followed from the existence of independent schools. Public health is quintessentially about engendering and applying scientific knowledge to improve the health of populations. In this difficult endeavor, those in the field must face and overcome problems of the material world with facets at many levels of organization. Unlike the problems demarcated by a single academic discipline, the problems of public health do not yield to narrowly defined pursuit. They require the skills and methods of several disciplines.

As an example, one may take the conquest of epidemic poliomyelitis, a devastating mystery of the first half of this century. Ultimately this was a public health triumph because all the necessary biomedical and population sciences were harnessed at the population level to stem a population threat. Within the first 2 decades of the century, epidemiologists in Sweden and then in the United States produced a first important key to understanding. By exclusion, they inferred that poliomyelitis could only be explained as a transmissible disease spread predominantly by silently infected persons. After another 2 decades, microbiologists were able to infect primate brains with whatagain by exclusion-could only be a virus; within another 2 decades, they isolated the virus and then produced efficacious vaccines. The baton passed back to epidemiologists and biostatisticians. In a 1954 field trial involving some 2 million children with about half of it randomized (still, I believe, the largest such trial ever undertaken), they demonstrated the effectiveness of the vaccine. Much remained to be done in distributing the vaccine and in ensuring its proper use and continuous surveillance. Public health generalists in the field, epidemiologists, health educators, and sociomedical scientists undertook these tasks to bring the disease under control.

Historically, schools of public health alone have systematically cultivated the academic seed that made natural such concerted multidisciplinary attacks on population health. They did so because that was their charge as they understood it. They made space in their seedling beds for disparate but essential disciplines to follow the common goal of public health, and so nurtured new applications and new independent professions. Epidemiology, biostatistics, sociomedical and environmental health sciences, health education, health policy, health organization, and others have found evolutionary niches in the schools and grown to maturity there. These different disciplines nurture and inform each other in mutual understanding. With this rich capacity for education and training, public health schools have produced for the country professional skills and resources unmatched anywhere else.

The University of California in Los Angeles pleads poverty inflicted by budget cuts as justification for closing the school, if not for disregarding statutory procedures in doing so. The announced plan disperses the departments of epidemiology and biostatistics to the medical school, community health sciences and health services to a school of public policy not yet in existence, and environmental health sciences elsewhere unknown. The savings that the university administration claims will result from this dispersion are far from evident to many observers.

There will, however, be great and evident cost. With the various disciplines of public health parceled out and separated, the synergy between them cannot survive. The relocated departments will be bound to direct their efforts to the service of the schools in which they find themselves. Thus, if a discipline is to thrive in schools of medicine, where the primary goal is to produce physicians who provide episodic medical care to individuals, that discipline will do well to serve the practice of individual medicine and not the health of populations. By the same token, the guiding philosophy that informs the mission of all schools of public health-protecting the public health by prevention and active intervention at the population and community levels—will find few natural defenders in schools and institutions devoted to causes other than those of public health.

Of course, the obvious and inevitable result of the dissolution is not simply the loss of a coherent philosophy focused on the public health. What is lost with it is the capacity to train public health workers. This is not a time of underemployment in public health. The nation is again beginning to recognize the need for public health approaches to our great plagues, infectious and otherwise, and for enlightened administration to cope with the runaway problems of health and medical care.

These truths are elementary. Can it be simple ignorance that leads a university to tear the fabric of a national resource? Is it the combination of economic and ideological pressures flowing from the dominating notions of a private market economy of the past decade? And have the administrators of even major public universities thereby lost the sense of public responsibility that would have them treasure and nurture those schools whose primary aim is to promote studies that serve the public good? Certainly something reckless must underlie their willingness, along with that of governors and state legislators, to dissipate our educational and intellectual infrastructures.

We have noted the large contribution made in the United States to modern public health by the invention of independent schools of public health. The freedom to innovate and experiment marks this society. The obverse—which is to say, the freedom to discard or destroy its best innovations—marks it, too. The public health movement needs to rise in defense of the School of Public Health of the University of California in Los Angeles. □ *Mervyn Susser* 

The author is the Editor of the Journal.

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## Medical Technology Assessment—Intended for Whom?

Analytic methods to evaluate the effectiveness and costs of medical services and procedures, whether called technology assessment, outcomes research, or some other catchy name, are getting increased attention in the health care reform effort. This is because creating equitable access to quality health care requires knowing which health care services "work."

In this issue, Anderson et al., propose a taxonomy for reporting the results of technology assessments.<sup>1</sup> They recognize that the field of outcomes research has not yet developed clearly defined categories of safety and effectiveness that suit all new technologies. Their proposal makes a valuable contribution to promot-

Editor's Note. See this issue's Health Law and Ethics department (p 1635).

ing more useful evaluations of medical services.

The authors are concerned with only one use of technology assessment. They would like to see its credible results accepted by the courts to resolve disputes between patients and health insurance companies over what services are covered by the patient's insurance contract. The taxonomy they propose could be used by public programs, such as Medicare and Medicaid and whatever may replace them in a reformed health system. But the authors focus on use of the taxonomy to make sure that private insurers can deny benefits to patients without being overridden by a judge.

In cases involving private insurance, the legal question is usually a simple contract dispute over the meaning of contract language such as what is "medically necessary" or "acceptable" or "experimental." Where the language is ambiguous, standard principles of contract interpretation construe the language against the insurer who drafted it and who is in a stronger bargaining position than an insured subscriber or patient.

The authors claim that courts "frequently" order insurers to pay for therapy that research or expertise has shown to be unnecessary or experimental. It is true that some courts have made decisions that seem incorrect, but the frequency of such decisions should be put in perspective. According to the authors' own research, private insurers deny only 1% to 2% of claims for health insurance benefits. Only a fraction of such denials result in litigation. Although we are not told what that fraction is or what proportion of litigated cases ultimately result in court orders to pay for benefits, it is safe to assume that the number falls below 1% of total claims. Nonetheless, even a small number of "bad" decisions can make insurers gunshy so that they decide to cover highly questionable care, thereby driving up health care costs for everyone.

Focusing on the social costs of "bad" decisions, Anderson et al. identify one problem with health insurance: judicial decisions that require insurers to pay for

health care that insurers claim is not covered by the insurance contract. Their solution is to create a seal of approval for technology assessments and practice guidelines prepared by authorized organizations that would bind the courts. With an authoritative taxonomy in place, courts could not find contract language too ambiguous to be enforceable.

Anderson et al. expect that health care costs will be contained if insurers and subscribers are bound by the contracts they make. But when people get sick, they do not want to be bound by the decisions they made when they bought insurance. They want whatever it takes to get well, regardless of the "rational" economic decision they made when choosing an insurance package. The important question is not what they agreed to. It is whether society should let them have certain services recommended by a physician at any time. In other words, the fundamental social issue is what kinds of health care services should be covered in any respectable health care system.

Technology assessment has a larger role to play than buttressing exclusions from private health insurance. It can help determine the services that should be part of the basic package of health care available to all. Equally important, it can help physicians practice good medicine and help patients decide what care is best for them.

Interestingly, what Anderson et al. propose is, in effect, a regulatory system whereby government defines the covered benefits by statute and delegates to some agency the discretion to decide which services are appropriate to produce those benefits. Coverage decisions would be overturned only if they were not made pursuant to statutory procedures, were not based on substantial evidence, or were arbitrary and capricious. This is the general standard of review that courts ordinarily apply in disputes over regulations or decisions issued by administrative agencies such as the Occupational Safety and Health Administration and the Environmental Protection Agency. The implication is that the private insurance system cannot work efficiently in the absence of public regulation.

Of course, with such a regulatory system in place, private insurance is not necessary. Determinations about what kinds of services should be covered can be used by government agencies as well as private insurers. Moreover, such determinations, being applicable to large populations (or even to everyone in the country), create fewer opportunities for dispute than do multiple private insurance contracts with different coverage provisions.

Technology assessment should be an integral part of our reformed health care system. Its benefits are not limited to market-based insurance contracts. At the same time, however, it cannot be expected to solve all questions about whether some services are appropriate, either for a national benefit package or for a particular patient. New therapies continue to emerge, their evaluation is often lengthy, and the results are sometimes equivocal. Appropriate methods have not been developed for assessing the effectiveness of most services. Most important, it is not always clear what it means for a service to be "effective" or to "work." For many services, it will be difficult to decide whether they are appropriate at all, much less in the circumstances of an individual patient.

Even with the best assessments, there will still be disputes about what kind of care should be provided that will not be resolvable by reference to any practice guidelines or taxonomy. Most services offer at least some marginal benefit. The real issue is deciding how much benefit is enough to make the service worth including in the national benefit package.

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