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Medical Education Responds to Katrina

A number of medical schools and teaching hospitals were grossly affected by the devastating impact of Hurricane Katrina this past August. Among these are Tulane University, Louisiana State University, and the University of South Alabama in Mobile. The Association of American Medical Colleges (AAMC) is working with the Liaison Committee on Medical Education to address issues regarding the verification of medical student records. This is being done to provide information to the many allopathic medical schools across the country that have offered to provide medical education and training to those medical students affected by the hurricane.

At the request of the NIH, AAMC has been working with a number of medical schools to accommodate graduate students and postdoctoral trainees whose educational programs have been disrupted by Hurricane Katrina.


"Medical Education Highlights for Primary Health Care"
Medical College Sued Because of Alleged Problem in Research Design

The Medical College of Wisconsin in Milwaukee, Wisconsin, was sued by the parents of a child who has cystic fibrosis because the college allegedly deceived the couple in having their daughter participate in a research study. Between 1985 and 1994, researchers from the medical school were conducting a new test to diagnose the disease on blood samples derived from 600,000 newborns.

Those babies who tested positive were put into two groups. One group of parents was told of the result of the test and their child received treatment for cystic fibrosis; the other group of parents was not told of the positive result and their child did not receive treatment for the disease. The medical college's attorney said that the child was in the same circumstances as children in other states whose blood was not tested and who were diagnosed by pediatricians. Ultimately, Wisconsin officially added the test to its newborn screening profile, but many states in the nation still do not require cystic fibrosis testing at birth.

Researchers said that the parents were notified about the test that was done on blood already sampled for other purposes. This was done through a brochure sent to the parents when their child was born. They indicated that their child, now 12, received the same treatment that children with cystic fibrosis received in Wisconsin and elsewhere in the nation at that time. Their child was not diagnosed with cystic fibrosis until she was two years of age. The family claims that instead of informing them about the positive results, researchers chose to keep the results in a computer instead.

A jury is expected to resolve the ethical issue as to whether the doctors should have designed their study protocol to inform parents of the outcome of the blood test before the project was ended.

(Newson K. “Parents Sue Medical College Over Study Methods.” Milwaukee Journal Sentinel. August 17, 2005.)

Collaboration of a Business and Medical School

The emerging Technologies Center of Indiana University School of Medicine, in conjunction with the Indiana University Johnson Center of Entrepreneurship and Innovation, is working with 22 companies that resulted from a business incubator. The Johnson Center is part of the university’s Kelly School of Business. It will assist these evolving businesses to succeed and Indiana University life science researchers to create companies derived from their efforts.

In addition to using his combined experience in both medicine and business, Dr. McDonald will also work with Kuratko to engage Kelly School of Business M.B.A. students in tactical research and consulting projects for physicians and companies. Teams of Kelly M.B.A. students will not just be assigned to a company for the semester. Instead they will focus on individual, strategic projects for companies and physicians.


Debt, Sex, and Ethnicity as an Influence of Medical Student Specialty Choice

A 2002 Association of American Medical Colleges survey of more than 14,000 U.S. medical students revealed that 17.9 percent of graduating medical students had loans that were $150,000 or greater. The survey indicated that 91 percent of this debt was accumulated in medical school. In addition, 16.5 percent of the graduates were debt free, but only 5 percent of the underrepresented minorities had no debt when they completed medical school.

African American students reported an average debt of $102,909 compared to $86,870 for all students and $76,049 for Asian students. It was recognized that there is a declining interest in the primary care specialties. However, this appears to be due to a number of factors including those within society and the health care system. The study showed that while debt was a factor in choosing a specialty, this was only so for those graduates who had high levels of debt.
There is some evidence that those who enter subspecialties are students with a desire for technical mastery, particularly surgical specialties. The study also showed that women were more likely to choose some specialties because of an "affinity with their traditional social roles." These include pediatrics and obstetrics because they see these specialties and primary care as allowing them more flexibility. In addition, there is a marked interest of African American students to practice in underserved, inner city areas. However, African American graduates seemed to have little interest in practicing in underserved rural areas.

The study concluded that debt was only a modest factor in career choice for medical school graduates. It was surmised that perhaps the rising cost of medical education might prevent the less affluent from pursuing a medical career.

(Rosenblatt RA and Andrilla HA. "The Impact of U.S. Medical Students’ Debt on Their Choice of Primary Care Careers: An Analysis of Data from the 2002 Medical School Graduation Questionnaire." Academic Medicine. 80-815-819; 2005.)

Characteristics of Medical School Research Centers

The role of interdisciplinary research centers and institutes at U.S. medical schools was explored in a project of the Association of American Medical Colleges (AAMC) in 2003. This included studying the missions of these centers because of their vast differences. The AAMC study concluded that the centers had numerous roles and functions that add to the richness of the university, providing service to individuals and the community and conducting research that can increase the reputation and strength of the university and medical school.

In addition to conducting research, the research centers contribute to the educational mission of the universities. This includes instruction and training of undergraduate and graduate students, medical students, residents, and fellows. In many instances, this also includes involvement in patient care and service outreach. The study points out that modern research centers now have more interdisciplinary approaches to their work compared to previous times. It suggests that research centers offer faculty members opportunities for interdisciplinary activities that are not available in the traditional discipline-based departmental structure.

The study also shows that 40 percent of the research centers have one or more faculty members with appointments in university divisions outside of the medical school. As a result, this can facilitate interaction between researchers from different disciplines, schools, and even institutions, crossing disciplinary boundaries. The AAMC study also pointed out that in almost 80 percent of the centers studied, periodic program review takes place and 75 percent have at least one advisory committee.

Among the conclusions of the study is that research centers are important to support a sustaining and growing biomedical research enterprise. They also have significant influence, power, and prestige. The study also concluded that universities should carefully define what their research centers are.

(Mallon MT and Bunton SA. "Characteristics of Research Centers and Institutes at U.S. Medical Schools and Universities." Association of American Medical Colleges. June 2005.)

Clinical Education of Medical Students

The Millennium Conferences on the Clinical Education of Medical Students was held in 2001 and 2002 to address what should be taught in the clinical curriculum, how it should be taught, and who should teach the clinical curriculum. The conference included 19 medical schools, which in a series of working group sessions produced four common themes. These were the development and use of a competency-based curriculum, performance assessment, integration of "orphan" topics, and the integration of basic science and clinical medicine.

They concluded that acquiring competencies should be considered throughout the continuum of medical education with a clear indication of the developmentally appropriate time for each competency to be achieved. These competencies should be assessed at regular intervals independent of specific clerkship assessments and individual learning plans should be developed to account for deficiencies and performance specific educational and career goals.

"Orphan" topics or those that fall outside of any single clerkship should be integrated in the program through the scheduling of courses throughout the curriculum and by scheduling "intersessions" at intervals throughout the clinical curriculum. Clinically relevant topics such as medical ethics could be woven into the clinical curriculum while those like bioinformatics do not need to be covered in the clinical curriculum but can be covered at some point in the medical school program. They also concluded that the curriculum should be designed to integrate basic science and clinical medicine throughout the four years. In this way, students can see the clinical applications of basic science knowledge, becoming better clinicians.

The clinical curriculum should be centrally designed rather than done departmentally, and there should be better integration between the first two and final two years, including clinical exposure during the preclinical years. Beginning clinical clerkships as early as the second year was advocated, with the basic sciences woven throughout the curriculum. This would reduce the relative
proportion of the basic sciences in the curriculum and increase the amount of clinical medicine. The focus of the clinical experience could use a patient-centered or student-centered model integrating inpatient and outpatient care, with the student following the patient through all aspects of care and across all disciplines.

The report recommends that the objectives of the fourth year be better defined. In addition to increasing emphasis on ambulatory care, additional opportunities should be made available in such settings as chronic care, urgent care, and emergency facilities. Educational technology should enhance the clinical experiences of students. Computer technology using virtual patients can allow longitudinal tracking of patients and the natural history of disease that may not be available to students.

A core faculty of elite dedicated clinician/educators should be developed since teaching is not seen as an activity that requires special skills and a special pathway should be established for medical educators. However, all faculty involved in teaching students must be committed to developing the skills to be excellent teachers.


Empathy Training in Medical Education

Over the course of the training of a physician, there appears to be a decline in empathy from the medical student years through residency training, points out Sonal Singh, M.D., from the Department of Medicine at Wake Forest University in his paper on empathy and medical education. He bases his conclusions on studies that utilized such validated questionnaires as the Jefferson Scale of Physician Empathy and another study that used 60 internal medicine residents called the Interpersonal Reactivity Index, which pointed out a decline in empathy that persisted throughout the residency.

Empathy is relevant to clinical performance and is positively associated with ratings of clinical competence during core clinical clerkships. It has been found that training in the early years of medical school can enhance behavioral empathy among students and improve their communication skills. However, empathy is not acquired automatically during clinical training. If medical students are to retain their original empathy, there is a need to teach interpersonal verbal and nonverbal communication skills.

Empathetic responses can be measured using such instruments as Mercer's Consultation and Relational Empathy appraisal. It is also important to note that, ultimately, it is only the patient that is able to indicate whether trainees demonstrate empathy. Promoting arts in the curriculum and role-playing also may be useful instruments.

The author recommends the use of what he refers to as "narrative medicine" as a useful technique now used by a number of medical schools. This is a technique where one writes reflectively about the stories they hear from patients. He believes that empathy that may be lost by the medical student during training may be discovered or regained through the narrative.

(Singh S. "Empathy: Lost or Found in Medical Education?" Medscape General Medicine. 7(3): 2005.)