Learning Oral Presentation Skills

A Rhetorical Analysis with Pedagogical and Professional Implications

Richard J. Haber, MD, Lorelei A. Lingard, PhD

OBJECTIVE: **Oral presentation skills are central to physician-physician communication; however, little is known about how these skills are learned. Rhetoric is a social science which studies communication in terms of context and explores the action of language on knowledge, attitudes, and values. It has not previously been applied to medical discourse. We used rhetorical principles to qualitatively study how students learn oral presentation skills and what professional values are communicated in this process.**

DESIGN: **Descriptive study.**

SETTING: **Inpatient general medicine service in a university-affiliated public hospital.**

PARTICIPANTS: **Twelve third-year medical students during their internal medicine clerkship and 14 teachers.**

MEASUREMENTS: **One-hundred sixty hours of ethnographic observation, including 73 oral presentations on rounds. Discourse-based interviews of 8 students and 10 teachers. Data were quanlitatively analyzed to uncover recurrent patterns of communication.**

MAIN RESULTS: **Students and teachers had different perceptions of the purpose of oral presentation, and this was reflected in performance. Students described and conducted the presentation as a rule-based, data-storage activity governed by ''order'' and ''structure.'' Teachers approached the presentation as a flexible means of ''communication'' and a method for ''constructing'' the details of a case into a diagnostic or therapeutic plan. Although most teachers viewed oral presentations rhetorically (sensitive to context), most feedback that students received was implicit and acontextual, with little guidance provided for determining relevant content. This led to dysfunctional generalizations by students, sometimes resulting in worse communication skills (e.g., comment ''be brief'' resulted in reading faster rather than editing) and unintended value acquisition (e.g., request for less social history interpreted as social history never relevant).**

CONCLUSIONS: **Students learn oral presentation by trial and error rather than through teaching of an explicit rhetorical model. This may delay development of effective communication skills and result in acquisition of unintended professional values. Teaching and learning of oral presentation skills may be improved by emphasizing that context determines content and by making explicit the tacit rules of presentation.**

KEY WORDS: **medical education; professional competence; communication; feedback; language; socialization; social sciences.**

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Oral presentation skills are central to physician-physician communication, but little is known about how these skills are learned. While the communication between physicians and patients has recently received increased scrutiny,[1] less attention has been paid to the nature of communication among physicians. Studies from medical sociology and medical anthropology report that oral communication plays a central role in clinical care.[2–6] In particular, the oral presentation of patient cases provides a vehicle for the collaborative conduct of medical work,[2,3,6] the teaching and evaluation of clinical competence,[2,4,6,7] the negotiation of professional relationships,[2,6] and the reproduction of professional values.[5,6,8,9] While previous studies have described some of the language characteristics and socializing effects of oral discourse among physicians, they have not analyzed how these skills are learned or taught.

Rhetoric is a social science which studies communication in terms of context and explores the action of language on knowledge, attitudes and values. Rhetoric has been applied to other professions such as engineering,[10] business,[11] physics,[12] and social work,[13] but has not been previously applied to analyzing medical discourse among physicians. To increase our understanding of physician-physician communication, we used the theoretical framework of rhetoric to study how medical students learn oral presentation skills and what professional values are acquired in this process.

METHODS

Twelve third-year students on their internal medicine clerkship at the University of California, San Francisco (UCSF)/San Francisco General Hospital and 14 teachers (8 residents and 6 attendings) were observed for 160 hours, including 73 oral presentations on rounds (42 by students and 31 by interns or postgraduate year 2 [PGY-2] residents). Observation was by a trained rhetorician (LAL) who

From the Medical Service, San Francisco General Hospital, Department of Medicine, University of California, San Francisco, San Francisco, Calif (RJH); and Centre for Research in Education at the University Health Network, University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada (LAL).

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Address correspondence and reprint requests to Dr. Haber: The Medical Service, San Francisco General Hospital, University of California, San Francisco, Box 0862, Third and Parnassus Avenues, San Francisco, CA 94143-0862 (e-mail: rhaber@itsa.ucsf.edu).

Table 1. Characteristics of Study Subjects and Reference Groups, %

	Students		Residents		Faculty	
	Subjects (*n* = 12)	Reference* (*n* = 141)	Subjects (*n* = 8)	Reference† (*n* = 140)	Subjects (*n* = 6)	Reference‡ (*n* = 57)
Female	42	56	50	49	17	37
White	67	45	88	68	100	88
Asian	33	31	13	25	0	4
Latino	0	14	0	5	0	4
African American	0	9	0	2	0	5
American Indian	0	2	0	0	0	0

* *University of California, San Francisco Medical School Class 1997–1998.*
† *UCSF Internal Medicine Residents 1997–1998.*
‡ *UCSF/San Francisco General Hospital Attendings 1997–1998.*

made rounds and took call with the patient care teams for part of two 8-week clerkships (October and November 1997, and January and February 1998). Nonparticipant observation was conducted following standard ethnographic technique,[14] in which the observer dwells in the research community and, without engaging in the activities under study, records those activities and the relations between research subjects.

Observation was separated in time to allow detection of possible differences in presentation skills later in the clerkship year. The first group, a convenience sample consisting of 4 of the 8 students on the clerkship (2 students on each of 2 teams), was selected to allow in-depth observation of a small number of students and their teams (2 interns, 1 PGY-2 resident, and 1 faculty attending for each team). Students were observed during all activities of the clerkship for a 3-week period (approximately 100 hours). During this time, the mean number of observed presentations was 7.5 per student and 5 per house officer. Based on the data gathered from the first group, hypotheses were generated, and all 8 students on the clerkship during the second time period were observed (mean number of observed presentations was 1.5 per student) for a 2-week period during team work rounds, attending rounds, and/or presentation rounds with the clerkship director (approximately 60 hours); most oral presentations occurred in these settings. Saturation sampling (when further observations yield minimal or no new information[15,16]) was achieved through this process. Subjects were informed of our interest in "how students adjust to the clerkship"; however, in order to minimize observer effect, we did not disclose our specific interest in their communication skills until after the observation period.

Discourse-based interviews[17] of 8 students and 10 teachers (5 residents and 5 attendings) were conducted and audiotaped. This sample included all the students on the clerkship during the second observation period and 5 of the 6 PGY-2 residents and 5 of the 6 team attendings during the same time period (those who agreed to be interviewed [all] and could be scheduled). Discourse-based interviews elicit tacit knowledge about language by having participants work with a discourse sample and explicitly justify content and organizational choices. Students were asked to arrange a written sample of patient material into oral presentation formats for different contexts and to justify and explain their choices. Teachers were given an already organized presentation sample and asked if they would present it differently in different contexts and to explain their choices. Teachers were also asked to interpret representative feedback statements selected from observational field notes. Different formats for the student and teacher interviews were chosen to reflect the preceptor relationship between students (creating the presentation) and teachers (critiquing the presentation). All students in the second group (*n* = 8) also completed a postclerkship survey. General survey questions inquired about the difficulties students had in composing and delivering case presentations, the "golden rules" of case presentation they had learned in their clerkships, and the advice they would offer to clerks beginning this rotation. Table 1 describes selected demographic characteristics of study subjects compared with the UCSF reference groups from which they were drawn. None of the teachers in the study had specific training in teaching oral presentation skills.

Data from field notes and transcribed interviews were qualitatively analyzed for emergent themes in order to uncover recurrent patterns of communication. Analysis followed the method of grounded theory technique[15] in which textual data is organized into increasingly refined categories representing recurrent ("emergent") themes. Final categories are checked with an expert insider (RJH) to ensure that they reflect the experienced reality of the discourse under study. Thematic findings from observations and interviews were triangulated using analyses of curricular documents, student surveys, and a review of the sociological, anthropological, and medical literature on medical discourse. Triangulation, a term from cartography, refers to the practice of collecting data from various sources in order to verify the accuracy of observational findings.

Although there were variations in presentation skills within our student and teacher groups (e.g., students demonstrated differing abilities, over time, to learn to adapt content to context), even after saturation sampling we did not find recognizable patterns to these intragroup

differences. In addition, there was no discernible overlap between student and teacher presentation skills at any time in the study. Therefore, intragroup differences are not presented, and only intergroup comparisons between students and teachers are reported. Because no substantial differences were observed for students or teachers between the 2 time periods, the results were combined for analysis. Informed consent was obtained from all participants and the study was approved by the institutional review board of UCSF.

RESULTS

In our study, students and teachers had different perceptions of the purpose of oral presentations, and this difference was reflected in performance. Students described and conducted the presentation as a rigid, rule-based storage activity governed by "order" and "structure." Students typically presented information in the order that interview questions were asked and in the same organizational format as their written records. Student presentations did not change in different contexts or situations. Students repeatedly attempted to present the same case details to the resident on work rounds and to the attending on attending rounds, even after feedback suggesting the diverse requirements of these 2 audiences. Moreover, when students were faced with alternative data arrangements in the interviews, they struggled to explain their preferences, demonstrating a fragile sense of what the "rules" of order and selection were based on. For example, in response to an inquiry about whether the sample patient's "10-year history of progressive dyspnea with exertion" could be moved from past medical history (the student's selection) to history of present illness [HPI], the student interviewee answered: "Geez, I might actually, well I don't really know. . .no, right, no, I don't know if I would be, I wouldn't be really adamant. . .well, I'd say no, don't move it because I think. . ." When asked to articulate reasons for their choices, students either verbally flailed (became dysfluent[18]), as the above example illustrates, or turned to their sense of the "rules" as justification. One responded: "Well, it's 'past [history]' or it's 'present [history]', isn't it? His chronic venous stasis and nonhealing ulcers are in the past—I mean he's got them now, but he had them already, so it's past, not present." Another answered: "Well, you could [move it to the HPI], I mean I think I'd want to, but you might get in trouble. That's not where it's meant to go."

In contrast to students, interviewed teachers described the presentation as "the way [physicians] talk to each other." Teachers reported that they approached the presentation as a flexible means of "communication" and a method for "constructing" the details of a case into a diagnostic or therapeutic plan. They described the presentation as both "a story you tell and an argument you make."

Reflecting their social understanding of the purpose of case presentation, more expert presenters (interns and residents) changed their presentations in response to differing contexts. For example, a resident was observed modifying the same case presentation for 3 different contexts: a telephone request for a specialty consultation, an acute care presentation to the intensive care unit (ICU) team, and a presentation to the medicine team faculty physician at attending rounds. Similarly, interns were often noted to solicit selection guidance from their residents as a strategy for deciding what should be included in their postcall rounds presentation. They would ask questions such as, "Do you want the whole physical exam [or all the lab values] or just the pertinent positives?" Or, more directly, "Which labs would you like?" In the busy postcall context, these interns have learned that offering less, and letting their resident choose, is better than offering more.

The expert's contextual flexibility was also evident in interview responses. In interviews, both resident and faculty teachers explained the changes they would make in the sample presentation in terms of contextual influences, and invariably requested of the interviewer details about the audience and context of the sample presentation before they would comment on its content. Teachers also recognized that students did not understand the social purpose of presentation. They complained that students "forget about communication, who they're talking to and what that person needs and just present masses of information until you can't see the forest for the trees." Additionally, teachers agreed that students were too wedded to structure, complaining that "if you give them section headings, they'll always put something under them, even if all the information we need is really contained in the first 2 sections of the presentation. They'll fill the written form and then present from it."

Students in our interview sample recognized that effective presenters altered the structure and organization of their presentations, but could not articulate how, when or why these alterations were chosen. And, as in most modeling situations where teaching is implicit, the principles (for improvisation) were not articulated for students. As a result, students were not easily able to understand or mimic those successful presentations that they witnessed by more experienced team members. One clerk commented:

> *You know, the hardest thing about this [oral presentation] is that there is this very rigorous form, but the people who are really good at it don't use it—they just converse. So there's this structure that we learn and that I'm using to present my patient, but they want me to pop in and out of it—I guess to have all the details that following the structure implies, but then to play jazz with it, to ease in and out of it. But how do I know when it's okay to pop out?*

Students were apt to see improvisation as evidence of the idiosyncrasy of experts, rather than as a function of the influence of context and purpose on presentation content. Thus, they had no awareness of which presentation "rules" they could bend at any given time, and why, and were

unable to adopt these macrostrategies even while they sensed them in the presentations of senior team members.

Although most interviewed teachers viewed presentations rhetorically (sensitive to context), as "a fluid- and patient- and time- and situation-dependent activity," most feedback that students received was implicit, acontextual, and brief. These characteristics are important and problematic. Student presenters received from their teachers, instructions that often had been unmoored from situations and experiences: "Make it shorter," "Only tell me what is relevant," "Only tell me what I want to know," "Just the pertinent positives," "Just the relevant data." While "relevance" was cited by both teachers and students as the most important criteria for inclusion of material in an oral presentation and the most difficult to teach and learn, "relevance" was almost never explicitly defined by the teacher or determined by the learner. This lack of explicit and contextually based feedback led to dysfunctional generalizations by students, sometimes resulting in worse communication skills and unintended value acquisition. Two representative vignettes from our observation data, drawn from a larger set of similar examples, illustrate these issues:

> *On postcall work rounds, John's detailed presentation is interrupted by his resident: "We can formally present him at attending rounds—just give a bullet on him, tell us why he came in, what's key in his history, you know…" Rather than editing, John simply begins to read his notes more quickly. Afraid of leaving out critical information and uncertain about what constitutes relevance in this situation, John does not know how to select information appropriate to this context without explicit guidance from the resident.*

> *At attending rounds later that morning, John applies what he has interpreted as a rule about conciseness and excludes most of the medical history, skips the physical exam altogether, and moves straight to the problem list and plan. He is surprised and frustrated when the attending interrupts, "Back up! I want to hear the history. I need to know what's going on here." John has applied what he thought was a general rule about conciseness without being aware that the 2 contexts require different material in the presentation. In one case, the team already knew the patient from the night's admission; in the other, the attending had not yet seen the patient and needed a full report. The contextual differences were not articulated for John and he did not perceive them.*

The next vignette also illustrates the problematic nature of feedback about presentations on rounds. But it is perhaps more disturbing because the student's misinterpretation of feedback allows for the possible acquisition of unintended and undesirable professional values.

> *Judy's presentation of a comprehensive social history for a patient admitted to the ICU for resuscitation following head trauma and alcohol withdrawal is interrupted by her resident: "Just give me the social context stuff when it's warranted, when it's related to the presenting illness." Judy comments later, "Some people just don't have an interest in people's social lives or what job they have. I don't know if it's because they don't have the time or if it's because they're not interested…so I think there's just that line between how medical you make things and how much of people's lives you bring into it all." Judy is therefore surprised and unprepared when the resident asks her about the patient's social situation, support system, and availability of programs for abused men prior to discharge. "God, I wish he'd make up his mind," she says.*

For the resident, the request for less social history reflected the acute care context and ongoing resuscitation. For the student, however, it suggested cultural values (social history is never relevant), sending messages about what counts as "medical" information and what does not. Without explicit articulation, the student missed the role of context in determining when social history is relevant in a presentation. The resident is unaware of both the student's errors: her failure to recognize the influence of context on content, and her assumption that social data is not medically relevant.

DISCUSSION

Our analysis of findings was framed by a rhetorical approach to communication. A range of language analysis methods that derive from the social sciences have recently been applied to medical discourse.[2–7,18,19] Like linguistics (the study of language structure), semiotics (the study of signs and symbols in language) or conversation analysis (the study of language delivery), rhetoric investigates the social relations enacted through language. The rhetorical model captures these relations in a model that breaks communication into four essential components: message, audience, purpose, and occasion.[20] This model places the message (content) in relation to its rhetorical situation (context), which is comprised of an audience, a purpose, and an occasion (the setting and circumstances). Using this model, we can systematically study the relation between any of these critical variables, such as the message and its effects on the audience or the purpose and its impact on the content. Our discussion of findings reflects the rhetorician's attention to the relationship between what we say to our students, what we teach our students to say, and what our students come to value, believe and practice.

Students' explanations of presentation purpose, content, and organization demonstrate a structural, formalized understanding of the case (which emphasizes content) that differs greatly from teachers' social understanding (with emphasis on context). Their approach makes students "stiff" presenters and inhibits their ability to recognize and respond to contextual influences in their oral presentations. One result is that students tend to be underselective and present masses of data because they do not understand the clinical or contextual principles for editing and prioritizing. Another result is that students interpret teachers feedback as "rules" about structure and content

rather than reflections of context and audience. Medical students are rule-seekers (as are students in other settings[21]), hoping at each turn to discover a rule to help organize the masses of new information they are encountering. Cryptic, acontextual feedback messages such as "just what's relevant," "don't mix the past up with the present," or "no social history, please" can easily look like rules rather than reflections of place and time. Once formulated, such rules may be blithely transported into new contexts, creating a cascade of errors that frustrates students and teachers alike. To students, the breaking of these "rules" may look like teacher idiosyncrasy instead of a reflection of differing content requirements for different contexts. Others have noted similar problems with misinterpretation of "indirect" feedback in a variety of clinical settings.[4,9,22,23]

In addition to suggesting problems with the ostensibly "explicit" feedback students receive on presentations, our data reveal difficulties in the implicit processes of this learning situation. Modeling is a common vehicle for implicit learning, but our data, and that of others,[9,24,25] suggest that it can set the learner up for confusion and failure if it is not accompanied by an explicit explanation of what is being modeled. In fact, experts may not be the ideal models for novices. Experts in this discourse community, such as senior residents, have already mastered the conventions of oral presentation. Over time, they have asserted their credibility as speakers, and they have earned the right to, as the student said, "play jazz" with their presentations. By virtue of their expertise, however, these role models may offer misleading examples to students who are unable to distinguish between the required conventions and those which are more plastic in the hands of a presenter whose competence is established and who understands the impact of contextual differences on presentation content.

The theme of relevance repeatedly surfaced in our observation and interview data and in our review of written curricular materials and student surveys. This concept was pervasive in teachers' feedback on rounds, and readily acknowledged in interviews, by students and teachers alike, as the most critical and the most difficult aspect of a case presentation. Postclerkship student surveys also supported this finding; clerks reported that determining relevant content in their presentations remained a problem even when they believed that they were mastering other difficult aspects of the clerkship (e.g., knowledge, physical examination). Interestingly, we found that teachers rarely defined the concept for their students; rather, they presupposed[26] students knew how to determine relevance even while explicitly stating that students had great difficulty in this area. Analysis of curriculum documents related to oral presentation also revealed presupposition in reference to the principle of relevance. For example, the advice to "limit yourself to the pertinent data" presupposes that there are data and some of them are pertinent, but it fails to define how one determines which is which. Such presupposition can be a key factor in what medical anthropologists and sociologists have referred to as "hazing" or "pimping."[27,28] Presupposing knowledge that students do not possess can trigger feelings of vulnerability and anxiety, conditions frequently observed in the clinical clerkships.[26–28] When asked to define the principle, none of our teacher-interviewees could offer appropriate, operational definitions of relevance although they had no difficulty enacting the principle in their own presentations. Experts' difficulty in accessing and expressing tacit knowledge and attitudes has previously been noted in medical practice[29] and in settings other than medicine.[30,31]

From our analysis, we believe that the "relevant data" in the oral presentation are determined, by expert presenters, with reference to both clinical (patient-centered) issues and rhetorical (context-centered) issues.[26] But without a specific rhetorical framework and a vocabulary for contextual issues, these experts have difficulty explaining this differentiation to others. This distinction (between clinical and rhetorical relevance) is useful, for it explains a phenomenon that plagues the case presentations of novice physicians: the relaying of clinically accurate but rhetorically irrelevant patient information. For example, what is rhetorically relevant changes between a short case presentation to request a specialty procedure and a new case presentation to the team's attending physician, although the patient's clinical status has not changed. Conversely, a change in the patient's course, such as onset of acute shortness of breath on the second hospital day, alters what is clinically relevant even when the rhetorical context and audience (rounds with the attending physician) remain the same. What is clinically relevant may best be learned by expanding the student's biomedical knowledge and experience, while rhetorical relevance is addressed through specific attention to the purpose, audience and occasion of each presentation. We believe that recognition of the difference between the clinical and rhetorical dimensions of relevance can improve students' selection of presentation material, their interpretation of feedback and their comprehension of the purpose and effect of team communication.[26] Furthermore, such an operational definition of relevance can help teachers to articulate the reasons for success and failure of student presentations, potentially improving both the usefulness of the feedback students receive and the evaluation of their skills.

Our findings suggest that the current process of trial and error that characterizes the learning of oral presentation skills may be flawed and potentially dysfunctional. It could engender values that are in conflict with those we hope to instill in future physicians. However, we also recognize that the presentation "experts" in the study evolved from this very educational system; although it is not clear from our data how and when this occurs. So, why fix something that apparently works? We believe that the potential for inappropriate and unintended value acquisition, inefficient learning, student and teacher frustration, and delay in clinical acculturation argues for change and

suggests that the learning process may be made more effective and efficient by an intervention to excavate implicit learning and improve explicit instruction. Genre theorists, who study the nature and acquisition of conventional forms of communication, debate this hypothesis. Some argue[32] that the learning of genres (standard forms of communication such as the oral presentation) is necessarily tacit, as experts cannot easily articulate their implicit knowledge and students need to experience the genre rather than be told rules that they may misuse. Others[33] argue that although authentic experiences are necessary, learning can be aided by the timely provision of information about generic structures, expectations, and "rules of play," analogous to the value of an experienced coach to a novice athlete. Whether explicit, contextualized instruction can improve students' acquisition of medical genres such as the oral presentation is not currently known; but it is a testable hypothesis. Nonetheless, we believe that 2 rhetorically based[34] recommendations can be made which may improve learning and teaching of oral presentation skills. First, teachers can emphasize the contextual basis for presentations by communicating clearly and repeatedly how context determines content. Second, teachers can make explicit the tacit rules of presentation by carefully articulating the reasoning behind their feedback and assuring that students understand what was said.

Our study has limitations. First, this was a qualitative study subject to observer biases and interpretations. Second, the sample size was small. Repeating the study with different sites and clerkships and observers, and a larger sample size, would help to validate, generalize and expand our findings and might allow us to detect patterns to the intragroup variations we observed. Third, this was a cross-sectional study and so was not able to determine how or when students learn the contextual basis for presentation evident in our resident teachers. A prospective study of students at different times in their clinical training might help to characterize this transition. Fourth, the different formats for students' and teachers' discourse interviews could have effected the results. For example, it may be easier to say what you would do with a sample presentation (teachers) than actually do it (students). Conversely, our observational data support the differences noted between students and teachers in the discourse interviews. In addition, the different formats reflected the preceptor relationship between student (creating the presentation) and teacher (critiquing the presentation) which we were studying. Lastly, the presence of an observer on the team and the connection of the study to the clerkship director may have induced a Hawthorne effect, although this would probably minimize rather than exaggerate the problems seen.

We conclude that students learn oral presentation by trial and error rather than through teaching of a specific educational model. This may delay development of effective communication skills, impair ability to learn from modeled behavior and result in acquisition of unintended professional values. A rhetorical model based on explicit, contextualized instruction may improve students' acquisition of oral presentation skills and help students to recognize the social nature of the language they are learning. As teachers, we need to be aware that the language we use—what we say and not say, and what we encourage students to say and not say—can have powerful effects on student learning.

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