programs, its psychometric characteristics have not been published by the ABIM Foundation. The items relate to communicating effectively with staff, being a good team member, treating staff with respect, respecting confidentiality, demonstrating honesty and integrity, responsibility and accountability, completing tasks reliably, timeliness of work, planning the course of care effectively, anticipating postdischarge needs, accepting suggestions, establishing rapport with patients and families, being sensitive and empathetic, and communicating effectively with patients and families. This evaluation was modified to use a reporting format, which asked nurses to “report” whether or how often a particular experience occurred by choosing among 5 ordinal responses (never, rarely, sometimes, usually, or always).

For this study, the questions from both the parent and the nurse questionnaires were combined to create a resident evaluation for use by attending physicians. We made modifications on the parent items so that they were applicable to attending physician raters (substitute “their child” for “your child” when appropriate), and a reporting format (frequency rather than perceived quality of behavior) was adopted. The attending physician items that mirror nurse items are identical in wording, format, and scaling.

Resident participants and parent, nurse, and attending physician evaluators all were surveyed regarding their personal characteristics (gender, age, and race/ethnicity). Unlike parents, who evaluated only 1 resident, nurses and attending physicians may have evaluated multiple residents. For maintaining nurse and attending physician anonymity, this information was collected with each evaluation rather than linked to an individual.

**Data Collection Methods**
A trained research assistant approached parents using a standardized technique on the day of anticipated discharge or the last day of the resident’s rotation. The research assistant informed parents that the evaluations would be reviewed by the resident and a coach to help guide improvement efforts. The parent was informed that the evaluation was anonymous and confidential. Parents who wished to participate gave verbal consent. The name and the picture of the resident who primarily was responsible for the patient during the hospital stay was displayed. The parent was asked whether he or she recognized and was able to evaluate the resident. The research assistant read items to parents and displayed answer options using a laminated card. Parents received no incentive to participate.

Nurses received an e-mail informing them of the study and their potential role in evaluating residents. In addition, the project was discussed at nursing staff meetings, where the evaluation forms were reviewed and questions about the project were answered. Like parents, nurses were informed that the purpose was to help residents identify strengths and areas for improvement. Nurses received no direct incentive to participate, although intermittently throughout the course of the study, food was delivered to the ward break room to thank them for their participation.

In contrast to parents and nurses, attending physician evaluations were solely for research purposes and were not shared with the residents. This was stated explicitly when attending physician participation was requested. Regardless of whether attending physicians chose to complete an evaluation for this study, they still were responsible for completing the standard end-of-rotation evaluation for each resident on their service. Attending physicians received no incentive to participate.

Nurses and attending physicians had the opportunity to evaluate between 2 and 4 (mean: 3) residents per...
month. On the last day of the rotation, evaluators received an e-mail requesting their participation. There was 1 e-mail for each resident to be evaluated. The name and the picture of the resident was not revealed until after the evaluator completed the demographics section of the questionnaire. Each evaluator had to indicate that he or she recognized the resident and felt comfortable providing ratings. Nurses and attending physicians were informed that the evaluations were anonymous and confidential. Aside from written instructions, evaluators did not receive formal training on how to complete the evaluation. Participants entered responses using a Web-based evaluation instrument.

Analytical Strategy
Dichotomous outcome variables were created, grouping responses into the highest possible response category versus responses in any other category. For each item, we calculated ratings as percentage in the highest response category. For example, if a resident was evaluated by 10 parents and 7 of the 10 marked “excellent” in response to the item related to using understandable language, then the percentage of highest response was 70%. Differences in this percentage were calculated for each resident on items that were common to the parent and the attending physician evaluations and items that were common to the nurse and the attending physician evaluations. These differences were compared using the signed rank test. Parent and nurse evaluations contained different items and therefore could not be compared directly. To facilitate comparisons with previously published studies, we calculated mean scores for each parent item and internal consistency (Cronbach’s $\alpha$ coefficient) for each evaluation form. SAS version 9.1 (SAS Institute, Inc, Cary, NC) was used for statistical analyses.

Traditionally, results from the ABIM PSQ have been reported as mean scores for each item by assigning a numerical value to each ordinal response (poor = 1, fair = 2, good = 3, very good = 4, excellent = 5). Comparisons that involve mean scores can be difficult to interpret, however, because the measurement distance between ratings of “fair” and “good” may be different from between ratings of “very good” and “excellent.” For example, someone who has a mean score of 4 may be a more skilled communicator than someone who has a mean score of 2, but the individual is not necessarily twice as skilled. In addition, PSQ ratings are not normally distributed, because they tend to cluster at the high end of the scale. This phenomenon is common to satisfaction ratings and may result from respondents’ finding it difficult to provide negative evaluations regardless of how they feel about their experience. As a result, analysts in the business sector have come to view any response other than the highest possible response as indicating that some element of the experience was not acceptable. We applied this rating philosophy through our use of the percentage of highest response.

RESULTS
Characteristics of Participants
The characteristics of residents, parents, nurses, and attending physicians are shown (Table 1).

Psychometric Properties of the Evaluations
Internal consistency (Cronbach’s $\alpha$ coefficient) was calculated for each evaluation instrument: parent evaluation ($\alpha = .95$), nurse evaluation ($\alpha = .96$), and attending physician evaluation ($\alpha = .91$).

Parent Ratings
Parent evaluations were available for all 36 resident participants. Residents were evaluated by a median of 10 parents (range: 5–19). Eighty-eight percent (355 of 400) of eligible parents agreed to participate and completed an evaluation. Seven non–English-speaking parents were ineligible to participate in the study. Parents provided the highest possible response (“excellent”) between 48%
and 67% of the time, depending on the item (Table 2). Mean scores also were calculated for each of the parent items. These ranged from 4.24 to 4.58. These are similar, although slightly higher, than those that were reported in a study in which adult patients used the ABIM PSQ to rate a group of internal medicine residents (4.17–4.24).28 On 3 items, parents indicated that they were “unable to evaluate” the resident >10% of the time. These items related to sharing decisions, explaining problems, and how the resident related to the child and the family during the physical examination.

**Nurse Ratings**

Nurse evaluations were available for all 36 resident participants. Residents were evaluated by a median of 9 nurses (range: 4–17). Of the 526 evaluations that were initiated, 63% (332 of 526) of evaluations were completed and included in subsequent analyses. Nurses provided the highest possible response (“always”) between 45% and 75% of the time, depending on the item (Table 3). More than 10% of nurse responses indicated that they were “unable to observe” on items related to respecting confidentiality and effectively planning the course of care. Nearly one fourth of nurse responses were that the nurse was unable to observe whether residents anticipated postdischarge needs.

**Attending Physician Ratings**

Attending physician evaluations were available for 34 of the 36 resident participants. These residents were evaluated by between 1 and 3 attending physicians (median: 1). Forty-nine percent of evaluations that were distributed among the 23 eligible attending physicians were completed. On items that mirrored parent items, the percentage of attending physicians who rated “always” on each item ranged from 27% to 80% (Table 2). More than half (59.1%) of attending physicians chose “unable to observe” in response to an item related to the physical examination. The “unable to observe” response was used frequently by attending physicians on items that related to sharing decisions (34.1%), listening carefully (31.8%), explaining problems (22.7%), and being truthful (20.5%). On items that mirrored nurse items, the percentage of attending physicians who rated “always” on each item ranged from 24% to 97% (Table 3), with 11.4% “unable to observe” whether residents communicated effectively with the patient and the family.

### Differences Between Attending Physician and Parent Ratings

The item related to sharing decisions with parents was rated significantly higher by parents than by attending physicians (48% vs 28%; *P* = .03; Table 2). Both parents and attending physicians provided the lowest percentage of highest response on this item. For the remaining items, attending physician and parent responses did not differ significantly.

### Differences Between Attending Physician and Nurse Ratings

In contrast to the parent–attending physician comparison, nurse responses on multiple items were significantly lower than those of attending physicians (Table 3). Nurses gave residents lower ratings on items that related to treating staff with respect (69% vs 97%; *P* < .01), accepting suggestions (56% vs 82%; *P* < .01), being a good team member (63% vs 88%; *P* < .01), being sensitive and empathetic (62% vs 85%; *P* < .01), respecting confidentiality (73% vs 97%; *P* < .01), demonstrating honesty and integrity (75% vs 92%; *P* < .01), and demonstrating responsibility and accountability (67% vs 83%; *P* = .02). Nurse responses were significantly higher than those of attending physicians on anticipating postdischarge needs (46% vs 25%; *P* < .01) and effectively planning the course of care (52% vs 33%; *P* = .03). Attending physician and nurse ratings

#### TABLE 2 Differences between Attending Physician and Parent Ratings

<table>
<thead>
<tr>
<th>Item</th>
<th>Attending Physician</th>
<th>Parent</th>
<th>Difference Between Ratings</th>
<th><em>P</em></th>
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</thead>
<tbody>
<tr>
<td>Attending physician &gt; parent ratings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being truthful</td>
<td>73.2</td>
<td>55.2</td>
<td>19.7</td>
<td>.12</td>
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<tr>
<td>Showing interest</td>
<td>79.8</td>
<td>61.0</td>
<td>19.4</td>
<td>.06</td>
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<tr>
<td>Physical examination</td>
<td>62.5</td>
<td>53.2</td>
<td>11.0</td>
<td>.64</td>
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<tr>
<td>Being respectful</td>
<td>71.7</td>
<td>65.4</td>
<td>6.8</td>
<td>.53</td>
</tr>
<tr>
<td>Being friendly</td>
<td>73.0</td>
<td>66.8</td>
<td>6.6</td>
<td>.48</td>
</tr>
<tr>
<td>Explaining problems</td>
<td>56.2</td>
<td>52.1</td>
<td>4.1</td>
<td>.58</td>
</tr>
<tr>
<td>Using plain language</td>
<td>63.0</td>
<td>58.7</td>
<td>4.3</td>
<td>.81</td>
</tr>
<tr>
<td>Encouraging questions</td>
<td>56.7</td>
<td>55.9</td>
<td>0.8</td>
<td>.77</td>
</tr>
<tr>
<td>Parent &gt; attending physician ratings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening carefully</td>
<td>40.7</td>
<td>60.9</td>
<td>-17.5</td>
<td>.07</td>
</tr>
<tr>
<td>Sharing decisions</td>
<td>27.5</td>
<td>47.7</td>
<td>-22.6</td>
<td>.03</td>
</tr>
</tbody>
</table>

* Ratings are presented as percentage of responses in highest response category.

* Percentage of responders who marked “unable to observe/evaluate” response.

* Listed from highest to lowest.
were similar on items that related to communicating effectively with staff, completing tasks reliably, timeliness of work, and establishing rapport and communicating effectively with the patient and the family.

**DISCUSSION**

Our results suggest that expanding resident evaluation procedures to include parents and nurses does enhance information gathered on resident communication skills and professionalism and may help to target specific behaviors for improvement. Whereas parent and attending physician ratings were similar on most items, attending physicians indicated that frequently they were “unable to observe” the behaviors of interest. Nurse ratings differed from those of attending physicians on several items. Increasing direct observation by attending physicians is important in some areas, but parents and nurses offer unique perspectives on other resident skills. Additional research is needed to determine whether receiving feedback on parent and nurse evaluations will have a positive impact on resident competency.

Contrary to our hypothesis, attending physicians who indicated that they observed the resident–patient/parent interactions in question provided responses that were similar to those that were obtained from parents. This differs from an internal medicine study that asked attending physicians to rate residents as they thought the average patient would and then compared the responses with those that were obtained from patients using the same evaluation form. Attending physician ratings were not significantly correlated with those of patients (r = 0.26). In our study, parents and attending physicians differed only on how well residents shared decisions with parents, with the parents rating residents higher than attending physicians. It is interesting that this item received the lowest rating from both sources, and both parents and attending physicians frequently were “unable to observe” this behavior. There are several possible explanations for this finding: (1) no decisions were made; (2) residents were not involved in the decisions that were made; (3) the family did not share in the decisions that were made; (4) the types of decisions that were faced were not well suited for a shared decision-making approach; or (5) participants had differing experiences, standards, or expectations regarding the sharing of decisions. Additional research is needed to understand better the preferences and use of shared decision making among families and physicians in pediatric settings.

Attending physicians frequently marked “unable to observe” in response to 5 of the 10 items that mirrored parent items. This may indicate that they did not have the opportunity to observe the behavior in question directly. This seems likely, because these items relate to interactions that might be difficult to observe in the context of traditional rounds. For example, asking, “How often does this doctor . . . let parents tell their story; listen carefully; ask thoughtful questions; not interrupt them while they’re talking,” would require an attending physician to observe the initial interview with a family. To respond to other items, attending physicians might need to observe the resident directly performing a physical examination, educating family members about their child’s problem, and counseling a family about diagnostic and/or therapeutic options. In some areas (eg, history, physical examination), direct observation by attending physicians may be important, whereas in other areas (eg, interpersonal skills), parents may be uniquely positioned or simply the best source for the information.
Finally, for family education, counseling, and decision sharing, gathering information from a combination of sources may be desirable. To our knowledge, this is the first study in which attending physicians self-reported their inability to observe the resident behaviors of interest on an evaluation. As highlighted by the Accreditation Council for Graduate Medical Education requirements, there is a clear need for resident evaluations to be informed by the direct observation of attending physicians. In the absence of an “unable to observe” category, it is possible that ratings would be provided for unobserved behaviors by extrapolating from resident performance in other domains (eg, presentations skills). Other researchers have addressed this issue by requiring raters to indicate the data source (note review, case discussion, and/or direct observation) that served as the basis for their rating. Such methods may promote increased direct observation among attending physicians. Practical strategies are needed to incorporate efficiently direct observation into the daily workflow of busy inpatient services.

Consistent with our hypothesis, we found that nurses commonly rated residents significantly lower than did attending physicians. On the item, “How often does the doctor treat staff with respect; not verbally abusive when under stress,” the response of “always” was provided by 97% of the time by attending physicians and 69% of the time by nurses. There were 6 additional items for which nurses perceived a lower performance than did attending physicians. Our findings are similar to previous studies that served as the basis for their rating. Such methods may promote increased direct observation among attending physicians. Practical strategies are needed to incorporate efficiently direct observation into the daily workflow of busy inpatient services.

This study is limited by inclusion of only parent, nurse, and attending physician raters. Future studies should include self-assessment as well as evaluations by peer residents and adolescent patients. Potential sources of bias include our exclusion of non–English-speaking families. We chose to exclude non–English-speaking families, who constitute <2% of all our hospital admissions, to standardize data collection in a way that would not rely on multiple interpreters. This may limit the applicability of our findings in more diverse settings. Another potential source of bias is the low attending physician response rate. This low response rate may have been attributable to time constraints and their awareness that the evaluation was solely for research purposes. In addition to the time spent completing the end-of-rotation evaluations, attending physicians who participated likely spent 3 to 5 minutes completing each research evaluation. Response bias should be limited by our concealing the identity of the resident being evaluated until after the evaluation was initiated. Personal characteristics of evaluators and resident participants and the health status of the patient may influence responses. Although these analyses were beyond the scope of the current study, this is an important area for future research. In addition, qualitative studies are needed to examine (1) whether parents are concerned that providing low ratings will have a negative impact on their child’s future care and (2) the meaning that different raters attach to different responses. Future studies should include formal rater training to increase the likelihood that raters apply uniform performance standards.

CONCLUSION
This study suggests that expanding resident evaluations to include parents and nurses provides novel informa-
tion that may help to target specific behaviors for improvement. Although increasing direct observation by attending physicians is important in some areas, parents and nurses offer unique perspectives on other resident skills. Additional research is needed to answer the crucial question of whether receiving feedback on parent and nurse evaluations will have a positive impact on the development of communication skills, interpersonal skills, and professionalism among residents.

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