for research was the highest-rated factor in their career choice. In response to these research findings, we have been actively engaging medical students in research, including a structured longitudinal research program at the University of Pittsburgh School of Medicine. The new medical school curriculum requires each medical student to identify a research mentor by the end of the first year who will guide the student in developing a longitudinal research experience. This longitudinal research experience includes a number of research activities, culminating in a mentored scholarly project.

Our Department of Family Medicine has been involved in this longitudinal research curriculum through engaging interested medical students in our collaborative research team, focused on community-based research projects within our Center for Primary Care Community-based Research. Our experiences during the past 2 years reveal the importance of teaching both the art and science of community-based research in a collaborative multidisciplinary environment. By instilling and promoting intellectual curiosity in a family and community environment, starting with those in medical school, we further our discipline of family medicine and promote healthy communities.

When our discipline officially began in 1967, we represented a counterculture in medicine. We promoted the patient rather than the system, relationships rather than procedures, continuity rather than episodic encounters, and comprehensiveness rather than limited specialization. Our very uniqueness attracted a cadre of bright, innovative professionals who sought a change in medical education and how health care was delivered.

Now we are facing an increasingly complex environment in academic health centers—an environment where health care leaders are questioning the traditional mission of academic health centers, and deans and medical educators are striving to adapt curricula that are less able to meet the needs of a dynamic environment. Family medicine educators took the lead on prioritizing the patient in the early 1970s, emphasizing the importance of care in the context of the family, promoting guidelines-based ambulatory care for chronic diseases, and partnering with the community.

The students entering medical school now are a new generation. They have been exposed to an explosion of new information and technology and have been challenged to develop decision-making skills earlier than their predecessors. They will embrace the investigative spirit if framed appropriately. We need their enthusiasm and creativity to help solve today's health care problems. These problems exceed what can be explored in the lab. Departments of family medicine are challenged to balance faculty who can fulfill our clinical missions with faculty who can develop our research missions. We need both, encouraging collaboration among them. We would submit that the ideal program to develop future clinician researchers during medical school is one that engages medical students in established multidisciplinary collaborative teams. These teams would contain clinical and basic science researchers, guiding the medical students in shaping a balanced research question that can be studied with sound research methodology. By generating new knowledge through research, the field of family medicine is further developed as a discipline.

Jeannette E. South-Paul, MD
Janine E. Janosky, PhD
Department of Family Medicine
University of Pittsburgh

References

1. Parchman M, Katerndahl DK, Larme A. Family medicine and research: from here to eternity. Fam Med 2003;35(4):291-5.
2. Bowman MA, Haynes RA, Rivo ML, Killian CD, Davis H. Characteristics of mecial students by level of interest in family medicine. Fam Med 1996;28(10):713-9.

New Research

Current Practices in Medical Spanish Teaching in US Medical Schools

To the Editor:

Background: By 2050, an estimated 24% of the US population will be ethnically Hispanic.[1] It is unknown what percentage of these individuals will speak English fluently. Current estimates suggest that only 3.1% of physicians identify their ethnicity as Hispanic,[2] and many of these may not speak Spanish, since ethnicity does not equate with language skills. Thus, a potential language barrier exists between up to 25% of our future patients and the majority of physicians who will care for them. Physicians must communicate clearly with patients to deliver high-quality medical care, yet only 3% of current medical students are ethnically Hispanic,[3] and we lack good national data on students' Spanish language skills. We contend that medical schools must respond to this growing need for Spanish-speaking physicians by providing opportunities for their students to acquire skills in medical Spanish. No studies currently report how many medical schools offer medical Spanish experiences and what kinds of curricula, courses, and experiences are offered.

Methods: From January–May 2005, we gathered data on current medical Spanish courses from three sources: (1) Medline and ERIC from 1996 to present using the keyword "medical Spanish," (2) CurrMit, the Association of American Medical College's curriculum database, and 3) Web sites of 125 US medical schools.

Results: The literature search revealed no articles pertaining to

opportunities for medical students to learn Spanish. Only five medical schools listed medical Spanish courses in CurrMit. Our Web site search uncovered 26 medical Spanish electives, 27 international experiences, eight student groups, and two longitudinal curricula. After combining searches, we found that 60 (48%) US medical schools list some medical Spanish experience on CurrMit and/or their Web site.

Conclusions: Fewer than half of US medical schools appear to offer medical Spanish experiences. Most offerings are electives or immersion experiences. We found no examples of required courses. In addition, we found no reports in the literature evaluating medical Spanish courses for medical students.

Our study has several limitations. Schools may not have entered complete information into CurrMit. In addition, medical schools' Web sites may not be up to date, experiences may not be listed on the Web site, or our search may not have identified all medical Spanish experiences (for example, those listed in PDF documents).

Discussion: Research into the teaching and learning of medical Spanish is in its infancy. In one study, a 10-week Spanish language course for pediatric emergency room residents was associated with increased patient satisfaction and decreased interpreter use.[4] Another study of emergency room residents confirmed that a 45-hour medical Spanish course decreased residents' use of interpreters. However, audiotape review of resident interactions in Spanish revealed potentially major communication errors in 14% of encounters.[5] Thus, limited Spanish language skills may increase patient satisfaction but may not improve quality of care.

Medical educators have yet to define best practices for teaching medical Spanish. For example, should institutions invest resources in teaching all students basic skills or in teaching advanced skills to a smaller group of motivated volunteers? Which teaching and learning activities best promote the acquisition of medical Spanish language skills? Should medical Spanish courses be required or elective? How fluent must a clinician be in order to deliver high-quality care? Medical educators must address these questions to graduate physicians who will provide high-quality care to our growing Hispanic population.

Kevin Maben, MD
Department of Pediatrics
University of Kansas
Alison Dobbie, MD
Department of Family Medicine
University of Kansas

References

1. US Census Bureau. US interim projections by age, sex, race, and Hispanic origin. Washington, DC: US Census Bureau, 2004.
2. American Medical Association. Physician characteristics and distribution in the US, 2005 edition. Chicago: American Medical Association, 2005.
3. Association of American Medical Colleges. Minority students in medical education: facts and figures XII. Washington, DC: Association of American Medical Colleges, 2004.
4. Mazor SS, Hampers LC, Chande VT, Krug SE, Teaching Spanish to pediatric emergency physicians: effects of patient satisfaction. Arch Pediatr Adolesc Med 2002;156(7):638-40.
5. Prince D, Nelson M. Teaching Spanish to emergency medicine residents. Acad Emerg Med 1995;2(1):32-6.