Health communication encompasses a diverse array of knowledge, skills, and attitudes we use to diagnose and manage illness, encourage prevention of disease and disability, and build therapeutic relationships with patients and families. Competence in these areas is as important to the care of patients as biomedical knowledge. Unfortunately, the elements of skilful health communication are difficult to define and teach, do not come easily for most of us, and must be practiced and adapted to the needs of specific patients.

Much has been written about the importance of effective health communication, with many studies documenting a link to the quality and outcomes of patient care. A comprehensive review of this literature is beyond the scope of this article, but a few examples serve to illustrate the range of potential impact of effective clinical communication. For example, patient- or relationship-centered interviewing techniques have been shown to help physicians and patients mutually select information during the medical interview, leading to more accurate diagnosis and greater patient and physician satisfaction [1]. Behavioral counseling interventions tailored to the patient’s stage of change [2] have been used to help patients reduce or eliminate risky alcohol use [3] and achieve clinical improvement in diabetes control [4]. In a study of patients with type 2 diabetes and low health literacy, patients whose physicians adapted educational messages to level of patient literacy had lower mean hemoglobin A1c levels [5]. Evidence from several studies suggests that self-management education of patients with a variety of chronic illnesses may improve outcomes and reduce costs [6]. Finally, studies exploring effects of cultural competence in health care report differences in physician and patient satisfaction, patients’ trust in their physicians, and even health outcomes based upon race, ethnicity, and culture [7–9].

Health communication skills are particularly important to the successful practice of family medicine. The core values of family medicine emphasize disease prevention, maintenance of quality of life, effective self-management, shared decision-making, and continuity relationships with patient and family. Increasingly, family physicians work to establish their office practice as a “personal medical home” for their patients [10]. A significant proportion of patient visits to a typical family practice office are devoted to management of chronic disease, including working with patients to improve adherence to medications, practice appropriate self-care, and make necessary changes in risky lifestyle behaviors.

Despite the wealth of evidence suggesting that health communication training should be a high priority beginning in medical school, medical students receive limited education in the principles and practices underlying communication competence. Furthermore, with the exception of patient interviewing skills courses and exposure to the electronic health record during clinical rotations, undergraduate health communication–related training tends to be primarily didactic, despite evidence from educational research suggesting that active learning strategies are most effective at teaching skills and changing attitudes [11].

This article describes an ongoing effort at our family practice residency program to enhance health communication skills training in 3 content areas: health literacy, cultural competence, and behavior change counseling. During our experience with this curriculum, the focus has remained on these 3 content areas while our learning objectives and teaching...
approaches have evolved in response to barriers and challenges faced along the way. The lessons we have learned about bringing clinical relevance to health communication skills training should be useful to both residents and residency programs.

**Background**

**Setting**

University of Pittsburgh Medical Center St. Margaret Hospital is a 250-bed acute care and teaching hospital with a family medicine residency program that trains 36 residents. The program consists of rotations across the range of clinical skills required by family medicine, including rotations in obstetrics and pediatrics at Magee-Women’s Hospital and Children’s Hospital of Pittsburgh, respectively, and longitudinal outpatient primary care experience at 1 of 3 urban neighborhood-based health centers. Each of the health centers serves a substantial number of low-income, working poor, and minority patients, including refugees from Somalia and Southeast Asia.

**Needs Assessment**

In 2001, our family medicine residency program conducted a needs assessment in preparation for designing and implementing a competency-based curriculum, which revealed that our residents felt least competent in the areas under the general rubric of health communication (Table 1). More specifically, residents expressed concerns about their ability to provide behavior change/motivational counseling, to use negotiation skills in discussing patients’ self-management options or treatment alternatives, and to broach or provide counseling on topics such as domestic violence and sexual practices, particularly in the context of cultural, racial, or ethnic differences. In response, we developed a health communication curriculum addressing the specific content areas identified by the needs assessment (ie, behavior change counseling using the stages of change model, cultural competence, and health literacy) and emphasizing active learning while minimizing lecture-based and didactic approaches.

**Curriculum Design and Planning**

Our initial curriculum design team included family physician and PhD educator faculty members as well as the residency program coordinator, whose MPH training in community and behavioral health provided a valuable foundation in our 3 content areas. Our first step was to determine how to add new learning opportunities to an already-packed residency schedule. Studying the rotation schedules for the 3-year residency, we concluded that we could create time for our health communication curriculum by borrowing 1 hour per week from 1 rotation per year (eg, year 1, community medicine; year 2, cardiology; year 3, neurology). This arrangement allowed us to assemble a group of learners each month consisting of at least 1 first-year, 1 second-year, and 1 third-year resident. It also made it possible to take advantage of senior residents’ experience working with patients toward

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**Table 1. Scope of Health Communication**

<table>
<thead>
<tr>
<th>Communication-Related Skill, Knowledge, or Attitude</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient interviewing</td>
<td>Use of questions and other interviewing techniques to elicit pertinent patient information (eg, history, symptoms) and to build rapport</td>
</tr>
<tr>
<td>Stage-based behavior change counseling</td>
<td>Use of questions to build patient insight into and commitment to behavior change</td>
</tr>
<tr>
<td>Assessing health literacy</td>
<td>Use of patient cues and appropriate questions to identify patients who read poorly or not at all, and adapting patient education appropriately</td>
</tr>
<tr>
<td>Cultural competence</td>
<td>Physician awareness of and appropriate response to cultural differences among patients, providers, and staff</td>
</tr>
<tr>
<td>Using EHR in patient care and practice management</td>
<td>Use of EHR for messaging between providers and during patient visits to enhance, not detract from, patient and physician satisfaction and health outcomes</td>
</tr>
<tr>
<td>Managing legal and ethical aspects of patient health information</td>
<td>E-mail communication with patients, phone etiquette, privacy and legal issues, HIPAA requirements, access issues</td>
</tr>
<tr>
<td>Patient education</td>
<td>Use of patient education materials with patients (including Web-based) group visits, strategies for presenting evidence to patients</td>
</tr>
</tbody>
</table>

EHR = electronic health record; HIPAA = Health Insurance Portability and Accountability Act.
positive behavior change, increased adherence to medications, and other aspects of chronic disease management. We expected senior residents to provide patient care examples that would make health literacy, cultural competence, and behavior change counseling believable and relevant to interns.

The next step was to decide how to provide meaningful learning about 3 complex subjects in 1 hour per week for 4 weeks. Although we had ample teaching materials developed by experts in the 3 areas, we felt that we needed to select topics, approaches, and learning activities that residents would see as directly relevant to patient care. We also recognized the need to convince residents that skills and principles related to interpersonal and communication competency are as important as medical knowledge in providing excellent patient care. Because we were uncertain which learning activities would be most effective at convincing residents of the importance of communication-related skills and principles, we sampled a variety of approaches in Year 1 with the expectation that we would continuously evaluate and refine the curriculum from month to month (Table 2) [12–16].

**Evolution of our Health Communication Curriculum**

**Year 1 Highlights: Senior Stories**

We entered Year 1 with our pilot curriculum built...
around weekly small-group sessions. Each 50-minute session was co-led by a faculty member and the residency program coordinator. Because we had a new group each month, we were able to refine our curriculum during the pilot year in response to residents’ evaluations, informal comments, and our own observations of which activities were most successful in giving residents ideas and practices that they could (and would) incorporate immediately into patient care. As the year progressed, we found that one of the most effective components of the planned learning activities were personal accounts from primarily third-year residents who had experienced frustrations and setbacks with patients with chronic conditions or risky health behaviors, and who now recognized the importance of health communication skills in working with these patients. These spontaneously shared “Senior Stories” were often about residents’ perceived successes, but those about failures often provided the most powerful learning. The testimonies served to motivate the other residents in the session and to reinforce the goals of the health communication curriculum. Three examples of such stories follow.

Stages of change counseling. One resident described an alcoholic patient who had previously quit drinking but then relapsed. The resident described how he counseled this patient (“I told him if he could quit once, he can do it again”). In sharing his story, the resident realized that he had practiced stage-appropriate counseling (helping the patient recognize that relapse is an opportunity to anticipate similar challenges) and had worked together with his patient to conceive a solution that fit the patient’s means and understanding of the situation.

Culture of medicine. Another resident shared a story of her attempt to put her hospitalized patient on the same medication regimen that she followed at home, rather than the “8-2-8” hospital regimen. The resident met great resistance from the nursing staff and found that the hospital’s computer order entry system made it nearly impossible to recreate the patient’s home dosing schedule. This story helped residents recognize that the culture of medicine, to which they had been indoctrinated, may at times be patient unfriendly.

Encouraging patient self-management. Another resident described a patient with whom he had struggled through many encounters, never being able to find common ground to forge ahead on a path to improved health. The patient returned each visit with the same host of somatic complaints as well as objections about medications and would not adhere to any course of treatment over time. The resident then described a particular encounter with the patient (“I had nothing to lose, so I took a big breath, and asked the patient, ‘What do you think would help?’ And it actually worked!”). The resident found the patient’s suggestion (ie, an increased antidepressant) quite agreeable, and for the first time, an encounter with this patient was closed on good terms.

Year 2 Highlights: Unforeseen Challenges
In Year 2, we used the same curriculum and scheduling model as in Year 1 but faced an unexpected challenge. In each of the first few months, 1 or more residents who had participated in the curriculum during Year 1 were reluctant to attend during Year 2, because they believed they had “already learned the content.” This was a particular problem for those who had been interns in Year 1, who did not have sufficient patient care experience to be able to effectively incorporate health communication skills into patient encounters or to have developed the awareness that mastery of these skills is the key to improving the outcomes of patient encounters (eg, better adherence to medications and/or weight loss/exercise recommendations, better chronic disease self-management).

We initially attempted to address resident reluctance by having a clinical faculty member contact second- and third-year residents scheduled for the sessions prior to the beginning of the rotation. The faculty member explained that new learning activities were included in the Year 2 sessions and that senior residents were invited to take leadership roles. However, in addition to being time-consuming, this strategy did not address the underlying problem: many residents were not convinced that the health communication skills they were learning would make a difference in patients’ health outcomes. Although their comments on evaluation forms were polite, off-hand comments during sessions told a different tale (eg, “It’s too complicated to bill for this; “You never get to see the outcome of this because it takes so long for patients to change”). Further, there was no penalty for missing the sessions and no systematic means of providing residents with feedback about the impact of their new communication skills on patient outcomes. As Year 3 approached, we determined that we needed to redesign the curriculum to increase the likelihood that residents would see the relevance of health communication skills to their patients’ health outcomes and would begin to incorporate the skills into the standard 15-minute ambulatory visit.
Year 3 Highlights: Making Communication Relevant to Practice
In Year 3, we changed our focus from learning skills to applying skills in outpatient family medicine and measuring the impact of these skills on patient (and/or practice) outcomes. Our learning objectives, related to the Plan-Do-Study-Act (PDSA) cycle, were: 1) office-based physicians can use the PDSA model to attempt small-scale, communication-related interventions to improve care without overburdening their already busy practices; 2) improved health communication can improve the quality of patient care; and 3) practitioners can operationalize good health communication practices.

We also changed the format to a single morning-long (8:00–11:30 AM) workshop, because the entire residency rotation schedule was altered in Year 2. Residents were scheduled to attend the workshop in the third week of the selected rotation (same as used in Years 1 and 2). In this way, we retained the feature of first-, second-, and third-year residents meeting as a small group with the benefit of senior leadership.

Each workshop began with a brief introduction to performance improvement using the PDSA cycle, featuring 1 or 2 examples from clinical practice in the outpatient health center. This was followed by 3 sessions (45 minutes each, with a 15-minute break between sessions) addressing health literacy, cultural competence, and behavior change counseling. Each session began with a brief introductory exercise, structured discussion, or icebreaker, incorporating new materials and activities not used in Years 1 and 2 (Table 3) [17]. Residents then brainstormed ideas for quality improvement (QI) topics they could theoretically study related to the health communication area of discussion (eg, health literacy). The residents then chose a QI topic to examine further and were led by a clinical faculty member in a discussion of how to apply the PDSA model to the topic. Examples of topics chosen for discussion include: 1) having patient education material in the appropriate language (health literacy), 2) ensuring access to interpretation services whenever needed (cultural competence), and 3) creating a place in the patient’s chart to track stage of change and/or priority lists for health behaviors or conviction/confidence scales (behavior change counseling).

Table 3. Health Communication Curriculum: Year 3

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Learning Materials and Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural competence</td>
<td>“Robert Phillip’s Story” video and discussion [17]. Residents viewed and discussed a video about a young African American man with end-stage renal failure. Residents learned about African Americans’ experiences with and perceptions of physicians and the U.S. health care system.</td>
</tr>
<tr>
<td>Stage-based behavior change counseling</td>
<td>Stages of change patient care scenarios. Residents were presented with brief patient scenarios that tested their knowledge about how to stage patients (eg, contemplation, action, relapse) and what interventions are appropriate for different stages. Residents discovered that they needed additional practice working with patients at every stage.</td>
</tr>
<tr>
<td>Decision balance for residents’ desired behavior change</td>
<td>A resident volunteered a behavior he or she wanted to change (eg, get more sleep or exercise, read more fiction/watch less TV), and the group worked through a decision balance with that resident. Residents learned that change is difficult for everyone and that people have reasons why they do not change even the most obviously risky behaviors.</td>
</tr>
</tbody>
</table>

Each step of this process related to our objectives for the workshop. Brainstorming about topics to study helped residents learn to identify small-scale communication-related interventions within the flow of daily practice. Choosing 1 small topic allowed residents to assess many different performance improvement questions relevant to their practices. Finally, working through the entire PDSA cycle for a topic led residents to encounter and attempt to answer, in specific terms, tough questions such as “How do we measure success?” and “What exactly would be our intervention?”

As Year 3 wound down, we again critically examined our approach to teaching health communication. We thought the QI concept worked well: evaluations were strong, and our facilitators observed that the residents were genuinely engaged in the PDSA discussions. Based on residents’ written evaluations and our own observations of the quality and depth of discussion during the sessions, repackaging health communication training into a performance improvement approach—focusing on application to and impact on patient care—appeared to help us meet our goals for redesign. The new approach increased residents’ satisfaction with the
sessions and their belief that they learned skills they could immediately apply in practice. Clearly, the connection to actual practice was the key to teaching these skills.

The small-group workshop format, however, was costly in terms of faculty time (2 or 3 facilitators teaching at least part of each workshop to only 3 or 4 residents). Also, after 3 years of testing and refining teaching materials and activities to achieve our objectives, we believed we could effectively implement many of these activities in a larger-group setting. Armed with our original needs assessment, our 3-year history of teaching materials and activities for the health communication curriculum, faculty champions, and strong resident evaluations of the QI approach, we negotiated for and received 6 noontime conference slots. (In our program, noontime conferences are attended by all residents who are not on away rotations as well as most faculty and attendings.)

**Year 4: Planning the Conference Series**

As this article is being written, we are finalizing preparations for our noontime conference series, entitled “The New Health Care System.” Elements of our original 3 health communication topics will be woven throughout the sessions (Table 4). The curriculum will incorporate additional topics not included in Years 1 through 3 (ie, e-mail, open access, group visits, and the electronic health record); the Institute of Medicine has identified these topics as fundamental to successful practice management and crucial to transforming the health care system [18]. Although “conference” connotes didactic instruction, we plan to structure each session around small-group activities, using the report-back method to facilitate large-group sharing at the end of each session. We realize that the limited conference time schedule and larger number of topics will produce more of a survey than an in-depth exploration of health communication topics for our residents. However, we believe a positive tradeoff will be the presence and participation of more faculty and attendings and the increased possibility of discussion among the larger group of residents.

**Lessons Learned**

Over its nearly 4-year history, our health communication curriculum has evolved from a series of small, intensive workshops for a small group of residents to a noontime conference series open to the entire residency as well as faculty and attendings. This story of the design, redesign, and ultimately transformation of a curriculum offers some important lessons about health communication training in the increasingly complex environment of a primary care residency program.

First, residents (and faculty) are more likely to take health communication training seriously if they experience payoff for applying these skills and principles in everyday clinical practice. This payoff may come in the form of measurably improved patient health outcomes; better history-taking, diagnosis, and/or management; and greater patient and physician satisfaction. Although our training approach emphasized active learning, mechanisms were not in place to assess how residents applied (during patient interactions) what they learned in the sessions or to provide feedback to residents.

Second, we are probably not unique in that our residents, particularly those in their first or second year of training, are more attentive to topics they consider clinical or technical than to topics they consider “soft.” We attempted to address these attitudes through Senior Stories, role-plays, and other patient care–oriented activities, which were well received during the sessions. However, to ensure residents’ consistent application of health communication skills into routine patient care, a broader culture change—or at least a culture challenge—is needed to legitimate these skills as part of every physician’s skill set. In retrospect, our Year 3 QI approach was a tiny first step toward this culture change: we reframed health communication within the larger framework of practice

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Health Communication Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview of quality aims, introduction to series</td>
<td>E-mail, electronic health record</td>
</tr>
<tr>
<td>New models of patient care</td>
<td>Group visits, patient education</td>
</tr>
<tr>
<td>Access to care</td>
<td>Cultural competence, Web access</td>
</tr>
<tr>
<td>Process improvement</td>
<td>Behavior change counseling</td>
</tr>
<tr>
<td>Patient safety</td>
<td>Health literacy, cultural competence</td>
</tr>
<tr>
<td>Health communication, summary of series</td>
<td>Health literacy, cultural competence, behavior change counseling</td>
</tr>
</tbody>
</table>
Table 5. Obstacles to Health Communication Training in Residency Programs

<table>
<thead>
<tr>
<th>Obstacle/Example(s)</th>
<th>Possible Solution(s)</th>
</tr>
</thead>
</table>
| **Resident attitudes**                                                            | Elicit personal stories from senior residents  
Provide small doses of strong evidence about impact of health communication on patient outcomes  
Incorporate health communication-related projects into community medicine rotation  
Enlist faculty champions and encourage them to include health communication topics during precepting and inpatient rounds |
| “Health communication topics are not clinical/are too ‘touchy-feely’”               |                                                                                                                                                     |
| “I already know this (and do this) because I took medical interviewing in medical school” | Link effective interviewing techniques to residents’ actual practice; chart audit patients’ health outcomes  
Encourage role-play, especially written by residents  
Videotape patient encounters to assess residents’ skill levels  
Have faculty (if skilled) demonstrate effective interviewing techniques  
Have residents self-assess their skills (works especially well with cultural competence because residents begin with personal experience)  
Have facilitators establish safe and humble environment through self-revelation (personal stories) |
| “I already know this because I did the workshop last year”                         | Ask repeaters for anecdotes about health communication successes (and failures) in patient care  
Provide new teaching and learning activities                                                                                                                                 |
| **Faculty attitudes**                                                              | Provide small doses of strong evidence  
Emphasize potential for improved health outcomes of resident’s patients  
Have residents participate in faculty development (eg, role-play of patient care scenarios from resident point of view)  
Embed communication topics in practice management curriculum |
| “Residents already know this because they (I) took medical interviewing in medical school” | Take the long view and keep trying  
Use patient outcomes and residents’ testimonies to continue to advocate for more quality teaching time  
Repackage as practice management  
Include health communication skills across the ACGME competencies on evaluation forms |
| **Institutional/organizational barriers**                                         | Expect and evaluate evidence for health communication as you would clinical evidence  
Summarize evidence carefully                                                                                           |
| Teaching health communication in a small group setting is “inefficient”; impact on patient care is not quantified yet |                                                                                                                                                     |
| Temptation to overwhelm residents with evidence about importance of health communications |                                                                                                                                                     |

ACGME = Accreditation Council for Graduate Medical Education.

management, which was of increasing interest to residents as they heard about dropping reimbursements and rising patient loads. Our Year 4 “New Health Care System” initiative is an even more ambitious attempt to challenge the old dichotomy between what is considered “clinical” and what is “soft.”

We realize that a broader effort across our faculty and all teaching venues (including outpatient precepting, advising, and evaluation) will be needed to effect such a culture change. This will take years, not months. However, we are part of a larger community of family medicine and internal medicine training
programs and expect to learn from others’ experiences as well as national-level initiatives, such as the Future of Family Medicine project of the Society of Teachers of Family Medicine [10]. We hope that our own experience, summarized in Table 5, will encourage other primary care residency programs to engage their residents and faculty in continued exploration of excellence in health communication training.

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References

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