The Epidemiologic Revolution, National Health Insurance and the Role of Health Departments

MILTON TERRIS, MD

In the 30 years preceding the end of World War II, local and state health departments and the U.S. Public Health Service grew and flourished as guardians of the people's health. In the subsequent 30 years, health departments have lost much of their momentum. The traditional U.S. Public Health Service has disappeared and its replacements have been transitory both in leadership and composition. Public health programs have been handed over to private interests and agencies lacking public health competence. The result has been confusion and pessimism about the future role of health departments.

One of the leading authorities in public health administration urges health departments "to serve as the community health conscience, the community health analyst, the community health counselor, and the community health catalyst." Coupled with this advice is the recommendation that health departments "remove themselves from the operation of institutions such as hospitals and clinics" and "leave the provision of most direct personal health services, preventive as well as therapeutic," to the private sector.[1]

The author of these statements appears to be urging health departments to exercise leadership in the absence of tangible authority or administrative responsibility, at best a difficult position and one which is hardly compatible with a future of consequence. His views are in sharp contrast to the policy previously held by the public health movement with regard to medical care. Even more disturbing is the fact that not only does the author recommend the removal of preventive personal health services from the health department, but he assigns a minor role to preventive programs in his listing of specific health department activities.

Prevention

It cannot be emphasized too strongly that the primary responsibility of health departments has always been and will continue to be the prevention of disease. This function is paramount, and health departments which ignore it risk not only the lives and health of the people they serve but also their raison d'etre as guardians of the public health.

During the 1940s and '50s, the potential for prevention seemed limited. Many of the infectious diseases had already been conquered, and there was little or no epidemiologic basis for prevention of the noninfectious diseases. Meanwhile, the inadequacies of medical care had become increasingly evident, and changes in medical care organization to meet the needs of the public appeared to be a fruitful area for public health activity.

We now face a cruel paradox. During the past 30 years the public health movement has laboriously achieved a positive orientation toward medical care, but it finds itself barred by powerful private interests from fulfilling its potential role. During these years there has also occurred a remarkable new epidemiologic revolution which has created the basis for prevention of some of the most important noninfectious diseases. Having oriented itself to medical care, the public health movement now finds a reorientation to prevention difficult. The findings, the potentials, and the strategies and tactics required to implement the second epidemiologic revolution are not only not understood; they have hardly been discussed.

The paradox works in another way to retard progress toward effective programs of prevention. During the first epidemiologic revolution, many distinguished individuals abandoned clinical medicine and the laboratory to join health departments and become front-line fighters against infectious diseases. These were among the most brilliant, the most devoted, the most capable of arousing public support: Stephen Smith, Charles Chapin, Hermann Biggs, Josephine Baker, Joseph Goldberger, C.-E.A. Winslow, Martha Eliot, and Thomas Parran were just a few of these outstanding men and women. Today, somewhat the same shift from clinical medicine and the laboratory has strengthened the ranks of those studying the epidemiology of noninfectious diseases. But there has been no comparable move into health departments. Many of the dynamic, idealistic young men and women who should be assuming the leadership of the new preventive programs of health departments are active instead in medical care administration in private agencies. We have succeeded

Address reprint requests to Dr. Milton Terris, Professor and Chairman, Department of Community and Preventive Medicine, New York Medical College, Fifth Avenue and 106th Street, New York, NY 10029. This paper, submitted to the Journal May 30, 1975, was revised and accepted for publication July 27, 1976.

only too well in teaching them the value and significance of medical care.

The Second Epidemiologic Revolution

Medical care is indeed valuable, but clearly it is more effective to prevent pathologic changes from occurring than to attempt to reverse the damage they have caused. The great changes in the pattern of disease during the past century have resulted primarily from the prevention of infectious diseases through environmental control and immunization. For the noninfectious diseases as well, it is not treatment but prevention that must be relied upon to achieve large declines in morbidity and mortality. Just as health departments were responsible for organizing the successful campaigns against infectious diseases, so must they now assume the more difficult responsibility of organizing the campaigns against noninfectious diseases.

The experience of countries which have established a complete national health service indicates that an integrated preventive-therapeutic health system greatly facilitates primary and secondary prevention.[2, 3] Nevertheless, a great deal can be accomplished by health departments even though they may be handicapped by their lack of authority over the medical care system. During the first epidemiologic revolution, health departments achieved miracles of prevention of infectious diseases despite their separation from treatment services. The same can be true for the second epidemiologic revolution in the prevention of noninfectious diseases.

During the past few decades, enormous advances have been made through epidemiologic studies of cancer, heart disease, stroke, and other major disease entities which are noninfectious in nature. The epidemiologists have forged effective weapons for control, weapons which must now be grasped by health departments and wielded for our traditional aims of preventing disease, disability, and death. The significance of these weapons may be understood by reviewing their potential impact on the ten leading causes of death.[4, 5]

The leading cause of death—diseases of the heart—accounts for 38 per cent of all deaths. Ninety per cent of cardiac deaths are the result of ischemic heart disease. Epidemiologic research has identified three major risk factors—high serum cholesterol, hypertension, and cigarette smoking—which increase the incidence and mortality rates for ischemic heart disease. Epidemiologic studies have also shown that each of these factors is amenable to change. Serum cholesterol can be lowered by the substitution of an unsaturated fatty acid diet;[6, 7] high blood pressure can be brought down by suitable drugs;[8, 9] and cigarette smoking can be reduced under the impact of adequate knowledge.[10–13] We are now reaching the end of the investigative period and the beginning of the time for action by federal, state, and local health departments.

Cancer accounts for 18 per cent of all deaths, many of which are still unpreventable. For certain sites, however, considerable progress has been achieved by epidemiologic research. We now know that cigarette smoking causes cancer of the lung, mouth, pharynx, and larynx.[14] It is becoming increasingly evident that alcohol consumption is related to cancer of the mouth, pharynx, esophagus, larynx, and liver.[15] The important role of X-rays and other sources of radiation in the etiology of leukemia and other forms of cancer has been demonstrated,[16] and the effects of a variety of industrial carcinogens have been ascertained.[17] Effective screening methods have been developed for breast cancer and cancer of the cervix.[18, 19]

Cerebrovascular diseases, which account for 11 per cent of all deaths, were completely unpreventable a quarter of a century ago. Now we know that the incidence of these diseases—caused primarily by hypertension and by atherosclerosis—can be lowered significantly by screening and long-term treatment for hypertension and presumably also by the prevention of atherosclerosis.[8, 9]

Accidents are a particularly tragic cause of mortality because they so often kill children and young people. Indeed, they are the leading cause of death up to the age of 35 years. For all ages, they are fourth in importance; if the attention paid to them were on a par with their significance to the nation's health, they could undoubtedly be driven out of the list of ten leading causes of death. Epidemiologic research has deepened our understanding of the host, agent, and environmental factors involved in various types of accidents and indicated the preventive measures that can and should be employed.[20, 21] One major research finding may be cited as an example, namely, the discovery that high blood alcohol levels are found in 50 per cent of the drivers responsible for fatal auto accidents.[22] The implications of this finding are clear, but effective public health action has yet to be taken in the United States.

Influenza and pneumonia, fifth in importance, continue to decline, presumably due to the use of influenza vaccines for high-risk individuals and to improvements in antibiotic therapy.

Bronchitis, emphysema, and other chronic obstructive lung diseases—now the sixth leading cause of death[5]—result mainly from cigarette smoking and other air pollutants. Most of these deaths could undoubtedly be prevented by effective public health action against these agents. On the other hand, significant declines in the mortality rate for diabetes mellitus, which is seventh in the list, cannot be expected with the knowledge and methods that are currently available.

Cirrhosis of the liver, which did not appear among the ten leading causes of death in 1965, was the tenth leading cause in 1969 and the eighth cause in 1973. This rapidly increasing cause of mortality has been shown by epidemiologists to be a function of alcohol consumption. As alcohol consumption rises in the population, so does the cirrhosis mortality rate, and as the consumption falls, so does the death rate.[23, 24]

Ninth on the list is arteriosclerosis, which is amenable to the measures recommended for ischemic heart disease. The last is birth injury, difficult labor, and other causes of mortality in early infancy which have continued to decline, presumably as a result of improved obstetrical and pediatric practice.

As one reviews the ten leading causes of death, and the

tools for control which the epidemiologists have fashioned for us, it becomes apparent that large declines in mortality are not only possible but inevitable, given a determined public health onslaught on the vulnerable causes of death. It is also apparent that the tools for control are primarily, though not entirely, in the area of primary prevention. The implication is clear: the major focus of prevention will, as in the first epidemiologic revolution, continue to be the community rather than the medical care system. The lack of administrative responsibility for medical care, while surely a handicap, will not effectively impede the primary thrust of health departments in their programs to prevent the major causes of death.

The programs will have three basic components: control of the environment, screening, and health education. Except for immunization, these are much the same approaches that were used effectively in the campaigns against communicable diseases during the first epidemiologic revolution. It is only the content that will be different.

Control of the Environment

During the first epidemiologic revolution, environmental control was directed primarily against vehicles and vectors of living agents, while today the agents are primarily physicochemical in nature. The fundamental strategy, however, remains the same, to create environmental barriers between agent and host. A wide variety of methods were used in the earlier period, such as construction of public water supply and sewage systems, residual spraying of dwellings, regulations requiring pasteurization of milk, and hospitalization of individuals with tuberculosis and other infectious diseases.

In the current period, the available measures for control of the environment may be grouped into those which are regulatory in nature, and those which are based on financial considerations. Among the former would be the following:

1. Laws proscribing all advertising for cigarettes and alcohol and forbidding smoking in public areas.
2. Laws requiring that only unsaturated fats be used in commercial baking, and that labels specify the amount and degree of saturation of the fats contained in packaged foods.
3. Regulations to prevent air and water pollution, accidents, and exposure to radiation, carcinogens and other toxic substances in industry, in medical care facilities, in the general community, and in the home.
4. Regulations requiring installation of safety features in motor vehicles, lowering the maximum speeds permitted on highways, and revoking driving licenses of motorists found to be driving under the influence of alcohol.

The financial measures are of two kinds—those which create a financial barrier to an agent, and those which subsidize its removal or replacement. Among the first group would be an increase in taxation of cigarettes and alcohol to achieve a four- to five-fold increase in price, and taxation of foods high in saturated fats to increase their relative costs. The second group would include assistance to farmers to change cattle feed in order to produce beef low in saturated fats, subsidies to lower the relative price of foods rich in unsaturated fats, and financial and other support to help farmers transfer the use of their land from tobacco and alcohol to non-lethal crops.

A simple reading of these proposed measures should convince even the most ingenuous that they will be difficult to legislate and implement. Those who will oppose them will be far more influential than the physicians and merchants who, fearing loss of trade, resisted public health activities and regulations for the prevention of infectious diseases. They will include the tobacco industry, the spirits, wine and beer industries, and industry in general because of the costs of prevention of occupational diseases and accidents and the control of air pollution. Unless the change to non-lethal crops is subsidized, there will be serious opposition from farmers. If the loss in advertising revenues caused by the ban on tobacco and alcohol advertising is not compensated by an equivalent use of the mass media for health education about these lethal substances, there will be strong opposition from the opinion-makers in the newspaper, magazine, and advertising industries.

There is little doubt, therefore, that any serious attempt to fulfill the promise of the second epidemiologic revolution will immediately pit the public interest—the health of the people of the United States—against formidable private interests. The outcome of such a confrontation will depend in large part on whether health departments move boldly to secure the support of the nation's citizens. That support can be achieved, and the resistance can be overcome, because the public's stake in these issues is very great. Once the public really understands this point, it will be difficult for anyone, no matter how powerful, to continue to delay the implementation of its demand that effective public health measures be taken.

Screening

During the first epidemiologic revolution, screening of well persons for early detection and treatment of disease was widely used in tuberculosis and syphilis control. In the noninfectious diseases, the concept has been expanded to include not only the detection of disease but the identification of risk factors as well. Examples of screening for disease include the use of cytology for cancer of the cervix, clinical examination and mammography for breast cancer, and blood pressure determination for hypertension. The determination of serum cholesterol level and the taking of smoking and drinking histories are examples of screening for risk factors.

Screening is valuable only if the tests are relatively cheap, easy to do, and score well on sensitivity and specificity. From the point of view of prevention as distinct from epidemiologic investigation, the tests should be done only if the disease they uncover can be treated effectively. Controlled outcome studies have already demonstrated the value of screening for hypertension and for breast cancer.[8, 9, 18] For the risk factors in ischemic heart disease, the outcome studies are now under way.[25, 26] No controlled studies have been done in cancer of the cervix, but recent evidence indicates a

significant correlation of declines in incidence and mortality of cervical cancer with annual rates of cytologic screening.[27]

A full discussion of the value of screening in a wide variety of diseases cannot be undertaken here. It should be noted, however, that screening can also be used effectively for the detection and correction of impairments. Screening for visual defects is particularly useful because of the ease of testing and the availability in most instances of relatively inexpensive corrective lenses.

Treatment following screening presents special problems. Where the patient seeks care for an illness, the motivation to accept treatment is relatively high. Where there is no manifest illness, as is usual in screening programs, and where treatment must often be maintained over a long period of time, motivation depends on an understanding of possible future outcomes by the patient which is equivalent, or almost equivalent, to that of the physician. Education, therefore, becomes essential. Equally important is the removal of impediments to treatment such as fee-for-service payments, long waiting periods, and lack of personal attention. Easy access to services must be assured; for this reason, long-continued treatment and supervision will probably be most effective at the workplace.[28] Occupational health services will therefore take on new dimensions during the second epidemiologic revolution.

Health Education

From everything that has been said above, it is clear that we have entered a new period in the history of public health in which health education will again occupy a central rather than a peripheral position. The new programs to prevent ischemic heart disease, cancer, cerebrovascular disease, accidents, cirrhosis of the liver, and chronic obstructive lung disease will all have to rely heavily on health education.

This reliance has two major aspects. One is the need to educate the public to understand the scientific basis for the new public health programs. Without a well informed public it will be impossible to counter the opposition of vested private interests which will place their own financial welfare above the health of the people.

The other aspect is the need to educate individuals to change their behavior in the interest of disease prevention. This can be done most effectively if the countereducation, such as advertising by the tobacco and alcohol companies, is prohibited. Furthermore, the budgets for health education at the federal, state, and local levels need to be at least equivalent to the annual advertising budgets of the tobacco and alcohol companies, which presumably have been somewhere in the $500 million range.

These funds will be used for far more complex tasks than the selling of cigarettes or whiskies. The shifting of dietary habits is not easy to accomplish, although it should be recalled that it has already been accomplished once in this century. "The basic 7" charts which graced every health department clinic and every public health nurse's office should serve as a reminder that health education played an important role in changing the American diet from meat, bread, and potatoes to a more balanced diet in which milk, fruits, and vegetables have a respectable place.

An even more difficult task, perhaps, is educating individuals to take treatment for years when they have no symptoms of disease. In hypertension, for example, treatment has to be continued for the lifetime of the individual when all that is amiss is a measurement taken by a physician. The magnitude of the task is indicated by the fact that about one-sixth of the population age 18 and over has hypertension.

Finally, there are the serious problems of addiction to tobacco, alcohol, and other drugs. These are known to be difficult to treat, although the success that a sizeable proportion of American and English physicians have had in throwing off their tobacco habit indicates that the addiction can be broken.[10-13] Since physicians may hardly be considered to have stronger wills than their peers in other occupations, one cannot help but conclude that superior knowledge and understanding are the basis for their success. Clearly there is a future for health education of those already addicted. Of even greater importance, however, will be the use of health education among young people to prevent addiction in the first place.

As we move to meet these responsibilities, it will be essential to conduct health education in a human way, as a transaction between individuals. This caveat should not be necessary, but we live in a nation in which machines seem to have captured and dehumanized men and women. The attempt to solve the problems of decent health care for the American people by "good management," "operations research," "systems analysis," and computerization of everything in sight is a case in point.

Let us not make the same error here by turning everything over to television; if we do so, we shall be sorely disappointed. The mass media should of course be used, including television, radio, newspapers, magazines, and billboards. But in addition we shall need more homely tools, such as pamphlets and leaflets in different languages, movies, slides, filmstrips, posters, exhibits, and classroom materials for teachers. Lectures, talks, study groups, question and answer sessions, and above all personal interviews for education of individual patients should become common practice for public health nurses, hospital and clinic nurses, health educators, nutritionists, dietitians, and even physicians. Indeed, we might take a leaf from the Soviet national health service in which all health workers are required to devote at least four hours a month to health education, and in which students in all medical schools, as well as in other schools for health workers, receive classroom and field training in health education.[29]

The Way Forward

To realize the potential created by the second epidemiologic revolution, a variety of actions need to be taken.

The schools of public health will have to reverse their current over-emphasis on the delivery of health services (a

euphemism for the delivery of treatment services), and accept and implement the primacy of prevention. The old order in the schools of public health—an order in which epidemiology was the key science of public health, and disease control was its primary concern—must be reinstated. The principles discovered by these disciplines will not have changed too much in the interim between the two epidemiologic revolutions, but their content will have grown with explosive force, to include not merely the infectious diseases but all forms of disease and trauma.

It is not enough, however, to train competent epidemiologists and public health administrators who wish to join the battle against the major diseases of our time. They need places to work, and the public health professions must therefore take measures to prevent the appointment of unqualified and incompetent health officials. Achieving the level of leadership necessary to put the findings of the epidemiologists into public service requires a determined struggle against every single patronage appointment of federal, state, or local health officials. The medical school deans, personal physicians, and other clinicians who may receive such appointments are not only uneducated and unqualified in public health, but they often exert a negative effect on preventive programs because of their overriding concern with treatment and their antagonism to public health.

Public health workers must insist on application of the merit system to all health personnel in public service, including those at the highest levels. This insistence needs to be coupled with a demand for democratization of federal health councils and state and local boards of health. These must become representative of the entire population, including industrial and white collar workers, farmers, minorities, and women. There is no excuse for continuing the present domination by physicians and other providers, nor the limitation—as in the boards of hospitals, medical schools, and voluntary health agencies—to business and professional men who not only represent a minority of the population but may have vested interests that are incompatible with specific preventive programs.

The young men and women who graduate from the schools of public health to devote their lives to the prevention of disease will require effective leadership from their colleagues in local, state, or federal health departments. As F. Burns Roth has pointed out, "The successes of public health in the past have been won because public health personnel and departments have seen themselves as being *advocates* and even militant fighters for the body politic . . . Health departments, at local, state, or national level, must see their responsibility to take a position on a wide variety of complicated problems and to advance solutions which will be in the public interest; this regardless of the possibility of confrontation with vested interests of all sorts."[30]

One of the most serious impediments in the fight against noninfectious diseases is a psychological one, based unfortunately on certain hard realities. Because of a tax structure which gives the federal government a disproportionate share of the funds available for government activities, the states and localities are handicapped in their public health as well as other programs. This has led too often to passivity, with state and local health departments waiting for federal grants before attempting anything new.

It is time to stop waiting for Godot. Whatever the action taken by the federal government, the states and localities have a wide variety of options as indicated by the programs enumerated in this paper. Many of these activities do not need a federal grant, but require hard work and a modicum of ingenuity. It is important to make a start, even in a small way, as long as the program is epidemiologically and administratively sound.

There are no blueprints for the fight against noninfectious diseases, just as there were none a hundred years ago when Pasteur's discoveries fired the imagination of the health professions and the public. The health departments which were established to control infections diseases encountered many difficulties, but they learned by doing, by making errors and correcting them. Health departments will have to do the same today; they will compare notes, and from their differing collective experiences the blueprints will emerge. We are at the begininning of an era. It will be our burden and our opportunity to be pioneers.

That is why the future of health departments, seemingly dim at the moment, is in fact very bright. We have a large and difficult task before us, nothing less than the implementation of the second epidemiologic revolution and the rescue of literally millions of men and women from preventable illness, disability and death.

To be effective in the great era of public health that lies ahead, health departments will need to emphasize the value of prevention in practical terms, by giving it first place in the health department program. The primacy of prevention is not simply a catchword or a slogan. It is profoundly true, and must remain the guiding principle of health departments and public health workers as we move forward to new problems, new difficulties, new obstacles and new victories.

Medical Care

The growing concern of the public with deficiencies in the availability and quality of medical care has led to an increasing demand for government action in this area of health service. Responsive to these needs, public health workers abandoned the restrictive formulation of the "basic six," the desirable minimum functions of local health departments which had been adopted by the American Public Health Association in 1940: vital statistics, sanitation, communicable disease control, laboratory services, maternal and child health, and health education.[31]

In 1950, on the initiative of Dr. Joseph W. Mountin of the U.S. Public Health Service, then Chairman of the Subcommittee on Medical Care of the Committee on Administrative Practice, APHA adopted a new statement on *The Local Health Department—Services and Responsibilities*.[32] Instead of definitions of local health services based on limited categories of activity, this statement declared it essential to define the general types of service which would be applicable to a variety of categories. These were: recording and analysis of health data, health education and information, supervision and regulation, provision of direct environmental health services, administration of personal health services,

operation of health facilities, and coordination of activities and resources.

The statement pointed out that the health officer has the opportunity to make a unique contribution through his utilization of epidemiologic knowledge to develop programs for the maintenance of health and control of disease. It went on to declare that "As new programs of public medical care are developed, their administration can logically be entrusted to the local health department. The well organized and adequately staffed local health department is fitted for this task because of its strong combination of medical and organizational skills, its accustomed responsibility for a public trust, its emphasis on promotion of health and prevention of disease, and its understanding of the organizational elements required to achieve a high quality of care."

This statement followed by six years an extraordinarily forward looking policy statement by the American Public Health Association on *Medical Care in a National Health Program*[33] which recommended that "A national program for medical care should make available to the entire population all essential preventive, diagnostic, and curative services." It supported financing through social insurance supplemented by general taxation, or by general taxation alone. Finally, it advocated that "A single responsible agency is a fundamental requisite to effective administration at all levels—federal, state, and local. The public health agencies—federal, state, and local—should carry major responsibilities in administering the health services of the future."

The 1944 and 1950 policy statements of the American Public Health Association represented a positive response to the general popular upsurge associated with the global war against fascism. The public—primarily in Europe and Asia where the sacrifices were greatest, but also in the United States—looked forward to achieving greater democracy and a more equitable distribution of goods and services, including health services. The democratic and egalitarian impulse that resulted, for example, in the establishment of the British National Health Service, led in the United States to the Wagner-Murray-Dingell bill for national health insurance and to the advanced positions taken by the American Public Health Association. Since the members of APHA were primarily health department workers committed to public service, the Association was able to respond to the deeply felt needs of the population for adequate medical care. All other national organizations in the health field, including voluntary agencies, professional societies, and associations of hospitals and medical schools, represented narrow private interests which considered themselves threatened in greater or lesser degree by public intervention in behalf of public health.

Postwar Changes

In Great Britain, the end of the war saw the establishment of the National Health Service by the Labour Party. In the United States, with no political party of labor, all that came forth were health insurance bills and APHA policy statements. They were the stillborn products of a once promising movement, overwhelmed, along with other progressive proposals, in the postwar period of anti-communist hysteria and reaction. The New Deal philosophy of the 1930s and '40s was replaced by one in which private business interests were given priority over civic services and community programs to improve health, housing, education, the standard of living and quality of life of the whole population.[34–36]

Concomitant with these developments occurred a degree of militarization which is, as President Dwight Eisenhower stated in his farewell address, "new in the American experience." He warned that "we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist. We must never let the weight of this combination endanger our liberties or democratic processes."[37] But the nation's productive and intellectual capacity continued to be geared to the requirements of the military-industrial complex, while a shrinking proportion of attention and resources was devoted to human needs.

During this period of armament-related prosperity, unemployment persisted. Despite some mitigation, this was also true of segregation and discrimination against black, Latin, and Asian Americans. Housing programs remained pitifully inadequate, and the slums not only continued but expanded; whole neighborhoods came to resemble bombed-out areas of destruction. The cities turned into nightmares. With continued unemployment, the harsh and hopeless life in the slums and ghettos, and the growth of private enterprise in heroin, citizens of all social classes became victims of violence. Not only the streets, but even halls and elevators were no longer safe.

Unrestricted private enterprise ran wild. Industry polluted the air of the cities and the water of lakes and rivers. Little was done to safeguard industrial workers from the growing danger of occupational disease. The multiplication and marketing of untested drugs and chemicals remained unchecked, causing a veritable pandemic of unnecessary illness and death.

In the provision of health services, unrestricted private enterprise created almost insoluble problems. Specialization grew out of all proportion to needs, in part because of a fantastic increase in the number of available residencies. This occurred because in a private practice medical economy the hospital title of "visiting" physician is completely descriptive, and hospitals found that the creation of residencies was the only way to assure that physicians would be on hand to care for patients. The extraordinary growth of specialization meant that a primary physician, whether general practitioner, internist, or pediatrician, became increasingly hard to find. Physicians disappeared almost completely from the poor sections of the cities and from rural areas.

Dazzled by the inordinate financial returns of private practice, physicians tended to become p.c.'s (professional corporations), a designation which aptly describes not only their desire for lower income taxes but their basic role in society as profit-making one-man corporations. Fewer physicians turned to work in public health agencies; those with a modicum of social conscience usually preferred to take the

more prestigious and higher paying positions in private medical schools, either in the ambulatory services or in administrative positions in university hospitals.

Unnecessary surgery became identified as a frequent phenomenon in fee-for-service private practice. The erosion of the patient-physician and patient-attorney relationships by rampant commercialism resulted in numerous suits for malpractice and inordinately high malpractice insurance rates. In the poor neighborhoods of the cities, "Medicaid mills" became notorious for "pingponging," that is, sending the patient from one "specialist" to another for non-indicated but profitable services.[38, 39] Disregarding the advice which the American Public Health Association had given in its testimony on the Medicare bill,[40] Congress opened the door wide to profit-making nursing homes with results that have been ultra-profitable for the owners and scandalously and heartbreakingly destructive of the health and lives of the patients.[41]

During this period in which the public interest was sacrificed increasingly to private interests, it was inevitable that the public agencies acting as guardians of the public interest would be denigrated. On the other hand, the virtues of the "great" private hospitals were sung on every possible occasion. Hardly anyone mentioned the much larger number of poor and mediocre private hospitals, the dumping of unwanted patients on municipal hospitals, and the large proportion of private hospital budgets that comes from Medicare, Medicaid and other government payments.

Every private hospital is a law unto itself and pays little or no attention to community needs. It is typical of the private hospitals that they busy themselves with establishing cardiac surgery units and other costly prestige services whether or not they duplicate services in other hospitals. Badly needed ambulatory care and emergency services remain limited and poorly staffed, while home care services and long-term care units are almost non-existent in these hospitals.

Similarly, the private medical schools were extolled as centers of excellence, but hardly anyone noted that they are generally unresponsive to the health needs of their regions, nor that they are in fact wards of the federal government which contributes more than half of their financial support.

Regardless of competition-engendered disagreements, the representatives of private enterprise in the health field—the powerful insurance companies, the private hospitals and their Blue Cross Plans, the private medical schools, and the private practitioners and their Blue Shield plans—were fully united in the campaign against public enterprise around the slogan of "pluralism". The unwary citizen was deftly ensnared by this vaguely democratic term into supporting the subversion of democratic control by turning public funds over to private corporations that do not represent the interests of the public.

This was the setting, in the country in general and in the health field in particular, that was encountered by the recommendations to assign the administration of government medical care programs to health departments. These proposals were clearly logical, since the official health agencies were already responsible to the public for preventive and other health services. What were the results?

Role of the Health Department

The federal health department—formerly the U.S. Public Health Service, now the agencies responsible to the Assistant Secretary for Health—has experienced a considerable growth in power and authority. The National Institutes of Health has become the dominant influence in the nation's medical schools, and the federal health department has been responsible for administration of the Hill-Burton hospital construction program. More recently, it has been given administrative responsibility for regional medical programs, comprehensive health planning, cancer centers, health services research and development, and health maintenance organizations.

Significantly, however, the most important new medical care programs were not assigned to the federal health department. Medicare was given to the Social Security Administration, and Medicaid to the Social Rehabilitation Service. It is naive to consider that since all these agencies are in the Department of Health, Education, and Welfare, there is no need to worry about medical care being in finance-oriented or welfare-oriented federal agencies because—magic word—there will be "coordination" of activities.

With the exception of the Hill-Burton program and comprehensive health planning, where their role has varied in different states, the state health departments have been completely bypassed in the new programs. The federal health department deals directly with private agencies and institutions in the states and localities for health services research and development, regional medical programs, cancer centers, and health maintenance organizations. Administration of Medicaid has been assigned to state welfare departments. Of even greater significance is the fact that administration of Medicare at the state level was given, not to the state health departments, but to private insurance companies and the provider-controlled Blue Cross-Blue Shield plans. With very few exceptions, local health departments have been excluded from administration of the new medical care programs.

A variety of reasons have been offered for the failure of legislators to give administrative responsibility for medical care to health departments. One of the most common is that health departments aren't good enough to do the job. This is a curious argument since the welfare departments do badly because, among other things, they do not have the full-time health personnel that are available in health departments. It is a curious argument, also, because of the federal government's experience, described by the staff of the Senate Committee on Finance, that the private insurance carriers' "performance under medicare has in the majority of instances been erratic, inefficient, costly and inconsistent with congressional intent."[42]

Health departments can in fact meet these administrative responsibilities better than other agencies. Their advantage over welfare departments is that they are health-orient-

ed and health-staffed. Their advantage over private insurance companies and the Blue Cross-Blue Shield plans, and over commissions with strong provider representation, is that they are public agencies responsible to the citizens and not to private boards of trustees or providers of care. Certainly health departments must be strengthened, and the federal health department knows through long experience how this is done: through federal grants to build up staff and resources; through effective merit system requirements; through loans of personnel to states and localities; and through training of local and state personnel at the federal level.

Those who use the argument that health departments are incompetent are akin to those who blame poverty on the poor. If you pay a man too little, or discriminate against him so he can't find work, and he eventually becomes too weak or too demoralized to fend for himself, then you can blame it all on his lack of initiative. Ditto for health departments. Starve them for funds, and discriminate against them so they don't get the programs they ought to have, then turn on them self-righteously and exclaim: "But you are so weak. And you have no experience."

One further question: Who designed, organized and administered the community programs that conquered communicable diseases in the United States? Was it the welfare departments? Private insurance companies? Blue Cross-Blue Shield? Physicians in private practice? The medical schools?

Another reason which is frequently given for excluding health departments is that the public health movement did not support the passage of the new medical care legislation, and was therefore bypassed when decisions were made on administrative responsibility. This argument reflects either ignorance or gross distortion of the facts, for the American Public Health Association was the only large national organization in the healh field—except for the American Nurses' Association—to support and testify for Medicare.[40] Ironically, those organizations that fought Medicare hardest—the private insurance companies, the Blue Shield plans of the American Medical Association, and the Blue Cross plans of the American Hospital Association—became the administrators of Medicare for the federal government.

The Legislative Picture

If we examine legislation recently passed by Congress or currently before it, we may obtain a sharper and more detailed view of the prospects for health department administration of medical care. It is encouraging, for example, to note that in 1973, Representative Paul G. Rogers and 17 other Congressmen introduced H.R. 1058 to establish a federal Department of Health which would have transferred to it, among other things, Titles V (child health and welfare), XVIII (Medicare), and XIX (Medicaid) of the Social Security Act "insofar as such titles relate to the provision of health care services."[43] This is a consummation devoutly to be wished. One would also hope that H.R. 1058 will be amended to require health department administration of "the provision of health care services" at state and local levels. But what is the possibility that any of these hopes will be fulfilled?

The major Congressional proposals for establishing national health insurance, or some facsimile thereof, make the prospects look bleak. The Administration's proposal calls for mandatory enrollment in private health insurance.[44] Even the most comprehensive proposal, the Health Security Bill, provides for administration by a five-man Health Security Board within the Department of Health, Education, and Welfare, and an Executive Director appointed by this Board with the approval of the Secretary of H.E.W. The Board would administer the program through the HEW regions and, within each region, through such health service areas as the Board may establish.[45] The federal health department, and state and local health departments, are simply and effectively excluded.

Congressional proposals for the important area of health planning were similarly designed to separate health departments from administrative responsibility. The National Health Policy, Planning and Resources Development Bill, H.R. 16204,[46] not only removed local planning from elected officials and their health departments and turned it over to nonprofit private corporations, but it also removed planning at the state level from the governors and their health departments and turned it over to coordinating councils representing the local corporations. The result was a violation of public responsibility for public policy and a blatant subversion of democratic institutions.

It took a great deal of public protest and clamor to convince Congress that there was strong popular sentiment against such subversion. The final act, the National Health Planning and Resources Development Act of 1974, Public Law 93-641[47] permits government agencies as well as nonprofit private corporations to serve as the local health systems agencies. Consumer representation in the private corporation agencies was raised from a precarious 50 per cent plus one to a clear majority up to 60 per cent. Administrative control of planning was no longer included in the functions of the state coordinating councils.

These are significant victories won by the state and local health departments. How they will finally turn out depends on what happens now within the states and localities. In any case, they indicate that the erosion of public responsibility for public health by private interests is not inevitable. Furthermore, as the Canadian experience has shown, this is true for national health insurance as for any other public health program. It is a serious error, therefore, for public health workers and their organizations to retreat into passivity on this issue.

The Canadian Example

During the 1960s, health departments in Canada appeared to face an even more bleak and forbidding prospect than did their counterparts in the United States. The report in 1965 of the Royal Commission on Health Services, which played a landmark role in the establishment of national medical care insurance in Canada, defined the functions of health

departments in terms which can best be described as a retreat from the "basic six" to a "basic three and a half." These included "responsibility for providing services in the area of environmental sanitation, communicable disease control, the operation of public health laboratories and the provision of transportation in remote or isolated areas."[48] Coupled with this definition was the recommendation that the responsibility for medical care be vested in independent health services commissions instead of the provincial health departments.

In Canada, government hospital insurance began in 1947 in Saskatchewan, enacted by the Cooperative Commonwealth Federation which later became the New Democratic Party. Administrative responsibility was first placed in a Health Services Planning Commission, but three years later it was transferred to the Provincial Department of Health. The second hospital insurance plan, begun in British Columbia in 1949, was administered by the Provincial Department of Health from the outset. When hospital insurance became a national program a decade later, only one other province, Newfoundland, placed administrative responsibility in the health department; the remaining seven used an independent hospital services commission. This picture has since changed drastically in favor of the provincial health departments. They now administer the programs in British Columbia, New Brunswick, Newfoundland, Ontario, Quebec, and Saskatchewan.[49] Together, these provinces account for 83 per cent of the Canadian population.

Canada's program of insurance for physicians' services first became effective in 1969. In only three of the provinces—British Columbia, New Brunswick, and Ontario—is the program administered by the Provincial Department of Health.[49] These provinces account, however, for 49 per cent of the Canadian population. Furthermore, one may confidently expect that eventually most or all of the provinces will take the logical step of bringing hospital insurance, medical care insurance, and the preventive services together in a unified program administered by the Provincial Department of Health.

Proposals for Action

Canada has broken decisively with the European pattern of administration of national health insurance by agencies concerned with payment rather than health. Can the United States do likewise? One thing is certain: nothing positive will happen if public health workers follow those who urge health departments to abandon medical care responsibilities to private agencies. An affirmative approach is essential.

In addition to the measures proposed earlier in this paper to strengthen health departments, public health workers should insist that the long overdue reorganization of local health units into area and regional health departments be carried out, and that these be given sufficient resources to provide effective service. They need to wage a stubborn campaign to have the planning functions placed in public agencies which will defend the public interest rather than in private corporations pursuing private concerns. They should combat the erosion of the federal health agencies and work for the establishment of a federal Department of Health responsible for all national health programs, including medical care.

It is important, finally, for public health workers to stop riding the coattails of the current sponsors of health insurance bills; they should develop their own legislative proposal for a comprehensive national public health program, including a new medical care system. Such a system must go beyond the payment principle of national health insurance and incorporate as many of the service principles of a national health service as possible, including 100 per cent population coverage, financing mainly by general revenues and only secondarily by insurance premiums, provision of services primarily by group and team practice in health centers, genuine regionalization of hospitals, major emphasis on preventive services, and administration by federal, state, and local health departments.

The vested interests which oppose these progressive developments are very strong. The giant insurance companies which dominate the health insurance field have enormous economic and political leverage. The private hospitals and practitioners, their Blue Cross-Blue Shield plans, and the private medical schools wield extensive influence.

If we match the political strengths of the public health movement with these great aggregates of private wealth and power, there can be no doubt as to the outcome. The balance can shift only if we move toward a strong political alliance of all those citizens who believe that the public good is more important than commercial advantage. Such a new political configuration, drawing its support primarily from the blue collar, white collar, and salaried professional workers who are the majority of the population, would exert a powerful influence on the direction of public policy.

In the field of public health as in all others, it would uphold the superiority of the public interest over narrow private interests. Instead of the sanctity of private enterprise, it would stand for the priority of human needs and social goals, the saving of lives and improvement of life for all citizens without discrimination, and the use of public enterprise to achieve these ends. Such a new political entity is long overdue; the need is great, and the benefits to the public and the nation cannot be overestimated.

REFERENCES

1. Hanlon, J. J. Is there a future for local health departments? Health Services Reports 88:898–901, 1973.
2. U.S. Department of Health, Education, and Welfare, Medical Care in the USSR, Report of the U.S. Delegation on Health Care Services and Planning, May 16–June 3, 1970. U.S. Government Printing Office, Washington, DC.
3. Winter, K. Health Services in the German Democratic Republic Compared to the Federal Republic of Germany. Inquiry, Comparative Health Systems, Supplement to Volume 12, Number 2, June 1975, pp. 63–68.
4. U.S. Department of Health, Education, and Welfare. Provisional Statistics, Annual Summary for the United States, 1973. Monthly Vital Statistics Report, Volume 22, Number 13, June 27, 1974.
5. The mortality from emphysema and bronchitis still goes up. Public Health Reports 90:382–383, 1975.

6. Christakis, G. et al. The anti-coronary club. A dietary approach to the prevention of coronary heart disease—A seven-year report. Am. J. Public Health 56:299–314, 1966.
7. The National Diet-Heart Study Final Report. Circulation 37: Supplement 1, March 1968
8. Veterans Administration Cooperative Study Group on Antihypertensive Agents. Effects of treatment on morbidity in hypertension: Results in patients with diastolic blood pressures averaging 115 through 129 mm. Hg. JAMA 202:1028–1034, 1967
9. Veterans Administration Cooperative Study Group on Antihypertensive Agents. Effects of treatment on morbidity in hypertension: II. Results in patients with diastolic blood pressure averaging 90 through 114 mm. Hg. JAMA 213:1143–1152, 1970
10. Doll, R. and Hill, A. B. Mortality in relation to smoking: Ten years' observations of British doctors. Brit. Med. J. 1:1399–1410, 1964
11. Garfinkel, L. Changes in cigarette smoking habits among physicians 1959–1965. Ca—A Cancer Journal for Clinicians 17:193–195, 1967
12. Garfinkel, L. Smoking in physicians 1959–1972. Presented at the Science Writers' Seminar, St. Petersburg, Florida, March 30, 1976
13. Monson, R. R. Cigarette smoking by Massachusetts physicians—1968. N. Eng. J. Med. 282:906–908, 1970
14. U.S. Department of Health, Education, and Welfare, Public Health Service. The Health Consequences of Smoking, A Report to the Surgeon General: 1971. U.S. Government Printing Office, Washington, DC, 1971.
15. U.S. Department of Health, Education, and Welfare, Public Health Service. Alcohol and Health, New Knowledge. U.S. Government Printing Office, Washington, DC, 1974.
16. Schottenfeld, D. Cancer Epidemiology and Prevention, Current Concepts. Thomas, Springfield, IL, 1975.
17. Bicentennial Conference on Occupational Carcinogens. New York: New York Academy of Sciences, vol. 271, 1976.
18. Shapiro, S., Strax, P. and Venet, L. Periodic breast cancer screening in reducing mortality from breast cancer. JAMA 215:1777–1785, 1971.
19. Committee on Cancer Prevention and Detection, International Union Against Cancer. The Evaluation of Cancer Control Measures. Brit. J. Cancer 28:105–107, 1973.
20. Iskrant, A. P. and Joliet, P. V. Accidents and Homicide. Cambridge, MA: Harvard University Press, 1968.
21. Baker, S. P. and Haddon, W., Jr. Reducing injuries and their results: The scientific approach. Health and Society 52:377–389, 1974.
22. McCarroll, J. R. and Haddon, W., Jr. A controlled study of fatal automobile accidents in New York City. J. Chron. Dis. 15:811–826, 1962
23. Seeley, J. R. Death by liver cirrhosis and the price of beverage alcohol. Canad. Med. Assoc. J. 83:1361–1366, 1960.
24. Terris, M. Epidemiology of cirrhosis of the liver: National mortality data. Am. J. Public Health 57:2076–2088, 1967.
25. World Health Organization European Collaborative Group. An international controlled trial in the multifactorial prevention of coronary heart disease. Int. J. Epid. 3:219–224, 1974.
26. The Multiple Risk Factor Intervention Trial (MRFIT), A national study of primary prevention of coronary heart disease. JAMA 235:825–827, 1976.
27. Cramer, D. W. The role of cervical cytology in the declining morbidity and mortality of cervical cancer. Cancer 34:2018–2027, 1974
28. Alderman, M. H. and Schoenbaum, B. A. Detection and treatment of hypertension at the work site. N. Eng. J. Med. 293:65–68, 1975
29. World Health Organization. Health Education in the U.S.S.R. Public Health Papers No. 19, World Health Organization, Geneva, 1963
30. Personal Communication
31. American Public Health Association. Desirable Minimum Functions and Organization Principles for Health Activities. New York: APHA, 1940
32. The Local Health Department—Services and Responsibilities. An Official Statement of the American Public Health Association Adopted November 1, 1950. Am. J. Public Health 41:302–307, 1951
33. Medical Care in a National Health Program. An Official Statement of the American Public Health Association Adopted October 4, 1944. Am. J. Public Health 34:1252–1256, 1944
34. Freeland, R. M. The Truman Doctrine and the Origins of McCarthyism. New York: Alfred A. Knopf, 1975
35. Wittner, L. S. Cold War America, From Hiroshima to Watergate. Praeger, New York, 1974
36. Douglas, W. O. Points of Rebellion. Random House, New York, 1970
37. Hofstadter, R., Ed. Great Issues in American History: From Reconstruction to the Present Day, 1864–1969. New York: Vintage Books, 1969
38. Katz, D. Card Is Key to Assembly-Line Care. Detroit Free Press, July 22, 1975
39. Subcommittee on Long-Term Care, Special Committee on Aging, United States Senate. Fraud and Abuse Among Clinical Laboratories. Senate Report No. 94-944, 94th Congress, 2d Session. Washington, DC: U.S. Government Printing Office, 1976
40. Hearings Before the Committee on Ways and Means, House of Representatives, 88th Congress, 1st and 2d Sessions on H.R. 3920, Part 3, pp. 1382–1387, Jan. 20, 1964
41. Subcommittee on Long-Term Care, Special Committee on Aging, United States Senate. Nursing Home Care in the United States: Failure in Public Policy. Introductory Report. Senate Report No. 93-1420, 93rd Congress, 2d Session. Washington, DC, U.S. Government Printing Office, 1974
42. Medicare and Medicaid—Problems, Issues, and Alternatives. Report of the Staff to the Committee on Finance, U.S. Senate, 91st Congress, 1st Session. U.S. Government Printing Office, Washington, DC, 1970
43. H.R. 1058, 93rd Congress, 1st Session, January 3, 1973
44. S. 1623, 92d Congress, 1st Session, 1971
45. S. 3, 94th Congress, 1st Session, January 15, 1975
46. National Health Policy, Planning and Resources Development Act of 1974. Report by the Committee on Interstate and Foreign Commerce (to accompany H.R. 16204). House of Representatives, 93rd Congress, 2d Session. U.S. Government Printing Office, Washington, DC, 1974
47. Public Law 93-641, 93rd Congress, January 4, 1975
48. Canada. Royal Commission on Health Services, Vol. 2. Ottawa: Roger Duhamel, 1965
49. Information obtained from provincial health departments