Conf on Education, Training and the Future of Public Health
Institute of Medicine
Houston TX
23 Mar 1987

Publ in: National Research Council. 1991. Conference Proceedings: March 22-24, 1987, Houston, Texas. Washington, DC: The National Academies Press.

FINAL DRAFT

Relationship Between the Work Setting and Professional Education in Public Health

by

D. A. Henderson, M.D., M.P.H.

Andrew A. Sorensen, Ph.D., M.P.H.

The domain of public health, as we are now beginning to redefine it, is of greater scope and complexity than it was during earlier decades of this century. However, let us not forget that the changes are of very recent vintage, the field having only recently been stirred from a somnolence extending back some 30 to 40 years. During that period the boundaries of public health changed only marginally, few new initiatives were undertaken and its institutions changed little. Approaches for the extension and improvement of curative services monopolized both attention and resources. Prevention was an afterthought, if considered at all. The largely laissez-faire evolution of medical and health practice relegated public health professionals to the periphery. Our educational institutions for public health reflected existing realities. Their academic offerings were largely geared to producing graduates whose professional activities and responsibilities were expected to be little different from those of graduates in the 1930s and 1940s. Not surprisingly, the institutions were regarded as stodgy and inward-looking and, with the lack of a broader public interest, their research products largely served to inform other academics. It was not a field which by either practical challenge or compensation, attracted the best minds. Relationships between those in the work setting and the academic community were limited and there were few incentives to encourage such

relationships. In their isolation, public health faculties came to resemble more the graduate faculties of schools of arts and sciences and less those of the practicing professional faculties of schools of medicine. The schools played a singular role, however, which is important to the future in sustaining a unique and diverse multidisciplinary group who could bring to problems, a needed breadth of skills and knowledge.

During the past decade, revolutionary changes began to occur as we perceived that we were approaching a ceiling in the quantity of resources which we should be expending for health care. Increasingly difficult questions began to be posed with regard to cost, quality and access. These, in turn, have raised questions regarding resource allocation and systems. A new class of participants sharpened the debate- the private sector, both as consumer and organizer. Environmental legislation coupled with successful litigation against offenders gave new impetus to the hitherto neglected field of environmental health. These engines of change have been further fueled by a rapidly growing understanding of the basic biology of disease and, with it, the discovery of measures which can avert or retard disease processes. And a burgeoning surplus of physicians has begun, happily, to translate into a growing recruitment of some of the most talented into public health. Let us not forget, however, that we are only in the early stages of revolutionary change in our health care system—an unlikely time in a revolution for defining either its scope or outcome.

During a revolution, one hopes for gradual restoration of more stable institutions and programs, albeit of a different and hopefully more appropriate character. This requires imaginative solutions and new directions. Absent

these, the outcome is chaos or perhaps anarchy. Our thesis is that the schools of public health are a critical resource to the debate and the new order would have to be reinvented if they did not now exist. However, to play the role which we believe they must, will require a serious reexamination of the relationship between academia and both the public and private sectors and through this a redefinition of educational mission and of the content and quality of the academic curriculum. This we believe will occur only if those in public health education are relevantly immersed in the realities of the work setting.

The base from which we are now departing can be more explicitly illustrated by the senior author's introduction into public health and his observations during the decade 1955-1965 when he served with the Communicable Disease Center. I believe these experiences are not atypical of those of others. I graduated from a respectable medical school which, at that time, taught neither epidemiology nor biostatistics; the course in public health was considered to be dull, stodgy and more relevant to the 1930's than the 1950's. There were none on the faculty whose specialty was either public health or preventive medicine and none in the class are known to have entertained any thought of these specialties as possible career options. Having decided to be an internist-cardiologist, I joined the Epidemic Intelligence Service not from interest but because it appeared to be the least undesirable way to discharge a two year military obligation. Under the tutelage of Alex Langmuir, I learned of the excitement of epidemiology and of public health, of work in the field and of dealing with community problems. I stayed on and for most of a decade dealt with the real-world problems of public health colleagues at national, state and local levels. Others were recruited to join the EIS but rarely did any apply who had a career interest in

public health. When such applicants were encountered, there was suspicion that they were in some way flawed or ingratiating themselves in order to be accepted. The demographics of those in the public health field were strangely skewed. Most of the leading figures at all levels of public health were then in their late 40's or older having entered the field during the depression days of the 1930s or immediately after military service in the 1940s. Many were of excellent quality but it was difficult to identify their successors. Remuneration was low and the status of public health even lower. At CDC, efforts were made to foster academic relationships but, finding little response at Schools of Public Health, attention was directed to the few Departments of Microbiology and Pediatrics with which there were interests in common. As gradually became apparent, most faculty in Schools of Public Health were unaccustomed and uncomfortable in dealing with untidy, real world programs and in the rough and tumble of political policy making. Few had ever managed a public health program and fewer still had done so recently. In truth, many demeaned those who did. The fact that such activities were characterized patronizingly as "service activities" rather than "professional practice activities" exemplified this. Not surprisingly, the health services research then being conducted was often characterized as "precious" and "irrelevant". And indeed much was. Elements of this legacy are still with us but it is for you to assess how much remains.

From a heritage so recent, it is evident that a significant, major reorientation is required to meet the new challenges. As the profession changes, so must its educational institutions. It may be tempting at this time to believe that we can now redefine a profession of public health and identify a body of knowledge specific to it. Indeed this has provided endlessly entertaining diversion to

many academic committees and others who enjoy this form of Augustinian discourse. We regard this as being both premature and futile. An illustration of what I mean is the comment made a few months ago by the President of a major academic medical center who said "the unthinkable of 12 months ago is now not only thinkable but is being implemented".

More important, we believe, is to recognize that we know a great deal more than we ever did about the antecedents of illness and the potential for promoting health and preventing disease. Moreover, we can expect a logarhythmically increasing array of effective interventions but as yet we have little expertise and few effective models to guide us in implementing them. Our sophistication in evaluating their effect is in an embryonic stage at best. It is apparent that terms such as 'marketing' and 'merchandising' are necessary and appropriate to our lexicon but in this field, we are ignorant neophytes. We now appreciate that health care is a major industry, the largest sector of our economy; that systems for curative care delivery are evolving, and others will emerge; that future policies and plans will need to consider still vestigial measures of quality of care and disease incidence as well as cost; that the systems will involve both public and private entities; that attempts to measure the effects on populations of social, medical, economic, and political upheaval in the health care system are only beginning; and that skilled professionals are needed whose concern extends beyond the components to the whole of the system and its rationalization.

We can all agree on common objectives of improved quality of life and diminished disease and disability at a cost we perceive we can afford. How we decide on strategy and tactics to achieve these objectives, how and by whom decisions are

to be reached, and how we monitor performance of the system are the central issues. Certainly, the problems and quandaries before us will not be quickly nor simply resolved nor will they be addressed primarily by a single professional group or discipline nor will they be addressed similarly in all geographic areas.

Rather than trying to define a field and a profession in transition, we believe we would be best served by identifying the most important strategies which could catalyze a process of rational change. We would offer two, both of which will require changes both in the work-site and in the public health schools and in their relationship to each other. The first is to focus on improved measurement and its application in policy formulation and resource allocation. The second is to facilitate the development of schools of public health as professional schools of defined quality which are fully relevant to the work-site.

Let us briefly address the first. Measurement in the health sector has lagged far behind that of other sectors of the economy. With the vast bulk of resources allocated to demand-side curative care in a laissez-faire patchwork of systems, there has been little motivation to collect and analyze such community-based data as disease prevalence, utilization and costs of service and of environmental and behavioral risk factors. This has begun to change with the identification of health goals for the nation, with the aggregation of curative services data from hospitals and pre-paid insurance schemes, with the development of post-marketing schemes for drug surveillance, with national surveys to assess nutritional status and a variety of other schemes. These efforts, however, are all comparatively recent, the data are highly variable in quality and still grossly incomplete, and as yet, only marginally employed in

health policy formulation. They in no way compare to the detail and sophistication of available data regarding wheat or milk production or the performance of large corporations. This situation will inevitably change as more difficult decisions are required in making resource allocations. However, we need to begin the time-consuming process of developing appropriate data collection systems and gaining experience in their use. Such measurements depend heavily on the central disciplines of public health—epidemiology and biostatistics—but for them to operate effectively will require the best efforts of those at the work-site working with those in the relevant academic departments. It will require the transformation of many epidemiologists and biostatisticians from professional academics to academic professionals and it will require both understanding and forbearance of academic colleagues by those at the work site. However, if progress is to be made, this change is essential.

The second strategy, not unrelated to the first, is for the schools of public health to accept full and appropriate responsibility for their role as professional schools, as they were so conceived to be at the time of their founding. The original models bore similarities to the better Schools of Medicine of the time in emphasizing the need for the Schools to undertake research to advance knowledge, to provide training for men and women that would "improve the standards of public health organization and administration" and to participate in work in the field. The last of these three has its analogue in the medical faculty participating in the care of patients--the process of both teaching and learning at the bedside. The bedside for us is the public health work-site. There is nothing which so tests the relevance and applicability of both teaching and research than to subject them to the crucible of diagnosing and teaching practical problems. Nor is there a better stimulus than this to

cause both curriculum and research to be redirected. We would suggest, however, that we have done a lamentable job in bringing public health to the bedside—in actively participating with practicing colleagues at the work-site. Note that we refer to active participation, not the usual service as consultants or committee members which so many offer as their meaningful involvement in public health practice. In blunt analogy, we would offer the view that there is a difference between being a stud on a breeding farm and being either the witness to the process or a member of the committee selecting the mare.

In the new challenges now being presented to us in environmental health and in such as AIDS, new paradigms are possible. We would offer as an example our own experience with the latter problem in which one of our senior faculty members in epidemiology has assumed direction of the AIDS outpatient clinic at the Johns Hopkins Hospital, which now has 600 patients. This was the base from which emerged prospective studies on the disease and its treatment but, quite as important, community-based education and outreach programs. Involved with these efforts are community groups, the health department, the schools and others. In all, some 25 faculty of the school are directly participating in activities which require the best of epidemiology, virology, health education, health systems management, health economics and other disciplines. Instead of a rich data base which is grist for an epidemiological mill, we have a resource at the heart of an educational enterprise which is invaluable both to the community and ourselves,--for research, for teaching and for advancing the state of the art. We need to learn from this experience.

Through meaningful collaboration between professionals at the work-site and those in academia, new policies, new strategies and new tactics in public health

will inevitably emerge and far sooner than by any other approach. Such efforts will inevitably be strengthened by the existence of a multidisciplinary faculty encompassed within a single academic center who can rapidly and effectively communicate new observations to others. We see no academic entity other than a school of public health which could adequately subsume this responsibility.

As a group, however, our schools are not now prepared to discharge this function. An important need is for mechanisms, both financial and administrative, which will facilitate faculty and student involvement in real world practice—a need no less real than the need to provide patients for surgeons to operate upon. Many on the faculties must accept a different role for themselves than that to which they are now accustomed and due credit must be given for contributions to professional practice. Those at the work-site must be prepared for and receptive to such change. To this end, a far more extensive continuing education program would be invaluable; but here, too, incentives will be required. No less important, we need to be cognizant of the fact that as medicine progressed from art toward science, Simon Flexner redefined what was acceptable medical education and the profession grew and prospered. If the schools of public health are to assume the broader mandate which, to us, seems both logical and necessary, so too, must we define more rigorously what is an accreditable academic public health institution.

Ultimately, we believe we would be best served by a network of greatly strengthened professional schools of public health, adequate in size to encompass the far broader expertise needed to address contemporary public health issues and which work closely and collaboratively with those at the work-sites throughout a proximate geographic region.