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WEB PAPER

A model for communication skills assessment across the undergraduate curriculum

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ABSTRACT Physicians' interpersonal and communication skills have a significant impact on patient care and correlate with improved healthcare outcomes. Some studies suggest, however, that communication skills decline during the four years of medical school. Regulatory and other medical organizations, recognizing the importance of interpersonal and communication skills in the practice of medicine, now require competence in communication skills. Two challenges exist: to select a framework of interpersonal and communication skills to teach across undergraduate medical education, and to develop and implement a uniform model for the assessment of these skills. The authors describe a process and model for developing and institutionalizing the assessment of communication skills across the undergraduate curriculum. Consensus was built regarding communication skill competencies by working with course leaders and examination directors, a uniform framework of competencies was selected to both teach and assess communication skills, and the framework was implemented across the Harvard Medical School undergraduate curriculum. The authors adapted an assessment framework based on the Bayer–Fetzer Kalamazoo Consensus Statement adapted a patient and added a satisfaction tool to bring patients' perspectives into the assessment of the learners. The core communication competencies and evaluation instruments were implemented in school-wide courses and assessment exercises including the first-year Patient–Doctor I Clinical Assessment, second-year Objective Structured Clinical Exam (OSCE), third-year Patient–Doctor III Clinical Assessment, fourth-year Comprehensive Clinical Practice Examination and the Core Medicine Clerkships. Faculty were offered workshops and interactive web-based teaching to become familiar with the framework, and students used the framework with repeated opportunities for faculty feedback on these skills. A model is offered for educational leaders and others who are involved in designing assessment in communication skills. By presenting an approach for implementation, the authors hope to provide guidance for the successful integration of communication skills assessment in undergraduate medical education.

Introduction

Communication is a core clinical skill that can be taught and learned. A physician performs 160,000 to 300,000 interviews during a lifetime career making the medical interview the most commonly performed procedure in clinical medicine (Lipkin, 1996).

Practice points

- Studies suggest communication skills decline during medical school.
- Regulatory and other medical organizations recognize the importance of teaching and assessing communication skills and require assessment of competence in these skills.
- The authors describe a uniform, longitudinal approach for assessing communication competencies.
- Instituting a uniform assessment framework of communication competencies provides repeated opportunities for student assessment and feedback, and consistently reinforces basic and more complex communication skills.
- Ongoing faculty development in teaching and assessing communication skills, and training for standardized patient assessors are important.

Evidence-based studies show that effective interpersonal and communication skills are associated with improved health outcomes (Stewart, 1995; Stewart *et al.*, 1999). Ineffective communication skills are associated with malpractice claims and suits (Levinson *et al.*, 1997) and medication errors (Kohn *et al.*, 1999).

Regulatory and other medical organizations, recognizing the importance of interpersonal and communication skills in the practice of medicine, now require competence in communication skills. Medical school guidelines (Institute for International Medical Education [IIME]—Institute for International Medical Education, 2002; General Medical Council [GMC]—General Medical Council, 2003; Liaison Committee on Medical Education [LCME]—Liaison Committee on Medical Education, 1998; Committee on Accreditation of Canadian Medical Schools [CACMS]; Association of American Medical Colleges [AAMC]—Association of American Medical Colleges, 1999; Association of Canadian Medical Colleges [ACMC]

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reflect international recognition of the importance of teaching and assessing communication skills during undergraduate medical training. As of 2005, US medical students are required to demonstrate competence in clinical, interpersonal, and communication skills on the United States Medical Licensing Examination (USMLE) Clinical Skills Examination (Klass *et al.*, 1998).

Competence in communication skills is also required via certification standards including the Canadian Medical Education Directions for Specialists 2000 Project (CanMeds) (Royal College of Physicians and Surgeons of Canada, 1996), Accreditation Council for Graduate Medical Education (ACGME) (Accreditation Council for Graduate Medical Education, 2001), Educational Commission for Foreign Medical Graduates (ECFMG) (Whelan, 1999), and others (Tate *et al.*, 1999).

Several consensus statements have proposed essential skills to teach and assess across the spectrum of medical education, including Kalamazoo (Bayer–Fetzer Conference on Physician–Patient Communication in Medical Education, 2001), Toronto (Simpson *et al.*, 1991), and International (Makoul & Schofield, 1999). The recent Kalamazoo II Report (Duffy *et al.*, 2004) and other reports (Whelan, 1999) summarize the state of the art in assessing communication. The report outlines how the Kalamazoo Consensus Statement (Bayer–Fetzer Conference on Physician–Patient Communication in Medical Education, 2001) and the ACGME interpersonal and communication skills competencies (Accreditation Council for Graduate Medical Education, 2001) are associated, and how these may be applied developmentally as trainees progress through training. Rider & Keefer (2005), with an international group of medical education leaders, further defined and expanded the ACGME interpersonal and communication skills competencies, added 20 sub-competencies and created a teaching toolbox. Their teaching toolbox connects these competencies to teaching strategies at each level of medical education.

Faculty, however, use a variety of models to teach and assess these skills (Cohen-Cole, 1991; Kurtz & Silverman, 1996; Stewart *et al.*, 1995; Makoul, 1998). Faculty are better able to teach and assess communication skills when they use the same framework of competencies to accomplish both tasks across the undergraduate curriculum. A framework grounds the reliability and effectiveness of observation and feedback (Makoul, 1998). A report from the AAMC published in 1999 found that, while medical schools use a variety of teaching and assessment methods, the majority (70%) did not use uniform frameworks for assessment throughout the curriculum (Association of American Medical Colleges, 1999). Additional data on the impact of using a uniform framework on individual performance and program efficacy is needed.

Some studies suggest that communication skills decline during the four years of medical school (Pfeiffer *et al.*, 1998; Prislin *et al.*, 2000; Pfeiffer *et al.*, 2001). This may reflect a lack of reinforcement combined with assessment and feedback on skills, or other factors. The majority of North American medical schools report fewer courses in communication skills training in the clinical (third and fourth) years than in the preclinical years (Association of American Medical Colleges, 1999).

Our goal was to implement a uniform communication skills assessment plan to reinforce basic skills introduced in years 1 and 2 and to elaborate on these skills during years 3 and 4, identifying appropriate skills for assessment at the different levels of training. We implemented a uniform communication skills framework for assessment across all four years of undergraduate medical education.

Developing a uniform framework for assessing communication skills

A Communication Skills Task Force, consisting of Patient–Doctor course leaders, Harvard Medical School experts involved nationally in the area of communication skills, and several clinical site faculty, held a series of meetings over several years to discuss core competencies and a framework for teaching and assessing communication skills during undergraduate medical education. A core group adopted a set of seven communication competencies based on the Bayer–Fetzer Kalamazoo Consensus Statement (Bayer–Fetzer Conference on Physician–Patient Communication in Medical Education, 2001).

The Kalamazoo Consensus Statement represents the collaboration and agreement of a group of experts, including the architects of five existing models of physician–patient communication. The Bayer–Fetzer Kalamazoo group identified seven broadly supported essential communication competencies, with sub-competencies for each, applicable to most medical encounters and adaptable across specialties, settings and health issues. The competencies include: building the patient–doctor relationship; opening the discussion; gathering information; understanding the patient’s perspective; sharing information; reaching agreement on problems and plans; and providing closure (Bayer–Fetzer Conference on Physician–Patient Communication in Medical Education, 2001). Members of the Bayer–Fetzer Kalamazoo consensus group also drafted an assessment tool correlated with these competencies.

The original Kalamazoo assessment tool included 23 communication sub-competencies with possible ratings: done well, needs improvement, not done, not applicable. Global ratings on the seven core communication competencies were not included. We adapted the Kalamazoo assessment tool, choosing to use global ratings of the seven core competencies using a Likert scale: 1 = poor, 2 = fair, 3 = good, 4 = very good, and 5 = excellent (Table 1). In years 1 and 2, we use global ratings on six core competencies, excluding reaching agreement. In year 3, we rate all seven core competencies as well as each sub-competency (a total of 30 ratings). In year 4, we again use global ratings on the seven core competencies. Assessment methods for each year are described below.

We also adapted the American Board of Internal Medicine (ABIM) patient satisfaction assessment tool (American Board of Internal Medicine, n.d.). We chose six items (five items in the first year) for our adapted tool including patient ratings of the interviewer’s greeting, respect, listening, showing interest, encouraging questions, and using simple language. Faculty examiners and/or standardized patients complete our adapted Kalamazoo assessment tool (i.e., the Harvard Medical School [HMS]

Table 1. Competencies and sub-competencies in communication skills adapted from the Bayer–Fetzer Kalamazoo consensus framework: the HMS Communication Skills Tool.

1. Builds a relationship:
<ul style="list-style-type: none"> • Greets and shows interest in the patient as a person • Uses words that show care and concern throughout the interview • Uses tone, pace, eye contact, and posture that show care and concern • Responds explicitly to patient statements about ideas, feelings, and values
2. Opens the discussion:
<ul style="list-style-type: none"> • Allows patient to complete opening statement without interruption • Asks 'is there anything else' to elicit full set of concerns • Explains and/or negotiates an agenda for the visit
3. Gathers information:
<ul style="list-style-type: none"> • Begins with patient narrative using open-ended questions ('tell me about...') • Clarifies details as necessary with more specific or 'yes/no' questions • Summarizes and gives patient opportunity to correct or add information • Transitions effectively to additional questions
4. Understands the patient's perspective:
<ul style="list-style-type: none"> • Asks about life events, circumstances, other people that might affect health • Elicits patient's beliefs, concerns and expectations about illness and treatment
5. Shares information:
<ul style="list-style-type: none"> • Assesses patient's understanding of problem and desire for more information • Explains using words that are easy for patient to understand • Asks if patient has any questions
6. Reaches agreement (if new/changed plan):
<ul style="list-style-type: none"> • Includes patient in choices and decisions to the extent she/he desires • Checks for mutual understanding of diagnostic and/or treatment plans • Asks about patient's ability to follow diagnostic and/or treatment plans • Identifies additional resources as appropriate
7. Provides closure:
<ul style="list-style-type: none"> • Asks if the patient has questions, concerns, or other issues • Summarizes • Clarifies follow-up or contact arrangements • Acknowledges patient and closes interview

Notes: Ratings used: 1 = poor; 2 = fair; 3 = good; 4 = very good; 5 = excellent.

Source: Adapted from *Essential Elements: The Communication Checklist*, ©Bayer-Fetzer Group on Physician–Patient Communication in Medical Education, May 2001. Used with permission.

Table 2. Adapted ABIM Patient Satisfaction Tool.

Items:

1. Greeting you warmly; calling you by the name you prefer; being friendly; never crabby or rude
 2. Treating you like you're on the same level; never 'talking down' to you or treating you like a child
 3. Letting you tell your story; listening carefully; asking thoughtful questions; not interrupting you while you're talking
 4. Showing interest in you as a person; not acting bored or ignoring what you have to say
 5. Encouraging you to ask questions; answering them clearly; never avoiding your question or lecturing you
 6. Using words you can understand when explaining your problems and treatment; explaining any technical medical terms in plain language
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Notes: Ratings: 1 = poor; 2 = fair; 3 = good; 4 = very good; 5 = excellent; 6 = unable to evaluate. Source: Adapted from American Board of Internal Medicine. Patient and peer assessment forms. Available at: http://www.acgme.org/outcome/downloads/IandC_1.pdf

Communication Skills Tool) and standardized patients complete our adapted ABIM patient satisfaction tool (Table 2) in assessment exercises at different stages over the four years of medical school.

Table 3 shows our framework for uniform assessment of communication skills across the curriculum. We use the HMS Communication Skills Tool, adapted from the Kalamazoo assessment tool, and the adapted ABIM Patient

Table 3. Uniform communication skills assessment across the medical school curriculum.

Assessment	Year			
	Year 1	Year 2	Year 3	Year 4
	Patient–Doctor I Clinical Assessment	Patient–Doctor II OSCE	Patient–Doctor III Clinical Assessment	Core Medicine Clerkships Communication Skills Assessment
Description of examination	Two videotaped interviews with standardized patients (SP), mid-year and end of year, with SP and faculty feedback	Seven 20-minute OSCE stations including history-taking, physical examination, communication skills, differential diagnosis, with SP and faculty feedback	Videotaped oral case presentation to faculty followed by giving bad news to a standardized patient; SP and faculty feedback	1. Two faculty-observed real-patient interviews followed by faculty feedback 2. Single case standardized patient exercise at end of clerkship with student self-assessment and SP and faculty feedback**
				Nine station CPX: 7 stations with SPs; history, physical examination, communication skills, differential diagnosis & some management with SP and faculty feedback
HMS assessment tool*	HMS Communication Skills Tool* completed by faculty during clinical assessment and all observed interviews throughout the course	HMS Communication Skills Tool completed by SP and faculty during seven-station OSCE	HMS Communication Skills Tool completed by faculty – with additional content-specific items	HMS Communication Skills Tool completed by SP and faculty in 7 of 9 OSCE stations
Patient Satisfaction Tool	Adapted ABIM Patient Satisfaction Tool completed by SPs at year end clinical assessment	Adapted ABIM Patient Satisfaction Tool completed by SPs at seven OSCE stations	Adapted ABIM Patient Satisfaction Tool completed by SPs	Adapted ABIM Patient Satisfaction Tool completed by SPs at seven of nine OSCE stations

Notes: *Adapted from *Essential Elements: The Communication Checklist*, ©Bayer-Fetzer Group on Physician–Patient Communication in Medical Education, May 2001. Used with permission. **This SP exercise occurred in 2004 only.

Satisfaction Tool in school-wide assessment exercises across four years and in the core medicine clerkship required of all third-year students.

Description of the curriculum and the implementation of assessment tools

Year I

The communication skills curriculum begins with the Patient–Doctor I course. Students work closely with faculty preceptors and a small group of peers one afternoon each week for nine months to learn the fundamentals of patient interviewing and the impact of illness on patients’ lives. Faculty teach interviewing content and skills in small-group tutorials and in clinical settings with real, and occasionally simulated, hospitalized or ambulatory patients. The goals of this first-year course include exploring the patient–doctor relationship and the contextual forces that affect it, and learning interviewing skills that demonstrate establishing rapport, collecting accurate data and understanding the patient’s perspective. Students also learn the standard medical write-up, and are introduced to the oral presentation. Students review videotapes of their patient interviews with peers and faculty at least twice during the year, mid-year and during the final clinical assessments. In the clinical assessment exercises, standardized patients portray cases that contain common biomedical and psychosocial problems. Students are assessed on their ability to elicit a complete history, including inquiring about the patient’s explanatory model and sensitive areas such as screening for smoking, substance abuse and domestic violence, and taking a sexual history. The HMS Communication Skills Tool is used for assessment and feedback. The year-long small-group format allows students to develop supportive, mentoring relationships with faculty. The multiple opportunities for one-on-one observation and assessment with immediate feedback help students set personal goals, receive and use feedback and practice self-reflection, all of which are central to professional development and improved communication skills.

Core faculty and Patient–Doctor I and II course leaders selected six of the seven Kalamazoo competencies (excluding reaching agreement) to be used for assessments in the first two years. Course leaders grouped a detailed list of skills already used in the curriculum into the competency headings in the Kalamazoo format. The detailed list of sub-competencies under each Kalamazoo heading is included on the interview observation–feedback forms for faculty and students in the course guides. Faculty use these feedback forms for teaching and assessment during observed student interviews with real and standardized patients throughout the year. Standardized patients interviewed by students in clinical assessment exercises complete the adapted ABIM patient satisfaction assessment tool.

Year II

Patient–Doctor II students concentrate on physical examinations and continue to learn and practice interviewing, interpersonal and communication skills. Students are assigned to a clinical site for the year, and the goals of the course are met using site-specific experiences and

resources. Toward the end of the second year, students participate in an Objective Structured Clinical Examination (OSCE) consisting of seven stations, each with a 15-minute encounter with a standardized patient (SP) and five minutes of SP and faculty feedback. Standardized patients assess students’ communication skills in the seven stations using the HMS Communication Skills Tool (see Table 1) and complete the adapted ABIM Patient Satisfaction Tool (see Table 2).

Year III

Concurrently with clinical clerkships, third-year students participate in weekly small-group tutorials over six months in the Patient–Doctor III course. The Patient–Doctor III course includes an in-depth clinical assessment with a standardized patient encounter centered on giving bad news. Students read an excerpted hospital chart of a patient who has metastatic breast or prostate cancer and present the case to a faculty examiner. The presentation begins with a discussion of the student’s planned approach to the patient, including psychosocial as well as medical issues. The student then meets with a standardized patient (SP) and gives the patient the bad news that the cancer has metastasized. Faculty observe and assess the students’ interviews. Student interviews and faculty feedback are videotaped, and students receive a copy of the videotape for review.

Faculty examiners assess and provide immediate feedback to each student, using an expanded HMS Communication Skills Tool, adapted from the Kalamazoo assessment tool. Using this expanded assessment tool, faculty assess students on the seven core communication competencies and 23 sub-competencies using a five-point Likert scale. Faculty also rate additional items related to this particular patient’s situation and case history. The standardized patients complete the HMS Communication Skills Tool and our adapted ABIM patient satisfaction assessment tool.

Faculty development workshops and a web-based faculty development learning module (Rider & Hinrichs, 2003) prepare faculty to assess students’ communication skills and give feedback. The workshops and web module provide the opportunity to practice using the assessment tool and to hone observation and feedback skills.

Core medicine clerkship

We implemented a communication skills curriculum and assessment in the 12-week core medicine clerkships (Rider *et al.*, 2004). We created interactive, web-based modules with embedded video clips on each of the essential elements of communication defined in the Kalamazoo Consensus Statement and assessed by our HMS Communication Skills Tool (Lown, 2003; Rider, 2003) [1].

The purpose of this resource was to provide both faculty and students with a common vocabulary, descriptions of the skills and videotaped demonstrations to help create a more consistent basis for skills performance and evaluation. At the end of the clerkship, all students completed a standardized patient interview, again with faculty assessment and feedback, and student self-assessment using the HMS Communication Skills Tool. Standardized patients also rated students’ communication skills using the HMS

Communication Skills Tool and the adapted ABIM patient satisfaction assessment tool. In 2004, one-half of the third-year students on their core medicine clerkship completed two faculty-observed interviews with real patients followed by faculty assessment ratings and feedback, and the student's self-assessment, both using the HMS Communication Skills Tool. In 2005, all third-year students completed observed interviews followed by faculty assessment and feedback.

In addition to a faculty development workshop, faculty assessing and teaching students during their core medicine clerkships and in the standardized patient exercise at the end of the medicine clerkship were provided with a self-instructional, web-based faculty development learning module. This module provided training for faculty in assessing communication skills and giving reflective feedback (Rider & Hinrichs, 2003).

Year IV

Students must pass a school-wide Comprehensive Clinical Practice Examination at the beginning of their fourth year. Students are assessed at nine clinical skill stations. Many of the stations are integrated across disciplines. For example, one station may integrate skills in medicine and neurology; another content and skills from surgery, obstetrics/gynecology and medicine. Standardized patients assess students' communication skills in seven of nine clinical skill stations using the same HMS Communication Skills and ABIM assessment tools. Faculty assess students' skills in interview content, physical diagnosis, differential diagnosis and management, and provide feedback on communication skills.

Discussion

While public interest and professional accreditation and licensure requirements are driving curricular change, barriers to enhancing interpersonal and communication skills teaching in medical education persist (Board of Medical Education, 2004; Institute of Medicine, 2004). Decreasing length of stay in hospitals, emphasis on the technological aspects of care and increasing demands on faculty time pose significant barriers to developing attitudes in trainees that value interpersonal and relational aspects of care (Ludmerer, 1999). The paucity of resources to support clinical teaching and the cost of school-wide clinical assessments using standardized patients present additional obstacles.

Infrequent or absent faculty development in teaching and assessing communication skills also poses a barrier to implementation of new curricula. Clinical preceptors who assess communication skills often have varying experience and approaches (Lang *et al.*, 2000; Novack *et al.*, 1993). A survey of medical school deans showed that faculty development in interpersonal skills teaching was favored by 62% of 114 (Novack *et al.*, 1993). Challenges include providing continuous orientation and faculty development for new and ongoing faculty each year, increasing the number of trained faculty invested in teaching and assessing students' communication skills, and providing ongoing training for faculty and standardized patient assessors.

Continuous reinforcement and longitudinal development of skills is critical for their retention and expansion.

Providing repeated opportunities for students to receive feedback on directly observed interviews using a uniform framework for teaching and for both formative and summative assessment over the four undergraduate years enables them to reinforce basic skills, and to learn more complex communication skills. To reinforce the skills, we assess the same seven core communication competencies, with 23 sub-competencies evaluated either separately or as part of global ratings of the seven core competencies, in each assessment exercise throughout the undergraduate years.

We adopted the principle that multiple perspectives and methods enhance skills-based assessment (Epstein & Hundert, 2002). The HMS Communication Skills Tool is completed by faculty, by standardized patients and/or by students for self-assessment, and standardized patients complete the adapted ABIM Patient Satisfaction Tool. Resources, time available for the assessment exercise, and standardized patient and faculty training determine the tools used in any given assessment exercise.

We also sought to bring patients' perspectives into our assessment strategies. An assessor personally involved in the interaction—e.g. an actual patient, simulated patient or standardized patient—may be able most accurately to measure the experience of the therapeutic relationship (Zoppi & Epstein, 2002). Various authors note that the patient's experience may be a more relevant measure of the patient-physician relationship than observations by impartial coders (Street, 1992; Janisse & Vuckovic, 2002). To bring patients' perspectives into our assessment system, we asked standardized patients to complete the adapted ABIM Patient Satisfaction Tool and, for some examinations, also the HMS Communication Skills Tool.

Finally, the goals of any curriculum should include the promotion of self-reflection and continuous self-directed learning not only in technical skills but also in relational skills and self-awareness. Using our assessment tools with students for formative evaluation and feedback, and for self-assessment, promotes these goals.

Implications

We implemented an integrated framework and resources for teaching and assessment to begin to address the increasing public and professional need for enhanced interpersonal and communication skills training, particularly in the latter years of the undergraduate medical curriculum. Until recently, medical training has not emphasized or consistently assessed communication and interpersonal skills and the physician-patient relationship. The new licensing and accreditation requirements for competence in clinical skills, including communication skills, provide an impetus for medical schools in the US to teach and assess communication skills in a more consistent and comprehensive manner throughout the curriculum than in the past.

The last available national report on the teaching and assessment of communication skills in US medical schools noted that the majority of schools did not use uniform frameworks for teaching and assessment (Association of American Medical Colleges, 1999). Our framework formalizes and institutionalizes the assessment of communication skills across the curriculum. Its use will enable us to collect data regarding the retention of these skills, and

whether uniform teaching and assessment over four years improves students' performance. Students use, practice and are assessed on these competencies numerous times over the course of their undergraduate training, in order to promote retention and further development of competence in communication skills. Implementation of our approach has raised the profile of communication skills teaching and assessment in our medical school curriculum, and has enabled us to expand and maintain this focus across all four years.

We hope to lay the groundwork for a focus on communication skills as a required competence throughout medical school. Multiple licensing and accreditation agencies join us in this important goal. Our experience provides one model for successfully integrating uniform communication skills assessment across the years of undergraduate medical education.

Notes on contributors

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Notes: Our assessment tools are available upon request from elizabeth_rider@hms.harvard.edu.

1. Expanded web-based modules are available in Novack *et al.* (2005).

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