

Medical Education Digest



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Medical Education Digest Celebrates Milestone 50th Issue



This month's *Medical Education Digest* marks the 50th consecutive issue of its publication, which began in July of 1999. Articles on medical education have been carefully selected by the editor and summarized into several brief paragraphs. These sources included numerous publications derived from the world literature that exemplified contemporary issues in the process of undergraduate, graduate, and continuing education of physicians.

Virtually every aspect of the process of producing physicians and maintaining their ability to practice has been selected for the *Medical Education Digest* and been aimed at those who either did not have the time or were probably not likely to seek out and read complete articles that reflected the field of medical education, which has become particularly dynamic in the past few decades. Congruent with the rest of society, the medical education process has—and will likely continue to—employ many aspects of information technology that have changed the facilitation of learning among students, residents, and practitioners.

Considering how vital it is to produce physicians who are able to access and employ the rapidly evolving reservoir of preventive, diagnostic, and therapeutic approaches to patient care, it is important that those responsible for their training become cognizant about new methods for the teaching, learning, and evaluation of physicians-in-training, as well as those who are currently part of the physician workforce.

Beginning with the January-February 2008 issue, those who read the *Medical Education Digest* will be able to acquire continuing medical education (CME) credit approved by both allopathic and osteopathic medicine. Each issue will have two or three questions based on articles in that issue. Readers will be granted CME credit when they send their answers to those questions directly to the publication either electronically or by other means (i.e., mail or personal delivery).

(Editor, Medical Education Digest.)



“Medical Education Highlights for Primary Health Care”

Undergraduate Public Health Education

In 2003, the Institute of Medicine of the National Academy of Sciences concluded that all undergraduates should have access to education in public health. As a result, in November 2006 a Consensus Conference on Undergraduate Public Health Education was held in Boston, Massachusetts, through the sponsorship of the Association for Prevention Teaching and Research, the Association of Schools of Public Health, and the Council of Colleges of Arts and Sciences.

Supported by the Josiah Macy, Jr. Foundation, a taskforce of seven clinical professions was set up that included allopathic and osteopathic medicine, dentistry, nursing and nurse practitioners, pharmacy, and physician assistants. The conferees agreed that public health education should take place in undergraduate institutions to develop an educated citizenry prepared to address challenges that range from acquired immunodeficiency syndrome to aging, avian influenza, and health care costs.

This can help prepare students who are pursuing a professional education in public health and other health professions as well as those who will become educated in disciplines ranging from the law and business to international affairs to have a broader population health perspective. A Public Health 101 curriculum would include

- an overview and basic principles
- population health tools
- disease and disability: determinants, burdens, and interventions
- health care public health systems
- special public health education focus areas (i.e., health disparities and vulnerable populations, public health preparedness and disaster management, and global health)

A curriculum for Epidemiology 101 would include

- history, philosophy, and uses of epidemiology
- descriptive epidemiology
- association and causation
- analytic epidemiology
- evidence-based public health applications to policy and basic clinical sciences

It is through such programs that the taskforce believes the critical needs for an educated citizenry will be addressed and leadership development will be fostered.

(Riegelman RK, Albertine S, and Persily NA. "The Educated Citizen: A Consensus Report on Public Health and Undergraduate Education." Council of Colleges of Arts & Sciences. October 2007.)

Economic Survival of New Physicians



The economics of health care have changed radically over the past 15 years. Fee-for-service models have mostly been replaced by contracts with negotiated rates under the control of so-called "managed care" plans. Physicians often do not understand and respond to such economic changes. As a result, there is a need for practical education in this new era of medical economics and organization.

In spite of this, medical schools often refuse to fund even seminar-style courses in health care economics. Montreal's McGill University School of Medicine reports that it is experiencing fourth-year medical students dropping out as a result of their exposure to real-world medical practice. In addition to health plans that have merged, there have been alignments with hospitals over the past 10 years. Not-for-profit hospitals are acting almost as if they are for-profit entities.

Despite this, 82 percent of physician groups are in practice with less than 10 doctors, following a cottage industry model. Even with all this change occurring rapidly, physicians are receiving no training to help them adapt to the market conditions that now exist. Consequently, they are not adequately equipped to function in this dramatically changing financing and delivery system that directly impacts the physician-patient relationship.

Today, medical practice depends almost entirely on contracts. New physicians need training in how to analyze contracts or when and where to get the assistance they require. In addition, 36 percent of the physicians' average base comes from the state and federal government (e.g., Medicare and Medicaid), but there is no course in medical school that trains them in the regulations and procedures of this form of reimbursement. Similarly, no course in medical school provides students with the practical and economic ramifications of caring for the many patients who do not have health insurance.

Medical school students typically are not made aware of the regulatory and political environment in which they will be practicing, the laws that require the disclosure of malpractice claims, or disciplinary actions that may involve them.

(Bond C. "The Training of the 'Helpless' Physician. Medscape General Medicine. 9 (3):47; 2007.)

Osteopathic Physicians Advocate Expanded Role in Substance Abuse

A review by Wyatt and Dekker of the December 2006 Second Leadership Conference on Medical Education in Primary Care concludes that while osteopathic physicians make up 7 percent of all U.S. physicians, they provide 17.4 percent of all primary care. Because of this statistic, they advocate that osteopathic physicians assume a substantial role in substance abuse disorders (SUD). However, there appears to be a lack of SUD education in undergraduate as well as graduate osteopathic medical education programs.

Changes in SUD education are reported in osteopathic medical education, with 22 of 23 schools having required programs in addiction medicine in 2004 compared to only 4 of 17 schools in 2000. Both osteopathic and allopathic medical schools have a better record in tobacco cessation, but even here there is little carryover into the clinical years. A need is identified for the establishment of consistency in drug and alcohol abuse curricular content and in the experience and expertise of those who teach it.

A number of activities are in progress in the United States through the involvement of medical students. Nova Southeastern University College of Osteopathic Medicine student Michael Dekker and Brian Hurley, a medical student from Keck School of Medicine at USC, presented a workshop at the 2007 American Society of Addiction Medicine Annual Medical-Scientific Conference. Titled "Physician-in-Training Opportunities to Improve Substance Abuse Curricula in Medical Education," they were able to speak to many student physician attendees. The Second Leadership Conference on Medical Education in Substance Abuse recommended that, with regard to SUD, working groups look at

- undergraduate, graduate, and continuing medical education
- licensure, accreditation, certification, and standards
- purchasers and payers of health care services
- prescriber education and prevention of prescription drug abuse
- public input on medical education in substance abuse

(Wyatt SA and Dekker MA. "Improving Physician and Medical Student Education in Substance Abuse." JAOA. 107 (Supplement 5): ES27-ES3; 2007.)

AAMC Reports U.S. Physician Shortages

The Association of American Medical Colleges issued a 2007 report concluding that a national shortage of physicians exists and will be increasing. This is based on studies in 15 states of current and future physician workforce needs, and almost all corroborated the findings of the AAMC. In Florida, for example, the State University System Board of Governors indicated that a quarter of physicians in practice are over age 65, while only 10 percent are under 35. The physician shortage in Florida will increase since its population will be increasing by 60 percent by 2030 and those age 65 and over by 124 percent during the same period. California projects a similar situation, with more than a fourth of physicians in that state being over age 55 in 2000. In addition, 60 percent of California physicians practice in only five counties.

Besides shortages projected in primary care, deficiencies also are anticipated in, but not limited to, cardiology, allergy/immunology, child psychiatry, dermatology, endocrinology, neurosurgery, and dermatology. A 2006 report by the American College of Physicians states that primary care is on the verge of collapse due to the growth of the number of people with chronic disease, long-term care needs of the aged, and a decline in medical students pursuing a career in primary care. A joint report by the American Geriatrics Society and Association of Directors of Geriatric Academic Programs indicates that the current number of geriatricians meets only 35 percent of estimated need and that another 14,000 are needed for the existing older population. Furthermore, by 2030, that number needs to more than double to 36,000 geriatricians. In addition, 26 percent of geriatric medicine fellowship positions are not filled, and 54 percent of those in geriatric psychiatry remain vacant.

(Recent Studies and Reports on Physician Shortages in the United States. Center for Workforce Studies. Association of American Medical Colleges. August 2007.)

LECOM Alternative Pathway Curriculum

Since 1999, Lake Erie College of Osteopathic Medicine (LECOM) has been conducting a three pathway preclinical curriculum. In addition to the traditional large-group lectures and structured laboratory experiences, independent study and problem-based learning (PBL) curricular pathways have been implemented. The PBL pathway consists of cases constructed in a way that allows progressive disclosure in small-group tutorial sessions from patient presentation to diagnosis and management.

The small groups are facilitated by a faculty member and include group-derived learning objectives that were modeled after the curriculum employed by Ohio State University in Columbus. The independent pathway is minimally structured with students learning at a self-determined pace. Other courses such as osteopathic principles and practice and clinical examination include students from all three tracks.

The LECOM PBL track is limited to 40 students yearly, with passive learning almost completely eliminated. The facilitators in the first year comprise basic science faculty members, while in the second year they consist of clinical science faculty members. Both the first- and second-year groups meet three times weekly in two-hour sessions. In the first year of the PBL curriculum, there are 31 cases, while in the second year there are 37-39 cases. Each case is usually discussed in two sessions, but additional sessions are required occasionally. An examination is given every six or seven weeks in multiple-choice and matching-question format.

Learning and understanding the basic science mechanisms associated with the clinical symptoms is the major goal of the PBL sessions rather than making a diagnosis. Students from all three pathways complete questionnaires regarding their satisfaction with their respective pathway. In addition, all students must complete and pass the Level 1 Comprehensive Osteopathic Medical Licensing Examination (COMLEX).

(Ferretti SM, Krueger WA, Gabel LL, Curry JJ. "Lake Erie College of Osteopathic Medicine Preclinical Problem-Based Learning Pathway Program: An Alternative Medical School Curriculum Design." Journal of the American Osteopathic Association. 107 (10):443-449; 2007.)

Training Medical Staff in Disaster Preparedness

Barriers exist in training the medical staff to be prepared for disasters. These disasters may include chemical, biological, radiological, nuclear, or explosive (CBRNE) incidents. Among the barriers are financial and regulatory constraints on the health care business, building, maintaining, and operating high-overhead health care facilities, and the use of transient and part-time staff.

It is reminded that since most medical operations are private, compensation is provided by care rather than disaster preparedness. Furthermore, disaster preparedness is typically an unfunded activity. In addition, medical facilities and care already are highly regulated. That means enforcing CBRNE competency benchmarks are another burden and have become another area by which the health care industry will be evaluated, regulated, and surveyed. Additionally, the majority of health care providers have little or no CBRNE knowledge or practical disaster response skills needed to cope with a major mass-casualty disaster.

The focus of drills on a single problem is only a partial solution. Also, drills that are conducted very infrequently and only to perhaps one shift of professionals or staff make the development of a useful trained staff almost impossible. Using physiologically accurate mannequins is to be encouraged since they can translate benchmarks into readily accessible knowledge-skill combinations.

Such investments in knowledge technology can train more individuals for less of a cost. Therefore, financial realities must not be ignored. At the same time, however, medical facilities need to determine the key skills needed by staff members to assure they are educated and skilled in disaster preparedness.

(Allswede M. "Imperatives for the Training of Medical Staff." Domestic Preparedness. December 13, 2006.)



Health Professions Division
College of Osteopathic Medicine
3200 South University Drive
4th Floor, Room 1495
(954) 262-1469
Fort Lauderdale, FL 33328-2018
<http://medicine.nova.edu>

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Editor

Leonard Levy, D.P.M., M.P.H.
Associate Dean

Associate Editor/Art Design

Scott Colton, B.A.
Director of Medical Communications