Continuing Medical Education in America

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Some of what may be perceived as today's failures in continuing medical education may have been caused by lack of sound educational principles in the medical education process. Others may be due to changing times and expanding knowledge. New methods need to be established which include education based on physician audit and self-assessment. Learning outcomes should be evaluated in order to assess physicians' abilities to render better patient care. The formal graduate educational program is seen as the base for the new method of delivery of continuing medical education. The residency has the ability to evaluate advances in medicine and distill them for the practicing clinician. It may also assist him with office systems which will enable him to monitor his practice and needs. Linkages with residency programs will benefit the practitioner and resident alike. In the future, other community facilities may be needed to handle problem-centered continuing medical education.

It is both timely and necessary to reassess the role, methods, and effectiveness of continuing medical education. Toward this purpose, this paper will briefly review the history of continuing medical education in America, discuss some of its problems, and describe the operation and advantages of basing future efforts in continuing medical education in family practice residency programs.

Historical Perspective

Prior to 1910, the standards of medical education were so poor that the Carnegie Foundation for the Advancement of Education and the American Medical Association commissioned Dr. Abraham Flexner[1] to inspect thoroughly the medical colleges of the United States. The consequence of his devastating report was that almost one third of the existing schools immediately closed their doors, and, with few exceptions, those remaining either individually, or by joining forces, raised admission and teaching standards to acceptable levels. It is interesting, however, that the very report that brought about the reformation in medical education is at the root of today's problem of research oriented full-time faculty who are often unresponsive and misdirected regarding the continuing education and needs of the clinician. Flexner proposed three remedies for the problem of inadequate medical education: (1) The development of education for medicine as a university controlled discipline with the careful selection of students from those with an educational background in the liberal arts; (2) The institution of the full-time teacher/investigator; and (3) The use of the hospital as a laboratory in a way that would permit the student to gain supervised, yet responsible experience in the application of the scientific method to patient care.

From 1910 until World War II, continuing education was reparative. The postgraduate school, identified by Flexner as a necessity for American medicine, was developed in an effort to mend the machine that had broken down. Sixty-five years post-Flexner, we suffer from a new set of maladies. Most physicians have a continuing thirst for knowledge and a desire to provide better care for their patients. However, they are victims of outdated teaching and learning methodologies, medical school apathy toward clinicians' needs, research which moves ahead faster than the system is able to disseminate it, and a lack of appropriate auditing tools to inform physicians of their needs by evaluation of their current knowledge.

Shepherd[2] stated in 1960 that sponsorship for continuing medical education during the post-Flexnerian era, had gone through three stages. These are: (1) The proprietary polyclinic hospital and graduate and postgraduate school; (2) The medical society and state board of health independent of the medical school (although using medical school faculty members to a large extent); and (3) The medical school as the responsible sponsor and planner often in cooperation with a medical society. Many of the sponsorships have overlapped and, in addition, there have been sponsorships by extension of departments of universities as well as academies of medicine.

Perhaps the most important step

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forward in continuing medical education was the creation of the American Academy of General Practice in 1947. This marked the beginning of mandatory continuing medical education. The Academy made the first basic readjustment of assumptions underlying continuing medical education: it was proposed that the mere acquisition of education is not the ultimate end. Selection, organization, and evaluation of educational content is the means to the end, and the end is better health care for the clinician's patients.

Current Trends

Current trends in medical education are toward specific requirements for continuing medical education credits. The American Academy of Family Physicians has had these requirements for 28 years.[3] On July 1, 1975, the American Medical Association identified 13 state medical associations, five medical specialty societies, and one specialty board, the American Board of Family Practice, which have stipulated requirements for continuing medical education. Others have indicated their intention to make similar requirements.

Some educators are asking if mandatory continuing medical education is valuable as a means of improving efficacy of education. Libby[4] has recently stated categorically, "Mandatory continuing education programs as they are now administered are predictable failures." He quotes Canadian educator A. M. Thomas: "By and large, men cannot be coerced into learning." Libby also feels that academicians involved in providing continuing education for the adult practitioner are primarily skilled in child/youth education. They teach as they were taught. He then cites M. S. Knowles, who believes that for some adults, the remembrance of the classroom as the place where one is treated with disrespect is so strong that it serves as a serious barrier to involvement in adult education activities. Finally, Libby states that in his opinion, the problem-centered curriculum is the only way to achieve appropriate education for adults. He may be right.

In 1968 Hudson[5] stated that research had moved ahead of current educational methods. This is true for the family physician, and probably for all of medicine. It has moved ahead of the ability of medical education to produce organized, selected, and evaluated material appropriate for assimilation in the time the clinician has available for study.

Problems in Continuing Medical Education

Americans have always been vitally interested in the educational process. How, then, has medical education, or at least continuing medical education fallen behind? Regarding this, the following points should be made:

1. *Medical schools have been research-oriented, and unresponsive in providing educational material.* One has only to look at the federal and non-federal support for medical schools in general, and it can be seen that a great deal of this support (52 percent) comes from research-oriented funding.[6] In addition, guidelines and criteria for promotion and tenure favor only those teachers of medicine who are able to produce research material in quantity sufficient to make their way upward on the ladder of professorial stature. The following quotations from *Guidelines and Criteria for Promotion and Tenure of the University of Kansas Medical School Committee on Promotions,* approved in June 1973, illustrate this point.[7]

> Promotion to a new rank must be based principally on evidence of achievement since the last promotion. Criteria for promotion traditionally have been and continue to be teaching, research and service. . . . A teacher's accomplishments and contributions as a scholar bring vital recognition to the university as well as to the individual. . . . Promotion in professorial rank is a testimony and recognition of professional competency and productivity. The evidence of this competence is the research conducted by the teacher, the results of which are submitted for professional evaluation, review and criticism to his peers through recognized media. Publication in refereed journals and in books is the only valid measure of scholarly productivity.

Promotion schedules that mandate research and publication as a part of scholarship are not necessarily conducive to the production of family practice teachers. Research is, however, a necessary part of family practice, particularly in the discipline's efforts to define its own core of knowledge. An equitable mix of teaching skills and health-care delivery skills must be weighed along with research as the basis for academic appointment and promotion.

2. *Family practice continuing medical education has suffered from the lack of a defined core of knowledge.* Forces in education are now making great steps toward this definition, but continuing medical education, to be most significant, must be based on the core of knowledge of the discipline. Future plans for family practice continuing medical education will gradually adopt goals and objectives centered in the definition of the discipline of family practice.

3. *There is a preponderance of the traditional content-transfer model of the educational process.* Critics of the present system see its greatest fault in being simply communicative education. But this mechanism cannot be sold short: it has performed well. Those who would measure it in terms of behavioral change have not really been able to define and measure behavior at all. We can, however, all look back on the development of the coronary care unit and find here an example of how new information was spread rapidly, safely, and usefully. We are obliged to admit that there must be something effective about a continuing medical education system that does this. Meanwhile, problem-centered education produced *en masse* is costly, logistically difficult to deliver, and not totally accepted by all of today's practitioners.

There are other methods of communicative medical education that the physician can take part in: the blend of journals, specialty organization meetings, national postgraduate courses, and hospital staff meetings. These add up to a mixture of methods to put new information rapidly in motion. However, new methods for the delivery of continuing medical education must be designed. Perhaps this can be done best by the program director of a family practice residency who is in daily practice within his own family practice center and who is constantly aware of new events in medicine.

4. *There has been a failure to perform evaluations, both in terms of the goals and objectives of education and the results of the educational process.* The needs of the potential consumer of continuing medical education have not been measured in offices or hospitals. Instead, research-

oriented medical schools have presumed to know these needs. Another method of determining the consumer's needs has been to ask him what he wishes. This is an irrational process which only reveals the subjects of greatest interest to the physician and does not take into consideration a true audit of his necessities. Measurement of learning outcomes is a necessary factor in any future continuing medical education scheme.

5. *There has been a failure to look at the motivational factors behind continuing medical education.* The American physician has exhibited a stout desire to continually upgrade himself. Yet he is irregularly motivated. The remote physician, the physician burdened with a large practice, the physician who is under financial stress or has no backup physicians to cover his practice, is under duress when it comes to obtaining continuing medical education. Systems must be devised to provide all physicians with the opportunities to partake of appropriate continuing medical education. The current system stresses mandated continuing medical education. This method is highly motivating, but other motivational factors should be explored. The question of punitive motivation and better educational process needs to be answered in terms of thoughtful analysis and review of the system, but without attaching "self-destruct" mechanisms to what has been an effective method of communication. The fault may lie with the process, and new processes may be needed to assist, entice, and teach the practicing physician.

General practice was criticized by its detractors as being a group of physicians without an intellectual base. Reinfrank, in his inaugural address as president of the American Society of Internal Medicine, stated,

> I suggest, therefore, that the need for competent scholarly clinicians broadly trained in disease recognition, and assessing the relationships of problems to each other in the total situation, with the ability to deal with less structured and more ambiguous problems than the subspecialties, will always remain a desirable social priority if the objective of any medical system is to obtain the best match between the physician and what he does and the patient and what he needs. Never was the old saying more appropriate. A patient says, 'I hope you treat what I got,' and the doctor says, 'I hope you got what I treat'. . . . I suggest that internists and other scholarly generalists will be required in the future, as they are required now, if high quality medical care is to be rationally linked to the current drive for cost containment.[8]

One would wonder if Reinfrank is referring to the family physician when he mentions "other scholarly generalists."

If our colleagues were previously able to criticize our lack of scholarly intent because of our lack of an intellectual beginning in residency, we have overcome that. But if their criticism is scrutinized, perhaps one would discover that it was the system that was at fault because the general practitioner was offered education for education's sake without regard for his needs.

The Residency Program and Continuing Medical Education

Family practice is developing its own academicians. Currently, their preoccupation is with the more glamorous undergraduate and graduate training. But the intellectualism of family practice must start here. Meaningful continuing medical education must be a part of the family practice residency and then continue in practice. The most promising place for continuing education for the graduated family physician is the family practice residency.

The three-year period of time within an organized educational environment is the ideal setting to serve as the base for continuing medical education. Each resident has the opportunity to develop and acquire lifelong habits for his continuing medical education and growth of competence. The learning process is an individual matter and each resident should be encouraged and helped to define his own style, the most effective method of learning. Within this learning process, a definite team effort needs to be made. The current American physician personality rejects any but those with an MD degree as being competent to teach physicians. Nutritionists, psychologists, and other behavioral scientists have been traditionally ignored by the physician who resents their intrusion into his intellectual sphere. This is fallacious thinking and should be overcome by introducing these professionals into the residency program. The physician who is accustomed to working with these colleagues qualified in other fields, will soon develop respect for them and accept being taught by them in future years. Evaluation, which is a part of all residency programs, may be threatening to older practicing physicians, but it is a major factor in producing appropriate education at all levels. Evaluation, begun when the individual is a student and resident and continued after he becomes a practicing physician, loses its threatening aspect.

Consideration of the residency program as the training base for continuing education is not without precedent. Hudson[5] quotes Lindsay Beaton, at an Association of American Medical Colleges teaching institute in 1962, as stating that the student graduate should never be separated from his medical school, but should be drawn periodically by ties to return to his alma mater for educational refreshment. This has not been applied to graduate training programs, and the geographical dispersion of graduates has never been addressed.

We should convert this idea to the residency program, with the development of ties to graduate training, and gradually change the method of delivery of continuing medical education. Alumni groups should have room to accept those geographically separated from their parent programs, and devices can be developed to make these educational orphans an integral part of their adopted home. This can be accomplished by the original parents "letting go" and new parents accepting without the stigma of adoption. Defining a clear-cut role for the new alumnus, such as teaching assignments and staff appointments, is imperative in this system. The function of the alumni organization will not be to rekindle the old days with meetings, but rather to serve as a support system for the residency program. No longer will content-transfer education be the graduates' only relationship to continuing education. Rather, the graduate will return periodically for refreshment and retraining as an active program participant, both as a student and a teacher. To be effective, the system must be continuous and as it grows, graduates will always be a part of the faculty.

They may attend one day a week or one day a month, or daily for a week, but while present, they will spend some of their time learning certain skills, or products of new research, or reviewing a broad spectrum of care. While attending, the returning graduate must contribute to the education of his successors in the residency program. This can be done as a group leader, lecturer, or clinic supervisor, but the role is less important than the contribution of practice experience to the current crop of residents. Under this method, the practicing doctor stays fresh, enthusiastic and current professionally, and he contributes to the welfare of the residency by paying tuition as well as providing certain teaching roles. The residency director, or his designate, who is experienced in teaching and assessment of needs, assists the practicing doctor in evaluating his educational needs, while the constant infusion of practicing doctors provides patient management skills to the training program.

The logistical problems of this kind of system will grow as more and more residents are graduated and ultimately could break down under the sheer weight of numbers, but not for a long time. It is during this time that competency-based objectives for training will be established. It is also during this period that a broad core of knowledge will be established for the family physician, and that through the knowledge gained in the residency refreshment training programs, cyclical methods of retraining and review will be identified. Later, other community clinical training centers may be established specifically for continuing medical education. It is not inconceivable that in the future, as medical schools and graduate training programs decentralize and develop greater community awareness, community continuing education centers will develop around larger community hospitals. These postgraduate institutions, along with the residencies, could well provide continuing medical education for all clinicians.

This new method of education will provide the practicing physician continuing medical education through better educational methods that are appropriate to his needs. This will combat the criticism that all continuing medical education is delivered via the content-transfer method. Content-transfer should not be totally removed, but should remain a part of association meetings. Communal learning still has a place in medical education, and until organized medicine develops new funding methods, educational association meetings need to be continued to support the work needs of the organizations. Other factors such as renewal of old friendships, contact with different perspectives, and shoulder rubbing with medical people from other areas contribute to the total learning picture in this setting.

Continuing medical education, through linkages of practicing physicians with residency programs should include practice profile methods and self-assessment as integral parts of the system. The residency program will have the responsibility of participating with the graduate in setting up systems in which educational content is geared to reality. This process will require a certain amount of time away from the individual's practice, especially in the case of doctors who are remote from the site of a residency program. Arrangements can be worked out so that senior residents spend part of their time in the office of the absent physician, under the guidance of another doctor. Current attitudes among those reviewing residency programs oppose such preceptorships, but more flexible attitudes may prevail in the future. For such a system to work, it should be meaningful to both the practicing physican who returns to the residency program and the resident who goes to the physician's office.

The role of the practicing physician has been discussed, but what about the resident who relieves him? It would seem that in order to have a positive experience, the resident would have to enter the practice while the practicing physician was still there and be introduced to the patients, the partner, or other members of the group practice in order to become familiarized with the practicing physician's methods of operation. Then, during the absence of the practicing physician, the resident would have the opportunity to apply his own attitudes and skills to the physician's practice and also receive the benefit of counseling from other members of the group practice. The resident should remain in the practice after the practicing physician returns so that fruitful discussions regarding outcomes of the resident's experience can take place and the whole process can be made into a learning experience for both the physician and the resident.

This new system of continuing medical education linked to the residency system provides the following positive features for the practicing physician:

1. Appropriate design of continuing medical education according to previously identified needs.
2. Immediate application of learned skills or knowledge to a patient population.
3. Opportunities for educational use of practice profiling, self-assessment, and practice audit.
4. Prospective evaluation of needs of practicing physicians and retrospective evaluation of their learning outcomes.
5. Linkages for the practicing physician to the learning centers for education and consultation.
6. Refreshment for the practicing physician both educationally and attitudinally.

The following positive points accrue to the residency program through this system:

1. Funding support through tuition charged to the returning graduates.
2. Teaching support contributed by the student-teacher returnee.
3. Constant infusion of practice attitudes in the training residents.

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