I. PREVENTIVE MEDICINE 1952–1964

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INTRODUCTION

Teachers of preventive medicine met in 1952 and formally discussed their objectives in the area of teaching. They described this effort in a book published the following year.[1] In 1963 they again assembled, in Saratoga Springs, New York, and discussed research; the deliberations of this meeting are as yet unpublished. Now Shepard and Roney[2] have described their efforts to learn, as objectively as possible, the ideas and some of the characteristics of teachers of preventive medicine.

This study, following the 1952 and 1963 conferences, gives an entirely different perspective from which to view the efforts of those in the field of preventive medicine. (In Shepard and Roney's report preventive medicine may be defined as any of those activities currently going on in departments or divisions of medical schools having "preventive medicine," "community medicine," and similar words in their titles. It is, therefore, used as a general term.)

Shepard and Roney's new data have raised a number of important questions which throw light on some of the problems disturbing teachers of preventive medicine. In my opinion, they are more disturbed than they should be, because they are filling an important need in medical education.

In 1952 I was privileged to attend the conference on teaching,

and in 1963 I was invited to assault verbally these men and women at their session on "Research and Preventive Medicine" at Saratoga Springs. This I did in a paper called "The Specialty of ?" It was intentionally barbed, but I felt a great deal of sympathy and understanding for the teachers in this controversial field. As an aside, one of my friends in preventive medicine called me and said, "Most of the things you criticized in your paper, we do here intentionally." My friend too, alas, was being somewhat defensive because my paper, in effect, said, "Quit worrying about who you are and push ahead with what you are doing." If there is one lesson to be learned from Shepard and Roney's work, it is that preventive medicine has no unity either in the education, training, and experience of its practitioners or, indeed, in their own image of themselves as a group. I submit that this is good.

In 1952 the assembled professors of preventive medicine were able to agree on broad general principles, and the report of the conference suggests a good deal of unanimity. From my own experience as an observer at the conference and from Allen Gregg's published comments in the report, it was clear that the more general the ideas, the more agreement, and the more specific the ideas, the more diversity of opinion.

THE MEANING OF WORDS AND THE IMAGES EVOKED BY THEIR USE

Shepard and Roney's study quite honestly discusses the relative validity and objectivity of their data. Questionnaires were used primarily, and there is frank exposition of the responses in the qualitative, as well as the quantitative, sense. Abundant tables give evidence of almost unanimous opinion in some areas, while sharply divided opinion is shown in other areas. However, the text includes the presentation of single responses which could not be tabulated all the way to the now classical response, "I hate questionnaires." There is the strong suggestion here, too, that the more general the question posed, the more agreement, and the more specific, the less. The more thoughtful respondents were probably upset at the gener-

alities, seeking more precise stimuli to respond to; whereas, the casual respondent did not question the precise interpretation of some of the words and, thus, found the questionnaire not too tiring.

The study makes very clear the need for precise definitions and understandings of the terms used. The word "comprehensive" as applied to medicine is too comprehensive as a word. It was used widely in the 1952 conference; yet, over a decade later, it is not interpreted in a comparable fashion by teachers of preventive medicine. One may point to similar instances of poorly defined concepts in clinical medicine. One may say, "What is cardiology?" I submit the situation is different in that few are asking what cardiology is accomplishing, whereas many eyes are on comprehensive medicine and studies of its evaluation are being made. In this case, and probably in others, the word should be discarded, and a new one, more precisely defined, should be created. Possibly the use of the term "angina" before the days of Louis is comparable, and we may be awaiting a more precise description of the separate entities which are covered by the more general term. Comprehensive medicine is used only as an example of my point; there are others. Can it be that preventive medicine has championed comprehensive medicine without knowing what it is?

THE TEAM APPROACH

Here, again, imprecision as to the meaning of the concept of the team of allied health professionals is brought out by the study. I will dare to suggest, however, that the care of the patient by whatever specialty or group is often fragmented or, indeed, perforated because of the lack of the definition of the word "team." A football coach knows very well that a team is not just a gang of people. Yet, the milling mob around a given patient these days is disturbing. Of those who come in direct contact with the patient, the poor medical student is rapidly assuming a minority status.

The problem of specialization and the resultant divided function of patient-care personnel has been bemoaned at length. But how can we create a patient-care team when we don't know what a team is?

This problem relates to our present educational structure. Special knowledge and skills are necessary in today's medical scene and will become more so as knowledge advances. Special concern and points of view are also necessary. Some of these are obviously makeshift and related to our lack of knowledge or our lack of application of existing knowledge, but still others are here to stay. Just as the preflight needs of an airplane are checked by the pilot and co-pilot before take-off, certain patient needs could be checked by quasi-mechanical means and groups of specialists sent in to see to the needs as they are discovered. But all of the patient's needs will not be discovered in this fashion, nor will he want all of his needs, as defined by someone else, taken care of.

The patient, therefore, requires an advocate of professional stature with medical knowledge qualifying him for this role. The question arises as to how much authority this advocate should have over the specialists who will be called on to do a specific job. If the patient were to recognize his advocate as such, the advocate would have complete authority; or, legally, the specialist would be guilty of assault if he treated the patient against the advice of the advocate. The advocate then becomes captain of the team of allied health specialists who minister to the patient. If the advocate is trained as a physician, has he the knowledge to speak for the patient in matters of nursing, social work, and other services? If he is not sepcifically trained in neurosurgery, is he qualified to speak for the patient in matters neurosurgical?

At present, the patient has no advocate but makes his own decision without any medical knowledge, permitting his body to be drugged and cut—too often on the advice of a neighbor who used to be a nurse. We say that the institution, the modern hospital under a board of superior citizens, selects its staff with care, and thus the patient is assured of impeccable advice from the specialists on the staff. But how can the impersonal institution be alert to the complex needs of a single human being among its many patients?

In our educational system, we are training our health professionals to be independent. Teaching occurs in separate schools with separate deans, departments, and faculties. After graduation they

form limited professional groups ever subdividing into subspecialty groups, and concern themselves with their own relation to the patient and not their relations to colleagues in other specialties nor, indeed, considerations of the patient's relations to the proliferating health professional groups. How can the product of the educational system and participants in the specialty microcosms be expected to function as a team under the leadership of the doctor? How can they collaborate as equals when each is concerned with his own relationship to the patient and not with the patient's relationship to the collaborating group?

In short, rather than clamoring for teamwork, which is not clearly defined in their minds, should not the professors of preventive medicine study and experiment with a variety of multidisciplinary approaches to the patient?

EDUCATIONAL BACKGROUND OF TEACHERS OF PREVENTIVE MEDICINE

Shepard and Roney's material stresses the great variety of education and experience of teachers of preventive medicine. Possibly the unifying characteristic is interest in difficult problems. However, this variety of education and experience can mean many things, some good and some bad. That the field attracts people with unusual talents is commendable; or one might say that the field permits men with unusual talents to find a place in a medical school. This is all good. Problems are created, however. One wonders whether the maverick is bad for the herd or solely for the drovers. It was not too long ago that the deviant who dared attempt cardiac surgery found all his patients dying. Did they die because he was incompetent or because he did not know enough and was trying to find out? As the Shepard and Roney report implies, knowledge in certain areas of preventive medicine is lacking, and we must be careful not to equate lack of knowledge with incompetence.

It is of some concern to me that the "classical" departments in medical schools are characterized by so much sameness. Although there are variations in research programs, teaching programs, and

philosophy, one gets the feeling that over the country and, indeed, abroad there is relatively little difference in the background and training and mores of the men in a given specialty. Moreover, one gets the feeling that their loyalties are to their discipline rather than to their institution or to the total care of their patients. If study of internists or biochemists were made, similar to that of teachers of preventive medicine discussed here, would such drastic differences in responses be obtained? Indeed, would the respondents in internal medicine and biochemistry answer such a questionnaire at all? Possibly this is idle curiosity doomed to be unsatisfied.

The more critical question is: "Do men go into preventive medicine because their experience, training, and interest are far enough away from those of the man who runs the classical department in the medical school so that there is no place for them? Many will say that teachers of preventive medicine are not "good enough" to work in the "classical" departments. Is it that the classical department cannot make room for or tolerate people with different or less well-accepted ideas?

In tracing the potential medical student from early education to the start of a career, one finds a boy influenced by a physician friend or by an illness experience embarking on a premedical course. He is then counseled by a premedical advisor who may too often be an expert on what medical school admission committees think rather than on the qualities of the particular student and the challenges of the health sciences. The admissions committee of the medical school is composed of medical school basic scientists and clinicians who are expert in guessing the chances of the applicant's passing their own courses. The courses are distinct and unrelated to each other, and the final test usually is provided by the National Board of Medical Examiners who prepare the examination via the same professors mentioned above. Residency training criteria are established by separate specialty boards chartered as independent societies of specialists. And, finally, hospital privileges are doled out usually if the man has certification by a specialty board.

If the student wants graduate training in the medical basic sciences, he is selected theoretically by the graduate faculty and gradu-

ate dean and finally examined by this same group. Is the fully trained medical basic scientist or physician truly a university product or does he simply have a union card? (Too often in medical and anti-medical circles "union card" reflects on the American Medical Association. I am suggesting that the union card concept might also apply to our educational systems in medicine all along the line. The blame is too frequently placed on the university medical schools, the teaching hospitals, or the American Medical Association. Possibly the specialist himself has too much voice through the departmental structure in schools, specialty services in hospitals, and the specialty boards in making sure that the future physician is created in his own image.) Should our classical departments begin to look at their own personnel and add staff with different orientations? More important, should not the leaders in the parent disciplines or specialties encourage their people to accept jobs in other departments? As it is now, too often if the professor of "A" loses a good man to the professor of "B," another discipline, he takes the "never-darken-my-door-again" attitude. On the other hand, if the man the professor of "B" gets is, by the parent department standards, a dud, the professor of "A" is glad to get rid of him.

I am suggesting that, in view of interdisciplinary developments, "classical" departments should look to a broadening of their bases, but that this cannot occur until a planned, mutual exchange of good people between specialties is effected by those who have assumed leadership.

The thesis described above suggests that preventive medicine in medical schools has become a place for those of diverse and "non-classical" interests. The often hostile and denigrating environment in which preventive medicine operates may be symptomatic of rigid departmental structure in medical schools. The existence of departments of preventive medicine, as they are described in Shepard and Roney's study, indicates serious needs in the educational and research programs of medical schools, which are not being met by the classical departments and which, moreover, are being ignored or actively shunned by these departments.

On the preventive medicine side of the picture, the minority

group attitude displayed is unhealthy. Attempts to define a single role or objective, attempts to band together and be alike may, in fact, impair their true mission. It is not a question of teachers of preventive medicine all doing the same thing, but one of doing what they are doing better. In this sense, the results of the studies by Shepard and Roney should encourage the teachers of preventive medicine and suggest that they are moving in the general direction they outlined a decade ago.

PREVENTIVE MEDICINE DEPARTMENTS AND THE COMMUNITY

In 1952, and in 1963 according to Shepard and Roney's study, teachers of preventive medicine felt they should take the leadership in awakening medical schools and teaching hospitals to the community. Undoubtedly, some of our colleagues not in preventive medicine feel the idea is original with them. Preventive medicine has led us in looking at the patient as a member of a living, interacting community. In spite of the fact that "community responsibility" is used as a fund-raising gimmick, there, indeed, is a general ferment here.

Obviously, the introduction of the behavioral sciences into the medical situation has stirred the pot. In some ways in this area we are in the taste-the-urine and smell-the-breath stage of the management of diabetes. After the introduction of insulin, patients began to live long enough for us to find our old methods too crude and insufficiently revealing as we sought to learn more about the natural history of the disease. People are doing more in these days of medical interest and concern than simply living or dying. Preventive medicine has discovered by itself that the community is not a lot of people drinking water and eliminating. How often have we clinicians made our rounds feeling that we were meeting the needs of our patients by checking intake and output and asking about the bowels?

The total environment of the patient has been complex and it is becoming more so. We have learned about those parts of the

environment most accessible to study, but not necessarily in the order of their importance. Water is relatively easy to test; some other items are more difficult.

Again, Shepard and Roney's study suggests varying concepts in the role of preventive medicine. Reference to the 1952 meeting indicates a broad interest in the community, while the responses of professors of preventive medicine in the current study represent interests in fragments of the community concept exposed in 1952.

In short, broad, general goals are frequently lost sight of, or are at least less distinct when the day-to-day approach to segments of a problem with limited methodology is attempted. Those areas susceptible to study loom large in importance and may, for a time, replace the primary over-all goal. The result is, again, confusion in terminology and words meaning different things to different people. For example, the community has an environment and part of the environment is the community. Those of us who have been around awhile know that environmental health relates to air and water pollution, and so forth, and the community characteristics usually relate not to the people as a whole but mostly to health and welfare agencies both privately and governmentally supported. Lest we be too critical, let us remember that a murmur and a thrill mean quite different things to different people, especially in the medical field. Possibly Shepard and Roney's study should be criticized for not refining the quality of the questions in these particular areas. However, from the standpoint of the medical student, we should remember that while in the areas of medicine, surgery, biochemistry, and pharmacology, he becomes quite sophisticated, in many of the areas discussed in preventive medicine, he is, in truth, a layman.

Should some of the terms, such as "community environment," rather than being defined as suggested above, be discarded completely in the profession? (If sociologists and socialism can be confused, possibly we should return to pictographic writing, with a poor, hard-working fellow symbolizing the first and a chicken in every pot the second.)

From the research standpoint in the more physical sciences, we

have failed to recognize that the cat reacts to the experimenter. In the field of community medicine, we are well aware that the community reacts not only to the experimenter but to the experiment. In spite of this knowledge and the computer's contribution to the problem of dealing promptly with multiple variables, we have fallen into another trap not limited, by the way, to the nonphysical sciences. We tend to confuse action-oriented studies with objective searches for information. "Imprecision nurtures bias and prejudice" could certainly be considered a truism. Where lack of precise techniques plagues a field of study, if the investigator has any enthusiasm at all, bias creeps in, and objectivity leaves by the back door.

More than this, however, the subject of the experiment, i.e., the community, either rejects the study by not co-operating or overcooperates to achieve certain personal goals. Thus, the action-oriented demonstration study receives one kind of reception, and the coldly objective, knowledge-gathering study may receive another. In my opinion, the action-oriented demonstration study may be a necessity and it can hide under the cloak of applied research; but what is greatly needed are more coldly objective studies which, I believe, are possible if they are not mixed with the applied research as defined above. It is often said that we must creep before we can walk. This can mean we must learn how to walk by progressive learning; or it can mean we must do something, so let's creep until we can walk. Being biased in this matter, I suggest we creep as part of the learning process, and do not simply pass the time this way until we happen to know how to walk. Even if true, the latter concept is defeatist, and not in the scientific or educational spirit.

For strategic reasons, an investigator may have to offer the community something "practical" to get it to submit to a study, but this must not be confused with the objective study itself.

Basic studies of the community in all its aspects are needed. Preventive medicine departments are interested and equipped to do these. Strong support of attempts at these studies, in spite of missteps and failures, are needed from medical schools and university administrators, department heads, faculty, and the medical profession at large.

Both the 1952 data collection effort and the 1964 study get into the question of full and part time. The figures are not comparable, so trends cannot be assessed, but both studies throw some light on the entire issue. The critical question here is that the part-time preventive medicine teacher, unless he happens to be in practice (as few are), does not have the opportunity to earn an income comparable to that of the part-time clinical teacher. From other sources it is also clear that the salaries for full-time preventive medicine people do not compare favorably with those of their full-time clinical colleagues. It is also probable, although clinical practice carries heavy responsibility, that the solo practitioner is freer to adjust to the medical school teaching schedule than is his part-time preventive medicine counterpart who has other duties in the department of health or similar organizations.

Thus supplementary sources of funds are not available for the support of preventive medicine teachers as they are for their clinical counterparts. Moreover, some of the areas of research interest to members of departments of preventive medicine are not as heavily financed by the Federal Government and foundations as are other fields in clinical medicine and the basic medical sciences. (Note, for example, the difference in the extramural budgets of the Bureau of State Services of the United States Public Health Service and of the National Institutes of Health of the United States Public Health Service. That of the Bureau is very small.) With only limited university resources available to make up the difference, departments of preventive medicine pay low salaries, are poorly supported, and have few research funds. This not only discourages students from entering the field but limits the opportunities for providing adequate training for new teachers of preventive medicine. This vicious cycle must be stopped by more adequate support of medical education as a whole and by provision of federal and foundation funds for research purposes. Efforts on the part of the United States Public Health Service to obtain funds for research in areas of interest to preventive medicine departments are to be commended.

In the over-all picture we have gone far, especially with federal help for research and research training in developing truly full-time departments of medical basic sciences. In the clinical areas the so-called full-time system has progressed, but we must not be deluded into thinking that income from private practice as a source of funds to support clinical departments is really in the full-time spirit. It has been a valuable and useful stopgap, but it must not obscure the support of educational programs for their own sakes. Unfortunately, preventive medicine falls in between the clinical and basic science situation and is not getting adequate support from any source.

In view of some of the preceding comments, should one recommend restricted support for departments of preventive medicine? To a certain extent, the answer is yes; but much will be lost, considering the broad areas of interest of those in preventive medicine across the country, if unrestricted educational funds are not available to encourage development of those areas of interest as they relate to all university departments, with preventive medicine getting its just share.

In my opinion, considering the fact that preventive medicine departments have fallen behind, they will benefit most by both restricted funds for the development of better departments of preventive medicine and unrestricted educational funds to university medical schools.

CONCLUSION

It has been my privilege to recall the Colorado Springs Conference by rereading "Preventive Medicine in Medical Schools," the report of a conference held in 1952, and relating this to the mass of data pictured in a study by Shepard and Roney, "The Teaching of Preventive Medicine in the United States," published in 1964. I was asked to criticize the latter "as a point of reference." This license permitted me to discuss a number of ideas. However, it is to be hoped that its readers use the data as I did, to provoke ideas rather

than to confirm notions or to seek the ultimate answer. It is well that the authors asked the question, "Where do you think we are now?" because by this mechanism those who read it will ask immediately, "Where then should we be in the future?" Best of all, the data are in a form which can be restudied in another decade.

REFERENCES

[1] Clark, Catherine G., PREVENTIVE MEDICINE IN MEDICAL SCHOOLS, Report of Colorado Springs Conference, November, 1952, Baltimore, Waverley Press. 1953.

[2] Shepard, William P., and Roney, James G., Jr., The Teaching of Preventive Medicine in the United States, *The Milbank Memorial Fund Quarterly*, Vol. XLII, No. 4, Part 2, October 1964.