

# Use of Unstructured Parent Narratives to Evaluate Medical Student Competencies in Communication and Professionalism

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**Objective.**—Medical education programs across the country are now required to conduct meaningful assessments of trainees' competencies, although uniform standards for conducting these evaluations have yet to be established. In 1999, the Indiana University School of Medicine introduced a comprehensive competency-based undergraduate curriculum. The overall goal of the curriculum is to make medical students' day-to-day experiences of training a source of learning about professionalism, communication, and aspects of medicine beyond factual knowledge. We sought to examine free-text comments by parents of pediatric inpatients as substrate for competency evaluation and feedback for third-year students on their pediatrics rotation.

**Methods.**—The study was conducted from June 2001 to February 2004. Parents of hospitalized children completed a short medical student evaluation form that included 2 questions inviting free-text response. We used narrative analysis, a qualitative research technique, to describe both the content and meaning of the parents' responses.

**Results.**—We collected 573 evaluations with narrative comments about 412 students. The most common aspect of medical student performance commented on by parents related to com-

munication (53.8%). The next most common narrative comment was some form of affirmation of the student as a health care professional (26.0%). Other themes included establishing context for the comment, perceptions of the health care system, criticizing medical student performance, perceptions of the role of medical students, physical approach to the patient, expression of humility by the student, holistic approach to the patient, physical appearance of the student, superlative description of student, and advocating for the patient. Multiple themes were identified in 232 narrative comments (40.4%). Examples of each theme are provided.

**Conclusions.**—Family members of pediatric inpatients are a valuable source of information about medical student performance in at least 2 of the Accreditation Council for Graduate Medical Education competency areas (Communication and Professionalism). Themes identified in this study could be used to inform the design of a comprehensive 360-degree student evaluation strategy.

**KEY WORDS:** communication; medical student; qualitative research

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Communication and relationship-building skills are fundamental building blocks of good medical care and a hallmark of professionalism. Substantial evidence suggests that competencies in communication and professionalism are integral to the process and outcomes of medical care.<sup>1</sup> Better physician interpersonal skills have been associated with improved outcomes in management of tobacco use, chronic headaches, diabetes, hypertension, and psychological problems.<sup>2,3</sup> Evidence also suggests that patients are less concerned with how much their physicians know than with how much they care.<sup>4</sup> Physicians demonstrating better interpersonal skills elicit greater amounts of information from patients, experience less medical litigation, and achieve increased patient adherence.<sup>5</sup> The January 1998 report of the American Asso-

ciation of Medical Colleges, *Learning Objectives for Medical Student Education*, called for establishing learning objectives regarding altruism and dutifulness.<sup>6</sup> In February 1999, the Accreditation Council for Graduate Medical Education (ACGME) called for evaluating resident physicians on their knowledge of medicine and on attributes such as communication skills and professionalism.<sup>7</sup> In 2003, ACGME made evaluation of residents in 6 competency areas mandatory.

Evaluating trainees' competencies in areas such as communication, caring, self-awareness, and moral and ethical reasoning is challenging. Several approaches are gaining wide acceptance and use, but a standard tool kit for competency evaluation techniques has yet to be developed. One common approach to assessing communication skills is the use of behavioral checklists such as the Mini Clinical Evaluation Exercise.<sup>8</sup>

Checklists work well for understanding the frequency with which a behavior occurs; however, they are prone to individual differences in rating style and are limited to a set of predetermined categories and summary judgments.<sup>8</sup> They are also largely insensitive to the interactive context in which a behavior occurs.

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Another means of evaluating trainee performance is the use of standardized patients in observed structured clinical examinations (OSCEs). OSCEs constitute a major portion of examinations mandated by the Educational Commission for Foreign Medical Graduates for international applicants to US residency programs. The aim of standardized patients in OSCEs is to expose test subjects to the same stimuli and thereby control for the content and presentation of cases. Limits of OSCEs include a lack of the range of individual variation in patient characteristics and presentations found in an actual care context and susceptibility to Hawthorne effect.<sup>9</sup>

A few evaluation tools have attempted to elicit patient and/or physician perspectives on the medical encounter. Westburg and Jason developed a technique ("stimulated recall") that involves playing a videotape of an encounter back to a physician as a means of exploring thinking at various points during the encounter.<sup>10</sup> Another technique involves having both a physician and patient independently review a videotape of their encounter, provide commentary, and then consider what each other has said.<sup>11</sup> These techniques are useful for assessing skills at building and maintaining relationships but they are also time consuming and expensive.

One final example of an approach to evaluating the range of patient perspectives on physician performance comes from studies of patient letters or comments. The relatively few studies in this domain have tended to focus on complaints and negative experiences patients have had in their interactions with physicians and other medical staff.<sup>12-14</sup> One challenge to such studies is that they tell the story from only one perspective. In the context of a complaint letter, this can be especially challenging and difficult for a physician to accept.

We were interested to know whether parents' free-text responses to a brief questionnaire about third-year medical students who had cared for their children had value as a component of gauging proficiency in medical communication and professionalism. We hypothesized that parents could provide a wealth of information for this type of competency evaluation because they spend significant time interacting with students in actual health care contexts. We used narrative analysis to catalogue thematic content in the parents' free-text responses. On the basis of our results, we discuss how the thematic content of the parents' free-text responses could enhance objectives identified in nationally endorsed frameworks for assessing medical student competency.

## METHODS

The required pediatric clerkship in the third year of the Indiana University School of Medicine lasts for approximately 7 weeks, and all students are assigned to an inpatient service for approximately 3½ weeks. We developed an evaluation form that included 9 Likert-scaled items regarding professionalism and communication, followed by a free-text response section that asked, "If there was a time that was particularly difficult or stressful, was this student able to be calm and reassuring?" and invited the

parent to provide "other written comments." This question was worded in response to curricular changes implemented by the Indiana University School of Medicine recommending that the stressfulness of a patient's situation be taken into account when evaluating medical student communication with the patient.

Evaluations were distributed between June 2001 and February 2004 to families receiving care on the inpatient services at 4 Indianapolis institutions affiliated with the Indiana University School of Medicine: (1) the James Whitcomb Riley Hospital for Children; (2) Methodist Hospital; (3) Wishard Memorial Hospital; and (4) Indiana University Hospital. The James Whitcomb Riley Hospital for Children is a large tertiary-care referral center that serves patients from across the state of Indiana. Indiana University Hospital has a level 2 neonatal intensive care unit that is used as an inpatient teaching site for third-year medical students. Wishard Hospital is a large county hospital, where students rotate on the general pediatric ward and the neonatal intensive care unit. Methodist Hospital is a large private hospital where students rotate on the general pediatric ward.

The Indiana University School of Medicine Institutional Review Board approved the study by expedited review.

The initial data collection strategy involved asking medical students on the inpatient services at the Riley Hospital to turn in a list of their patients each Wednesday afternoon. The clerkship director attempted to meet with each family listed and distribute the evaluation forms directly (time period 1). Approximately 5 months into the study, the method of distributing evaluation forms was changed so that students delivered the evaluation forms directly to each family (time period 2). This change was implemented because the variable timing of discharge from the hospital combined with the large volume of students participating in inpatient pediatric settings (approximately 25 students per month) made restricting delivery to only the clerkship director or clerkship administrative staff impractical. In June 2002, the study was expanded to include 3 additional hospitals (all third-year students at all pediatric inpatient sites; time period 3). In each instance, a cover letter instructed the parents to use the campus envelope that was attached to the form and return it by mail at no cost. The cover letter also explained that all responses would remain confidential and that any information directly identifying patients and families would be removed in creating an anonymous composite of evaluations for the student. A number of parents indicated that they wanted their names to appear with their comments as a way of encouraging or thanking the student.

All the parent free-text comments were transcribed, checked for accuracy, and given unique anonymous identifiers. We selected 80 comments at random to derive initial thematic categories. Four reviewers including the pediatric clerkship director, a qualitative science researcher, a medical education researcher, and a health services researcher reviewed the parent comments separately. We used ACGME Project General Competencies as a guide. Each reviewer highlighted portions of the text that

**Table 1.** Interrater Reliability

Category	Kappa
Communication—overall	0.7
Communication—building rapport	0.9
Communication—conveying information	0.9
Communication—listening	0.9
Affirmations	0.9
Brief compliment—minimal response	0.6
Direct response to prompt	0.6
Establishing context	0.9
Extra efforts	0.7
Commentary on the health care system	0.8
Criticisms	0.9
Parent perception of students	...*
Approach to patient	0.5
Humility	0.5
Holistic approach to patient	0.7
Appearance	0.8
Superlatives	0.7
Advocacy	...*

\*Too few codes were present in the test set to test.

seemed to illustrate a theme. The name given that theme was written in the margin of the transcript. The reviewers then came together as a group where they compared and contrasted their results, and agreed on and negotiated differences. The group eventually arrived at consensus on all themes.

Once consensus had been achieved, 2 of the reviewers (M.H. and G.C.L.) coded the remaining comments. By agreement, each comment could be coded into multiple categories. By use of a subanalysis of 100 comments drawn at random, we calculated interrater reliability between the 2 reviewers for each category of comments. Interrater reliability varied from .5 to .9, with the majority of categories falling in the .7 to .9 range. Kappa values are presented in Table 1. After assessing interrater reliability, the remaining comments were coded by the 2 reviewers.

**RESULTS**

We received 944 parent evaluations; 573 of these evaluations contained free-text narrative comments describing 412 students (Table 2). Most free-text narrative comments were written in response to the second question of the evaluation form that invited “other written comments.” Tracking of total number of evaluation forms distributed versus numbers of evaluation forms received back from the parents was conducted twice. The first effort to determine response rate occurred between November 28, 2001, and January 25, 2002,

during which time the clerkship director delivered the form directly to the patients’ family members. During this tracking period, 51 forms were delivered and 38 forms were returned (74.5% response rate) generating evaluation material for 19 students. A second tracking period occurred between October 3, 2001, and November 21, 2001, during which the students delivered the form to the patient’s family. Ninety-three forms were delivered and 60 forms were returned (64.5% response rate) generating evaluation material for 27 students. No attempt was made to determine response rate during time period 3, when students were responsible for delivering evaluation forms across 4 separate hospital systems.

On the basis of group consensus, we identified 15 major themes which are presented with our research group definitions and examples in Table 3. For the “Communication” major theme, we developed 3 subthemes: Building Rapport, Conveying Information, and Listening. Narratives could be coded as containing multiple themes, and our analysis of the comments resulted in 1142 separate codes. The distribution of codes by themes is presented in Table 4. There were no free-text narratives coded as relating to “parent perceptions of students” or “appearance” in time period 2 and no free-text narratives coded as relating to “superlatives” in time period 1. However, with the relatively few numbers of students in the first 2 time periods, there were no clear trends in the distribution of themes by study period or by hospital site.

Several findings from the analysis of comments stand out. First, and most striking, is the amount of positive energy and enthusiasm contained in the comments. One in 4 comments contained some kind of compliment or affirmation of the student and his or her role in delivering care. By contrast, frank criticism of student behavior and performance was minimal. Only 25 of a total of the 1142 total themes coded, or 2%, were critical in nature. These critical comments were addressed to 24 students; only one student received 2 comments that were critical in nature. A related finding was the amount of free-text narrative material that was contained in response to the 2 evaluation questions given to the parents: “If there was a time that was particularly difficult or stressful, was this student able to be calm and reassuring?” and “other written comments.” Most responses were to the first question, which was formatted as a forced-choice, yes-no question. As such, it was striking that only 13.4% of the comments responded directly to the question; the rest appeared as free-text narratives ranging from brief descriptions of qualities and characteristics

**Table 2.** Evaluation Distribution

Time Period	Dates of Academic Year	Method of Distribution	Location of Distribution*	No. of Evaluations Received	No. With Comments	No. of Students Evaluated
1	6/15/2001 to 10/2/2001	Clerkship director	Riley	140	91 (65%)	71
2	10/3/2001 to 5/20/2002	Students	Riley	133	86 (65%)	62
3	6/12/2002 to 2/26/2004	Students	Riley, Methodist, Wishard, University	671	396 (59%)	279
Total	...	...	...	944	573 (61%)	412

\*Riley, James Whitcomb Riley Hospital for Children, Indianapolis, Ind; Methodist, Methodist Hospital, Indianapolis, Ind; Wishard, Wishard Memorial Hospital, Indianapolis, Ind; University, Indiana University Hospital, Indianapolis.

**Table 3.** Themes: Definitions and Examples

Theme	Definition	Example
Superlatives	Describes student as “best” or clearly makes a comparison that indicates a superior performance.	<i>My son has been in the hospital 2–3 times a year for the last 4–5 years. Of all the students/residents we have encountered, I think [student’s name] has stood above all.</i>
Extra effort	Describes a student providing actions or services beyond the typical scope of patient care, generally strengthening the relationship.	<i>She brought my daughter a magazine off hours because she knew she liked a certain rock star. It means so much to [my daughter] that a doctor could care about her like that.</i>
Communication	Describes any aspect of communication, including verbal and nonverbal, listening, respect/sensitivity, providing information, establishing rapport.	<i>This medical student was kind and easy to talk to. He treated my family with respect and courtesy. His willingness to listen attentively and actually hear what his patients/families are saying will help make him an impressive doctor in the future.</i>
Humility	Describes a student’s willingness to admit uncertainty (usually in knowledge), or describes a student as being humble.	<i>I think it is obvious that [student’s name] is not afraid to say “I’m not sure, but I’ll ask” and I find that to be admirable.</i>
Criticism	Criticizes some aspect of the student.	<i>Comes across too shy. Tone of voice makes her seem like she isn’t real sure of herself.</i>
Appearance	Describes the medical student’s appearance, including clothing, grooming.	<i>Regarding dress: I was a little surprised to see her wear a skirt/top outfit which exposed her stomach. It seems too casual for the professional environment.</i>
Affirmation	Expresses encouragement or confidence in the ability, or potential ability, of the student to become a physician.	<i>In my opinion she will make an excellent doctor, and if [daughter’s name] has to ever be hospitalized again, I would love to have her on the medical team.</i>
Establishing context	Provides background information; may explain the situation surrounding the family/child’s interaction with the student.	<i>When [student’s name] came into my son’s room I had been running on 5 hours of sleep in 3 days and had watched my son get very sick in a very quick amount of time, and was very frustrated with what I was being told. [Student’s name] came into the room and was very pleasant, understanding and patient.</i>
Advocacy	Expresses a plea for the child/family, a call for more work in a particular field (eg, research regarding a particular diagnosis) or a call for expanding the role of the parents/child in the medical education process.	<i>My daughter has always been very difficult to diagnose with anything. And they all worked very hard to figure her out. I thank them. She has Kabuki syndrome and I wish more would be taught or learned about this syndrome</i>
Commentary on the health care system	Describes the way that health care is delivered, or the parent’s impression (positive or negative) of doctors/hospitals in general.	<i>I never felt rushed when he was in the room and I usually feel like most doctors are in too big of a hurry.</i>
Parental perceptions of students	Reflects parent’s perspective of medical students, particularly about how they view the role or expectations (including knowledge) of students.	<i>Was not expected by us to be leader in medical care, but to participate in learning the process from attending and resident doctors.</i>
Holistic approach to patient care	Discusses aspects that deal with the family or patient as a whole or as a person, and may include how the student made the family feel (eg, comforting, made them laugh).	<i>[Student’s name] seems compassionate and interested in the patient’s illness, but more importantly he seems interested in the patient as a person.</i>
Approach to the patient	Describes how the student approached the patient—eg, how they (successfully or unsuccessfully) approached the child for an examination, how they addressed the child or parents.	<i>She was very good with [child’s name] when he was afraid to be examined. She was very patient and kind. Offered him a bubble pen to play with to distract him.</i>
Direct response to prompt	Those comments that answer the question, “If there was a time that was particularly difficult or stressful, was this student able to be calm and reassuring?”	Responses usually were a simple “yes” or “no.”
Brief compliment—minimal response	Those responses that are minimal, many of which are brief compliments.	<i>Very nice student.</i>

of the students and their work to full-blown stories about significant relationships that had been built while the student was on service.

Another notable feature was the frequency and content of comments that dealt with communication and professionalism. As an overall category, communication was

mentioned most frequently. In addition, we found specific descriptions of behaviors that could be subcategorized as skills or habits of practice that included rapport-building skills, conveying information, and listening. The distribution of comments in the communication category was also noteworthy. Parent comments about rapport building were

**Table 4.** Summary of Narrative Comments\*

Category	Time Period			Entire Study Period
	1	2	3	
Number of written comments	91	86	396	573
Number of themes coded	171	187	784	1142
Communication—building rapport	45	46	193	252
Communication—conveying information	19	23	108	128
Communication—listening	7	4	23	33
Affirmations	26	23	111	161
Brief compliment—minimal response	20	24	105	149
Direct response to prompt	3	6	68	77
Establishing context	18	7	39	64
Extra efforts	5	2	30	37
Commentary on the health care system	4	4	22	30
Criticisms	6	2	17	25
Parent perception of students	3	0	20	23
Approach to patient	5	3	15	23
Humility	5	1	12	18
Holistic approach to patient	2	2	9	13
Appearance	2	0	5	7
Superlatives	0	3	3	6
Advocacy	1	1	4	6

\*Note that narrative comments may have been coded for multiple themes: Number of comments coded with 1 category: 342. Number of comments coded with 2 categories: 142. Number of comments coded with 3 categories: 52. Number of comments coded with 4 categories: 26. Number of comments coded with >5 categories: 12.

twice as frequent as comments about conveying information. In comparison, comments about listening were far less frequent.

Professionalism is a complex construct that involves many dimensions of activity. For example, parents commented on student behavior that went above and beyond what they were required to do to make their child's hospital stay a more positive experience (altruism). In addition, they commented on such professional characteristics as humility (being of service), being holistic in their approach (humanism), and establishing a context for their presence accountability. Professional demeanor was also mentioned, although not often.

## DISCUSSION

This study demonstrates the feasibility and acceptability of evaluating interpersonal skills of third-year medical students by using comments from parents of hospitalized children. Family members seemed eager to contribute to the assessment of medical student performance as indicated by their narratives, which typically described a range of interpersonal skills well beyond what was requested by the limited scope of the semistructured questionnaire. Despite a likely high degree of stress stemming from their child's hospitalization, parents were positive about communication and relationship skills as well as the professionalism of the students who were involved in their sick children's care. By means of qualitative research methods, we were able to readily collect and analyze a large body of data and identify specific thematic content that would have been missed by using currently available methods of assessment.

The following example demonstrates how parent comments provided richness to the evaluation of a particular

student that would not otherwise have been captured. The student during her pediatric clerkship had 2 faculty and 3 resident clinical evaluations completed. Only one of these routine evaluations contained narrative comments in addition to Likert-scale scores: "[Student's name] is a hard working, eager to learn medical student. She would make an outstanding pediatrics resident." Her communication skill ratings by the residents and faculty were all split between the top 2 scores in a 5-item Likert scale. The following is a narrative comment from a parent:

"She took me to a private area and talked with me until I had stopped crying and was reassured of my daughter's progress. Upon taking my daughter's history she asked us if she could give us some personal information. After being told "yes" she told us she is a Ewing's sarcoma survivor. She didn't have to tell us this but it helped us immeasurably. We hadn't had the opportunity to speak with anyone who had Ewings. Therefore, it helped my daughter with questions and myself with questions of her future complications. [Student's name] was open and honest of her own medical complications but reminded us that my daughter's cancer was in a different place with different side effects possible. [Student's name] also checked on us without feeling intrusive and respected our privacy. She will make a wonderful, caring, intelligent doctor someday that I would be happy to have take care of my family."

This parent comment abounds with information regarding the student's interpersonal and communication skills: recognizing the need for a private setting, demonstrating empathy to the family's situation, allowing them to cry, obtaining permission before sharing personal information, and finally providing appropriate counseling by distinguishing her experience from that of the family's. The

additional information enables a more complete view of the medical student from an evaluator's point of view, in contrast to the cursory evaluations by the residents and faculty. Also, because the comments are specific and contextual, they provide the student with feedback and information about their performance that parents value. As stated previously, assessing interpersonal skills is challenging because of the myriad aspects of the skills, the subjective nature of assessment techniques, and the prohibitive cost both in terms of time and money.<sup>15,16</sup>

In considering the standard methods used at our institution to evaluate medical students, we observed a sharp contrast between the feedback generated from parents versus that of academic staff. Attendings and residents with severe demands on their time often hurriedly complete short student evaluation forms (mostly checklists); faculty rarely take the time to write substantive narrative comments. As well, many faculty interpret communication skills to mean oral presentations of factual medical information during rounds or written medical documentation, not how the student communicates at the bedside with the patient or family members, or with colleagues and other team members. Even as our institution is mandating directly observed encounters via quotas for Mini Clinical Evaluation Exercises, these are usually limited to watching students extracting historical information rather than listening or informing patients and families of clinical findings. In contrast, parent narratives address a higher order of communication and professionalism across a wider range of interactions, including providing daily updates, responding to questions, and providing support and encouragement. This type of evaluation that is derived from what the student actually is *doing* significantly enhances other means of evaluating that are primarily based on what students *know* (eg, written tests) or *show* (eg, OSCE).<sup>17</sup>

One interesting developmental theme in the comments concerned medical student versus practicing physician time demands. Parents reported that students had more time to be informative and to engage in supportive relationships. Many comments included the hope that as the students progressed through their training, they would not forego the opportunity to spend therapeutic time with hospitalized families—a compliment to the students and an indirect criticism of the practicing physicians. Some parents blamed the medical system for pressuring physicians to see more patients in less time.

In addition to indirect comparisons, we were also curious about the comments that were directly coded as critical. Of the 25 critical narratives, 19 dealt with some aspect of communication. Eleven of the critical narratives described the student as lacking confidence (e.g., “comes across too shy”), 3 commented on personal appearance (e.g., “surprised to see her wear a skirt/top outfit which exposed her stomach”), and 3 described the physical approach to the patient (“needs to be gentle when waking babies”). Most of these narratives contained affirming as well as critical comments.

Patients and their families may feel reluctant to criticize health care providers for fear that they will jeopardize their

care.<sup>18</sup> We tried to minimize this response bias by allowing the parents to remain anonymous when completing the evaluation and by returning it via mail rather than in person. The critical narratives in our study are particularly interesting considering that for a large portion of the study, students distributed the evaluation forms directly and thus had the opportunity to exclude families they thought might be critical from completing an evaluation.

This study has several limitations. First, as mentioned above, negative evaluation results may be underrepresented. Survey research also shows that results are more positively skewed when forms are filled out during an experience like hospitalization and then become somewhat more negative as time passes (with some time to process, the rater may become less enthusiastic).<sup>19</sup> Although as many as one-third of patients experience dissatisfaction with hospital care, few of these patients actually complain.<sup>20,21</sup> Second, the evaluation form was not specifically designed to capture the themes we identified. The wording of the question that produced the narrative comment is narrow and specifically asked whether the student was supportive during stressful situations. However, only 13.4% of the parent comments actually responded to the question asked; the rest described in rich detail their experiences with the students. Finally, the distribution of the forms changed over the project period, potentially introducing unwanted variation in the results. More systematic attention to the selection of parents and the distribution of the forms would likely reduce this variation.

This project was stimulated by the implementation of a new competency-based curriculum that stresses noncognitive, humanistic skills alongside scientific knowledge and recall of factual information. Our original intent was to obtain firsthand accounts of student communication skills and professionalism by using the concept of 360-degree evaluation. Using parents to evaluate the students provided us with access to a world of lived experience which we had not anticipated. Nor had we anticipated the extent to which the parents would volunteer information beyond that which was asked of them. From the standpoint of a clerkship director, our experience suggests that collecting feedback from parents is highly informative and requires minimal resources. We currently supply students with forms at the beginning of the clerkship, which is a practical way to deliver these forms for a large medical school (280 students per year). We have also developed a form in Spanish. We have not placed a minimum number of parent evaluations required to be returned for a student, but rather have encouraged students that these are opportunities to have significant comments that will be included on their final course evaluation (we usually share samples at our clerkship orientation), and many have been used when writing nominations for awards or letters for residency applications. Our longer-range goal is to allow parents access to evaluations by computer in their room. This study adds to a growing literature advocating that parents should play an evaluative role in medical education.<sup>4,22,23</sup>

Many good things are happening between parents and students. We intend to proceed from a quality-improve-

ment standpoint and explore how we can give this feedback to the students and facilitate such events occurring more frequently. Such applications may enable medical educators to move poorly performing students to a “good” level, and good students to a “great” level. Additional research is needed to explore how parents can be involved in assisting medical students as they learn to communicate more effectively.

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