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Small-Group Learning Concept Gains Widespread Acceptance

Stephen Slogoff, M.D., dean of the Loyola University of Chicago Stritch School of Medicine, claims that up until the early 1990's, their medical students had the traditional dawn-to-dusk class schedule. Classes were so structured that they knew what they were doing every hour of the day throughout their medical school career.

Now his medical students have almost 50 percent of their time available for individual study. In addition, they have essentially reduced the didactic curriculum to less than 25 percent.

Dr. Slogoff indicated that the plans for a new medical education building with a new set of lecture halls did not fit with this new curriculum.

As a result, another facility was designed to meet these needs consisting of conference rooms that hold 9 to 12 students so they could sit around a table talking to one another to problem solve on their own.

The University of Rochester School of Medicine and Dentistry also revamped its curriculum to emphasize small-group learning and the early acquisition of clinical skills. The institution recently completed construction of the Arthur Kornberg Medical Research Building, which incorporates 12 problem-based learning classrooms.

These rooms adjoin miniature, fully equipped doctors' offices.

Equipped with video cameras, the instructor and the students’ peers use the videotapes to critique the student’s performance. The University of Iowa College of Medicine is about to open a new Medical Education and Biomedical Research facility that is for the utilization of small, case-based learning classrooms and mock examination rooms equipped with video cameras for evaluation.

Lindsey C. Henson, M.D., Ph.D., senior associate dean for medical education at the University of Rochester School of Medicine and Dentistry, does not see lectures totally disappearing. “We want them to be a supplement to students’ own learning initiatives,” Dr. Henson stresses.

Peter Denson, M.D., associate dean for student affairs and curriculum at the University of Iowa College of Medicine, says that physicians will soon be able to access all the content they need from the computer.

He further indicated that the question of mastery of content is becoming less important than being able to work together and ask the right questions to uncover the right information from the patient.

(Gagriel BA. "Not Your Father's Classroom: Schools Shape Learning." Association of American Medical Colleges Reporter. November 2000; 6-7.)
Safety Concerns and Electronic Prescriptions

Safety considerations are among the most cited reasons for promoting the use of hand-held computers. Handwriting illegibility has brought more attention to itself because it is often the underlying cause of medication errors. Simultaneously, the technology learning curve that physicians face can be conquered insofar as their drug prescribing habits are concerned.

In the near future, physicians will increasingly be expected to use computer technology to write as well as deliver prescriptions. The Institute of Medicine reported in 1993 that medication errors accounted for more than 7,000 patient deaths. This was due to the use of the wrong drug name, poor penmanship, dosage form or abbreviation, drug interactions, or allergic reactions. However, handwriting illegibility has particularly been cited. The State of Washington has passed legislation requiring that prescriptions be legible. The Institute of Medicine has called for that by 2003 there is universal adoption of electronic prescription systems.

Using electronic prescriptions virtually eliminates the possibility of fraudulent prescription pad usage. This form of technology warns physicians of potential drug interactions, dose problems, and patient drug allergies while the patient is still in the office. Malpractice insurers such as the Doctor's Company of California are beginning to offer discounts to those who use electronic prescription systems (i.e., five percent). The hand-held computer database is updated daily by health care plans if there are any formulary changes. Wireless transmission permits prescriptions to be sent to the pharmacist of the patient's choice. In addition, a physician can change a patient's prescription from any location.

(Dermatology World. American Academy of Dermatology. December 2000; 6-7.)

Primary Care Practice and Genetics

An Alabama study indicates that it is important for primary care physicians to make informed decisions about the application of cancer genetic testing, interpretation of test results, and the implications for preventive or corrective intervention. While curriculum guidelines for cancer genetic education programs have been published, continuing medical education programs have done little in cancer genetic education.

A survey was done that produced data indicating that a majority of primary care physicians are missing opportunities to identify familial and hereditary cancer syndromes and to refer patients for additional genetic assessment. The investigators conclude that this low referral rate may be due to the lack of knowledge of physicians. This is expressed by a lack of confidence in explaining test results. However more than 90 percent of those responding indicated an interest in learning more about guidelines for screening and surgical prevention based on genetic testing. (Acton RT, Burst NM, Casebeer L, Ferguson SM, Greene P, Laird BL, and Leviton L. "Knowledge, Attitudes, and Behavior of Alabama's Primary Care Physicians Regarding Cancer Genetics." Academic Medicine. 2000; 75:850-852.)

Influence of Clinical Teachers on Students and Residents

According to Stritter's learning vector theory, learners in pursuing their learning needs progress from dependence on their teachers to collaboration and then to independence. A survey of medical students at Baylor College of Medicine was compared to the results of a survey of family practice physicians. The three highest ranked roles of clinical teachers identified by medical students were characteristics of the teacher role.

On the other hand, the survey of residents identified the three highest ranked characteristics as that of a supervisor, no role, and then teacher. This is explained by indicating that in the first stage of professional development the novice learner depends on the teacher to control the learning environment. In the second stage the learner functions more independently with the teacher's supervision and feedback.

In the final stage of development learners accept more responsibility for learning and function more independently. Third year residents, for example, value their clinical teachers as colleagues. Such knowledge can help to develop teaching strategies that are tailored to the needs of each learner group and lead teachers to support learners throughout their professional development.

(Paukert J, Richards BF. "How Medical Students and Residents Describe the Roles and Characteristics of Their Influential Clinical Teachers." Academic Medicine. 2000; 843-845.)
Faculty Practice Plans in Medical Schools

When Medicare and Medicaid emerged in the 1960’s, faculty practice plans (FPP’s) in allopathic medical schools began to appear as more patients became insured and faculty billed for more services and generated income from uninsured patients. The FPP became the administrative mechanism to manage this new income source and allowed clinical faculty to contribute financially to the mission of the academic medical center. Dependency by medical schools on the income generated by FPP's increased considerably since that time.

Medical school FPP’s are organized arrangements which include some of the following: billing, collecting, and distributing professional fee income. The plan itself is a set of relationships between the clinical practice of physician faculty and the medical school. Like community medical practice, changes in health care delivery and financing have affected FPPs, but the proportion of medical school income from this source is still substantial.

Objectives of FPP’s may include:

- To encourage superior patient care
- To enhance teaching and research
- To bill and collect efficiently for medical services provided by clinical faculty
- To provide a mechanism for organizing and managing the clinical practice of faculty members, consistent with the mission of the academic medical center
- To provide a significant source of revenue to support the academic programs of the medical school
- To ensure a sufficient number and variety of patients for education and research

(Basanova JE. Faculty Practice Plans, Models for a New Health Care Age. American College of Physician Executives. 1997; 1-118.)

Better Care for Older Heart Attack Victims at Teaching Hospitals

A nationwide study reported that elderly patients treated for heart attacks at teaching hospitals are more likely to survive and receive better quality of care than those treated at hospitals that do not train physicians. Researchers at the University of Alabama at Birmingham in a study partly supported by the Agency for Healthcare Research and Quality found that Medicare patients age 65 and older who received care for myocardial infarction at teaching hospitals were more likely to be alive two years after being discharged compared to similar patients at non-teaching hospitals.

The investigators also found that the patients of major teaching hospitals (academic medical centers with more than one intern for every 10 patients) were more likely to be given aspirin during their stays, if appropriate, than patients treated in non-teaching hospitals. The major teaching hospitals were also more likely to give their patients beta-blockers and angiotensin-converting enzyme inhibitors (ACE inhibitors) upon discharge, when appropriate. No significant difference between teaching and non-teaching hospitals was found in the use of angioplasty or thrombolytic drugs. The data was based on Medicare data from 114,129 randomly selected patients in 50 states who were treated for myocardial infarcts between February 1994 and July 1995.

("Teaching Hospitals Provide Better Care for Older Heart Attack Patients." AHRQ Research Activities. 241: September 2000; 1-2.)
The Acquisition of Grants by Faculty

Read the instructions, read the instructions, read the instructions is the advice given by Jackie Roberts of the Federation of American Societies of Experimental Biology to emphasize why many grant applications are not approved and funded. Don Frazier, professor of medicine and biomedical engineering at the University of Kentucky in Lexington and a principal investigator of the university's Interactive NIH Grant Writing Program, also says that guidelines must be followed. He also indicates that investigators, who address the reviewers' criticisms of a previously unfunded application that they resubmit, have their chances of being funded go up 50-60 percent. “Bad news can lead to good news,” he says.

Beth Fischer, professor of neuroscience at the University of Pittsburgh, states that her main advice is to develop good writing skills and develop a proposal that FITS:

- One that fills an important gap in knowledge.
- One that is interesting to you, your field, and the funding agency.
- One that tests a hypothesis.
- One that has a short-term attainable goal.

Fischer points out that the new grant application writer should not promise the world. “Successful grant writing is a matter of perseverance and a thick skin,” is the advice given by Frazier.

(Kreeger KY. “Winning, Managing, and Renewing Grants.” The Scientist. October 30, 2000; 31.)