

Marrying Content and Process in Clinical Method Teaching: Enhancing the Calgary–Cambridge Guides

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ABSTRACT

Communication skills training is now internationally accepted as an essential component of medical education. However, learners and teachers in communication skills programs continue to experience problems integrating communication with other clinical skills, ensuring that clinical faculty support and teach communication beyond the formal communication course, extending communication training coherently into clerkship and residency, and applying communication skills in medical practice at a professional level of competence.

One factor contributing to these problems is that learners confront two apparently conflicting models of the medical interview: a communication model describing the process of the interview and the “traditional medical history” describing the content of the interview. The resulting confusion exacerbates the above dilemmas and interferes with learners using communication skills training to advantage in real-life practice.

The authors propose a comprehensive clinical method that explicitly integrates traditional clinical method with effective communication skills. To implement this more comprehensive approach, they have modified their own Calgary–Cambridge guides to the medical interview by developing three diagrams that visually and conceptually improve the way communication skills teaching is introduced and that place communication process skills within a comprehensive clinical method; devising a content guide for medical interviewing that is more closely aligned with the structure and process skills used in communication skills training; and incorporating patient-centered medicine into both process and content aspects of the medical interview. These enhancements help resolve ongoing difficulties associated with both teaching communication skills and applying them effectively in medical practice.

Acad. Med. 2003;78:802–809.

The development of effective communication skills is an important part of becoming a good doctor,^{1–4} and there is strong evidence that, with appropriate teaching, these skills can be both acquired and retained.^{5–8} In keeping with this evidence, the Medical School Objectives Project III on contemporary

issues in medicine⁴ highlights the importance of working from a communication skills model or framework for teaching and assessing communication in medicine and lists examples of models that have been influential. Despite these important developments, learners and teachers in communication skills programs continue to experience significant dilemmas:

- *Integrating communication with other clinical skills*—unless communication skills are integrated with history taking, physical examination, and medical problem solving, learners are unlikely to apply communication skills they have learned in real-life practice.
- *Ensuring that clinical faculty support and teach communication beyond the formal communication course*—unless clinical faculty who teach at the bedside or in other clinic settings reinforce communication skills, learners

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lose the gains they have made in their formal communication courses.

- *Extending communication training coherently into clerkship and residency*—if communication skills training is not carried forward into clerkship and residency, learners' communication skills deteriorate. Learners need to reinforce and extend their communication skills learning as they expand their clinical knowledge and deal with increasingly complex situations. Continuing to emphasize patient- or relationship-centered practice⁹ is especially important.
- *Applying communication skills in real-life practice at a professional level of competence*—unless we resolve the above dilemmas of integration, this ultimate goal of all communication training cannot be realized.

This article explores a key factor that exacerbates these problems, namely the separation of content and process in the teaching and learning of medical skills. Frequently, a communication model, describing the process of the interview, and a “traditional medical history,” describing the content of the interview, are introduced separately. Confusion resulting from this separation of content and process interferes with learners using communication skills training to their advantage in real-life practice.

To resolve this confusion, we propose a comprehensive clinical method that explicitly integrates traditional clinical method with effective communication skills. As an example of this comprehensive approach, we have modified our own model for teaching the medical interview, the Calgary–Cambridge guides.^{10–12} The enhancements we suggest help resolve ongoing difficulties associated with both teaching communication skills and applying them effectively in medical practice.

CONTENT AND PROCESS IN THE MEDICAL INTERVIEW

The Problem of Separating Content and Process

Traditionally, learners in medical education are confronted with two apparently conflicting models of the medical interview, whether during their training as medical students, residents, or practicing physicians. The first is the “traditional medical history,” a framework of information clinicians are generally expected to obtain when taking a clinical history and to consider when formulating a diagnosis (List 1). This is commonly referred to as the *content* of the medical interview, the information that needs to be discovered by the end of the interview.

The second is a communication model, such as the Calgary–Cambridge guides. Communication models provide

List 1

Content Guide for the Traditional Medical History

- Chief complaint
- History of the present complaint
- Past medical history
- Family history
- Personal and social history
- Drug and allergy history
- Functional enquiry/systems review

an alternative framework and list of skills that detail the means by which doctors conduct the medical interview, develop rapport, obtain the required information described in the traditional medical history, and then discuss their findings and management alternatives with patients. This is commonly referred to as the *process* of the medical interview or how we do things. Examples of communication process skills might include the physician's nonverbal behavior, the use of open or closed questions, the skills used to ensure accurate understanding, or the ways the interview is structured.^{11–13}

Confusion over Process

When confronted with these two models of the medical interview, it is all too easy for learners to think of them as alternatives and to confuse the models' respective roles. Too often, learners disregard their communication skills learning and use the traditional medical history as a guide not just to the content but also to the process of the medical interview. Consequently, these learners revert to closed questioning and a tightly structured interview that are dictated by the search for biomedical information.

There are several reasons why learners may make this mistake:

- Outside of communication skills courses, learners are rarely observed taking histories. Instead, they simply present their findings to their teachers using the template of the traditional medical history. Learners, therefore, erroneously perceive that the format in which they present their findings is that in which they should obtain the information.
- Critically, learners write their findings in case records in the same format, further embedding this approach as the “correct” format for the process of medical interviewing.
- Learners rarely observe their teachers undertaking a full medical interview. Instead, they see no more than snippets of them taking histories, engaging patients in

explanation, and planning or working with patients over time. Learners more often observe their teachers problem solving or teaching at the bedside and, unfortunately, mistake this for what patient care looks like “in the real world.” Similarly, at the bedside, learners are often encouraged to move directly to closed questioning regarding specific bits of the patient’s history, which inadvertently overrides effective communication skills teaching.

- Clinical faculty vary in their own training and knowledge base regarding communication as well as in their expertise and comfort with teaching communication skills. Because of this, they often revert to the traditional medical history, the only approach they were taught in their own education.
- The findings to discover in the physical examination (content) are usually taught in close conjunction with the way to discover them (process). In contrast, the content of the traditional medical history is commonly taught in history-taking courses, systems-based courses, or bedside-teaching rounds that focus on medical problem solving related to disease. Process skills are taught in separate communication courses. Moreover, history taking is often taught by specialists in teaching hospitals while communication courses are taught by general practitioners, psychologists, and psychiatrists. This can give inappropriate messages to learners: “Real” doctors take ‘histories’ and are not interested in communication, whereas communication teachers communicate but are not interested in the clinical history. Neither statement is true. However, the learner perceives that the traditional medical history is the “correct” approach and process skills are an optional add-on extra.

Confusion over Content

Another source of confusion has to do with content. Although communication models are commonly perceived to focus solely on process skills, many have introduced a new area of content to history taking, namely, the patient’s perspective of his or her illness.¹⁴ The traditional medical history concentrates on pathological disease at the expense of understanding the highly individual needs and perspectives of each patient. As a consequence, much of the information required to understand and manage patients’ problems is never elicited. Studies of patient satisfaction, adherence, recall, and physiological outcome validate the need for a broader view of history taking that encompasses content from the patient’s life-world, as well as the doctor’s more limited biological perspective.^{9,14}

The fact that patients’ ideas, concerns, expectations, and feelings are not a component of the traditional medical

history has all too often resulted in their omission in everyday clinical practice¹⁵ and has led communication process guides to include this area of content as a counterbalance. If, however, different areas of content appear in traditional history-taking and communication skills guides, learners may think they need either to discover patients’ ideas and concerns *or* to take a full and accurate biomedical history, when in fact they need to do both.

MARRYING CONTENT AND PROCESS IN THE ENHANCED CALGARY–CAMBRIDGE GUIDES

To resolve these confusions, we propose a comprehensive clinical method that explicitly integrates traditional clinical method with effective communication skills in such a way that the contribution of both components can be given equal emphasis in any teaching session.

The Calgary–Cambridge guides were developed to delineate effective physician–patient communication skills and provide an evidence-based structure for the analysis and teaching of these skills in the medical interview.^{10–13} Since their publication, a number of organizations at all levels of medical education and across a wide range of specialties have adopted the guides as the underpinning to their communication skills teaching programs. Institutions in Australia, Canada, Norway, South Africa, Spain, the United Kingdom, the United States, and elsewhere have used the guides as a primary resource for teaching, assessment, or research. Despite this widespread reception, these guides, like other communication models, may have inadvertently contributed to the artificial separation of content and process.

To move toward a more comprehensive approach, we have enhanced the Calgary–Cambridge guides in a number of ways. Our modifications include:

- Developing a framework of three diagrams that visually and conceptually improve the way we introduce communication skills teaching and that place communication process skills within a comprehensive clinical method
- Devising a new content guide for medical interviewing that is more closely aligned with the structure and process skills of communication skills training
- Incorporating patient-centered medicine into both process and content aspects of the medical interview

Our enhanced Calgary–Cambridge guides highlight both process and content components of the medical interview, combine the “old” content of the biomedical history with the “new” content of the patient’s perspective, and include a place for physical examination. The modifications clarify the need to elicit information about both the biomedical disease process and the patient’s perspective and emphasize

that both are essential components of the medical history. Below, we describe in detail how we have enhanced the guides and modified their presentation.

Framework of a Comprehensive Clinical Method

The first enhancement is our introduction of a set of three diagrams that make it easier for learners and physicians who teach them to conceptualize (1) what is happening in a medical interview and (2) how the skills of communication and physical examination work together in an integrated way (Figure 1). The diagrams introduce the skills of communication and place them within a comprehensive clinical method. Together, the diagrams provide a memorable and logical organizational schema for both physician–patient interactions and communication skills education.

The basic framework. Figure 1A shows the first diagram. Both communication tasks and physical examination are included in this bare-bones map of the medical interview depicting the flow of these tasks in real-life clinical practice. Beginning with this diagram is an important step in obtaining “buy-in” because clinical faculty as well as learners can identify immediately with this straightforward and easily remembered presentation of the model.

The basic framework diagram introduces two changes. First, instead of mapping communication only, it includes physical examination as one of the key tasks that physicians tend to carry out in temporal sequence during a full medical interview. Depicting physical examination in its appropriate place in the sequence reflects what happens in real-life interviews and enables learners to see the fit between physical examination and the communication tasks.

The second change we have introduced is a sharpening of the distinction between the five tasks that are performed in sequence in medical interviews and the two that occur as continuous threads throughout the interview—namely, building the relationship and structuring the interview. This change helps learners conceptualize more accurately the communication process itself as well as the relationships among the various tasks that comprise it.

The expanded framework. Figure 1B shows how we expand the basic framework by identifying the objectives to be achieved within each of its six communication tasks. This expanded framework of tasks and objectives provides an overview that helps the learner organize and apply the numerous communication process skills that are delineated in the more complex Calgary–Cambridge guides. The objectives serve as subheadings that refine conceptualization. The guides then spell out specific, evidence-based skills needed to accomplish each objective.

An example of the interrelationship between content and process. The third diagram (Figure 1C) takes one

task—gathering information—as an example and shows an expanded view of how content and process specifically interrelate in the medical interview. Together, the three diagrams (Figure 1) form a framework for conceptualizing the tasks of a physician–patient encounter and the way they flow in real time. This framework helps learners (and those faculty who are less familiar with communication teaching) visualize and understand the relationships between the discrete elements of communication content and process.

The more detailed Calgary–Cambridge process and content guides described below are needed, then, to move learners from merely thinking effectively about the objectives of physician–patient interaction to actually identifying and performing the communication process skills involved and, thereby, discovering and communicating the appropriate content of the medical interview.

Calgary–Cambridge Guides: Communication Process Skills

The Calgary–Cambridge guides have been presented and substantiated elsewhere.^{11,12} They identify a total of more than 70 core, evidence-based communication process skills that fit into the framework of tasks and objectives shown in Figure 1B. In our experience, learners and clinical faculty who understand the framework shown in the set of diagrams (Figure 1) first are better able to accept and assimilate the true complexity of doctor–patient communication as detailed in the Calgary–Cambridge guides’ many individual skills. The guides present a repertoire of skills to be used as required, not a list to be slavishly followed in every encounter. We have made slight modifications and improvements to the skills in the Calgary–Cambridge guides; these communication process skills guides can be accessed on the web at (www.skillscascade.com) or (www.med.ualgary.ca/education/learningresources).

Calgary–Cambridge Guides: Communication Content

The revised Calgary–Cambridge content guide (List 2) replaces the content guide shown in List 1. The new guide offers an improved method of conceptualizing and recording information during the consultation and in the medical record. The traditional ways of recording information in medical records are retained but enhanced by including:

- The sequence of events
- The new content regarding the patients’ perspective
- Possible treatment alternatives considered by the physician
- A record of what the patient has been told
- The plan of action negotiated with the patient

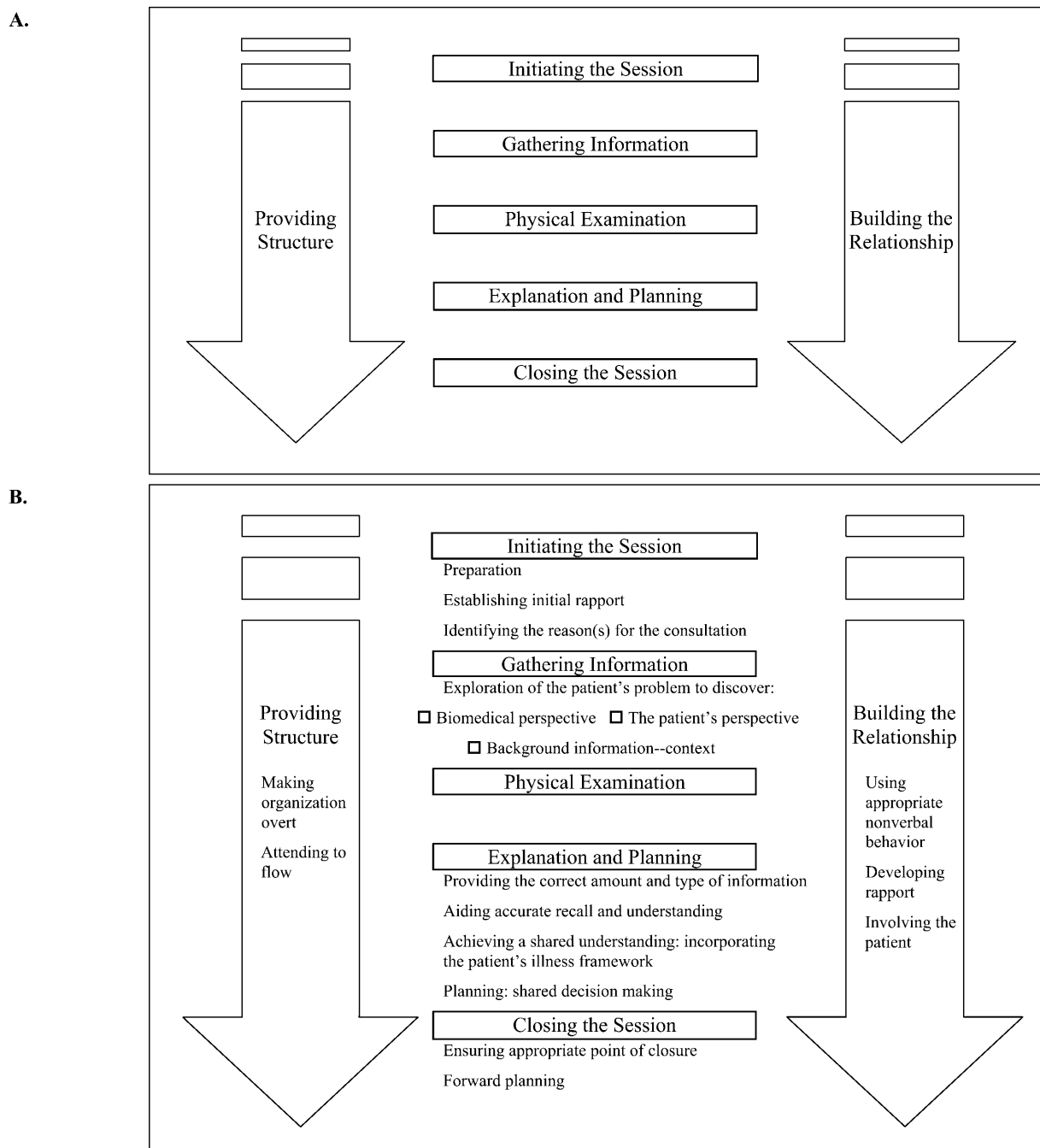


Figure 1. Three diagrams that visually and conceptually introduce communication skills and place them within a comprehensive clinical method. A, basic framework: flow of medical interview tasks in clinical practice. B, expanded framework: objectives to be achieved within medical interview tasks. C, example of interrelationship between content and process (gathering information).

With these additions, the content guide (List 2) parallels medical practice more closely than the traditional approach. For example, specifying sequence of events, symptom analysis, and relevant systems review on the form helps learners make a more thorough exploration of the patient's

current problems. At the same time, it helps prevent learners from focusing too narrowly on symptom analysis alone.

By making it easier for learners to routinely include both old and new content in real-life practice, these additions

C.

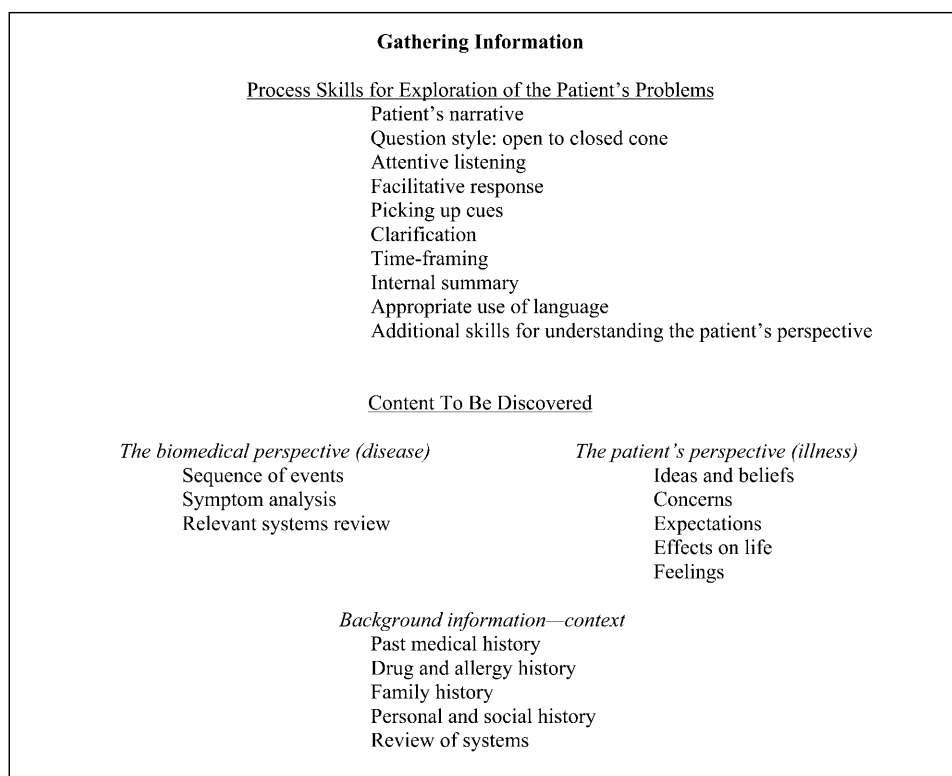


Figure 1. Concluded

result in improvements to both teaching and practice regarding the medical record. (For use in practice, each item in the new content guide would be followed by a space in which learners could write in the appropriate information as they make notes during the interview and later write up their notes in the medical record.)

The headings on the new content guide and the sequential tasks of medical interviewing correspond closely. For example, patient's problem list corresponds to initiation, exploration of patient's problems corresponds to gathering information, and physical examination is the same in both frameworks. The rest of the content guide's headings correspond to explanation and planning.

Thus, the improved content guide is also more closely aligned with the specific communication skills of the Calgary–Cambridge process guide. Because of this “fit,” the two guides reinforce each other and encourage integration of content with process skills.

OPPORTUNITIES OFFERED BY MARRYING CONTENT AND PROCESS

Marrying content and process in the enhanced Calgary–Cambridge guides offers numerous opportunities to commu-

nication skills teaching courses. First, traditional medical schools wishing to move away from separate history-taking and communication skills courses toward a more integrated format have had difficulty making this shift because clinicians and teachers may feel concerned that the recognizable elements of the traditional medical history will be sacrificed. For example, this was our experience at the University of Cambridge School of Clinical Medicine. The needs imposed by such an integration within a curriculum that had hitherto treated these elements separately was one of the factors that encouraged us to reexamine the way the Calgary–Cambridge guides were arranged. By explaining how process and content fit together, the enhanced guides clarify how the history-taking content is not lost but strengthened in communication skills teaching.

Second, those already undertaking integrated communication skills teaching still often have difficulty getting established physicians in academic or clinical settings outside the communication course to see exactly what the communication skills program encompasses. These physicians can, therefore, inadvertently undermine the messages from the communication course by giving contradictory messages. For instance, before we modified the guides, we experienced this problem at the University of Calgary even

List 2

Revised Content Guide to the Medical Interview

- Patient's problem list
- Exploration of patient's problems
 - Medical perspective—disease
 - Sequence of events
 - Symptom analysis
 - Relevant systems review
 - Patient's perspective—illness
 - Ideas and beliefs
 - Concerns
 - Expectations
 - Effects on life
 - Feelings
- Background information—context
 - Past medical history
 - Drug and allergy history
 - Family history
 - Personal and social history
 - Review of systems
- Physical examination
- Differential diagnosis—hypotheses (including both disease and illness issues)
- Physician's plan of management
 - Investigations
 - Treatment alternatives
- Explanation and planning with patient
 - What the patient has been told
 - Plan of action negotiated

though we had in place an integrated approach to history-taking and communication skills teaching. The enhanced guides offer ways to conceptualize communication skills in the medical interview that clinical teachers and role models outside the communication course can relate to and use more easily. Marrying process and content helps clinical faculty and other physicians understand and, therefore, complement the messages learners get from the communication course.

Third, when clinical-skills teaching occurs in separate courses (i.e., when communication, physical examination, and practical clinical procedures such as suturing and catheterization are taught separately), problems have arisen with integrating these skills and getting faculty in various parts of the program to support each other's messages. Marrying content and process increases faculty's understanding of how each of these skills sets interrelates.

And finally, problem-based learning curricula have often focused on the content of the medical interview and the role that content plays in hypothesis generation, problem solving, and diagnosis, while giving short shrift to the process skills that are so crucial in obtaining accurate informa-

tion efficiently and working out management strategies with the patient. Clinical presentation curricula, with their foci on schemes and inductive clinical reasoning,¹⁶ can have similar problems. Marrying communication content and process makes explicit the importance of both sets of skills to solving medical problems and working out management strategies and, so, prevents communication process skills from being ignored.

CONCLUSIONS

This article makes the case that marrying process and content in clinical-method teaching carries benefits for both learners and teachers. It describes enhancements in the way we graphically represent, conceptualize, and use the Calgary–Cambridge guides. The new arrangement marries content and process elements of the medical interview, incorporates both biomedical and patient perspectives, and includes the physical examination within a single unified model. Closely aligned to “real-life” medicine, this model enables the practice of a truly comprehensive approach to clinical-skills teaching and practice that translates readily from clinical coursework to practice settings. The enhanced Calgary–Cambridge guides help teaching faculty and role models (whether in the classroom or at the bedside) relate more easily to communication skills teaching and more readily participate in or reinforce the communication skills teaching program.

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