

Public Health Today— The Nation's Best Investment

By LEONARD A. SCHEELE, M.D.

PUBLIC HEALTH is a human institution. Unlike eternal truths, it is not "the same" yesterday, today, and tomorrow. Instead, it is dynamic, subject to change, and constantly changing. Even as we meet here this morning, "today" is rushing to become time past; and "tomorrow," to become time present.

Public health cannot afford to be the same today as it was yesterday, or as it will be tomorrow. For while we are thinking about public health today—while the clock ticks away the next half hour:

Forty people in the United States will die from cardiovascular diseases.

In the same 30 minutes, another 12 will die from cancer.

Five more will die in accidents.

That is the toll which these causes alone exact every half hour today—and will exact every half hour tomorrow.

If these facts are at once dramatic and sobering, consider this: For more than 1,750,000 Americans, this half hour will be the same as the last, and the next, and all the rest this year. These are the people of all ages whose diseases, injuries, or impairments disable throughout time. To many of them, death is not as difficult to contemplate as the ticking of the clock into the hours and days of invalidism ahead.

The Surgeon General's presentation was part of a symposium on "public health yesterday, today, and tomorrow" at the 22d annual meeting of the Southern Branch, American Public Health Association, in Atlanta, Ga., April 23, 1953.

Spur to Action

A consciousness of needless death and suffering has always given public health workers a sense of urgency in their planning and daily operations. We have, however, lost—or are losing—some of that strong drive, for our very successes have eased the spur in many of our programs.

Plainly, it is more difficult to feel the urgency of diphtheria immunizations in school health work today than it was years ago when the first active immunizing agents were developed and diphtheria outbreaks were an ever present spur. In malaria control, it is more difficult to retain a strong motivation for tracking down a dozen or so indigenous cases in a wide, sparsely populated area than it was barely 5 years ago to conduct a vigorous DDT program in the many communities with high malaria rates.

Some of you may recall the plea of William James that society develop a "moral equivalent for war," in order that man may exercise his aggressive drives without destroying himself. To paraphrase that proposal: In our public health work, we need a psychological equivalent for epidemics. Without some such spur, we run the risk of ignoring the need for vigorous action against the major health problems of our times, and of sinking into desultory performance of our customary activities. The public, observing the apparent ease with which old threats to life and health are controlled and being insufficiently aware of present threats, can be excused for questioning the necessity of its substantial investment in public health.

The whole array of protective measures against communicable diseases is so woven into the average American's life that he takes the benefits for granted. Epidemiological investigations, sanitation, licensing of biological products, and quarantine, for example, operate day by day with very few citizens, relatively speaking, being aware of their influence. Even case-finding, immunization, and treatment activities reach directly only a small proportion of the total population. To many people, public health work seems rather dull routine.

In the perspective of time past, time present, and time future, however, public health measures have had spectacular results. The average length of life in this country has increased 5 years since 1940; 8 years since 1930; and 19 years since 1900. A population gaining in longevity and general well-being finds it easy to overlook the indispensability of public health work, even in fields nearly conquered. In the light of the Nation's health gains, however, public health is our best investment.

Economics of Public Health

According to the most recent estimates, there are between 35,000 and 40,000 public health workers in official health agencies in the United States. Of these, 28,000 are professional and technical personnel providing some type of full-time local health service to 70 percent of the total population in the continental United States, roughly 106,000,000 people.

Although the Nation's investment in public health and related services has increased since World War II, expenditures for the promotion of health and the prevention of disease and disability still comprise a small proportion of the total health and medical care expenditures. Public health budgets also are small in comparison with budgets for hospital and medical care.

The American public is spending about \$14 billion annually for all types of civilian health and medical services. Expenditures for the conservative services—prevention of disease, promotion of health, and medical rehabilitation of the disabled—amount to only 6 percent of the total. The total expenditure for the conservative services, from all sources, is thus well under \$1 billion annually.

The implications are clear. Unless the health conservation services are sustained, unless health research is sustained, hope must be abandoned for any substantial reduction of the enormous burden that hospital and medical care imposes on all people—often when it is too late to bring the individual health or even life.

Public health and related services are relatively inexpensive. Public health progress has been achieved, in fact, through consistent search for, and development of, relatively low-cost techniques.

It is not so much the low cost of public health as it is its enormous returns in human and economic values that makes it a profitable investment. The results, however, do not show up as rapidly or as discretely as do the profits from investment in new products, for public health is dealing primarily with the human organism in its varied environments. It may take a decade or more to evaluate the economic gain from some important forward move in public health. Hence, in assessing public health today, we have to look back to yesterday.

Costs and Savings

Indeed, it seems but yesterday in these southern States when the most conservative estimate placed the economic cost of malaria alone at half a billion dollars a year. The intensive DDT program which lifted this burden from the south cost about one tenth of a single year's economic loss. There are few citizens today who do not credit malaria control with its contribution to the great economic advance of the southern States in the past decade. The campaigns against hookworm and pellagra belong to an earlier period, but these public health investments also have played a major part in the economic progress of the south.

Reductions in deaths and disability due to tuberculosis and syphilis are saving untold millions in dollars and in days of productive work. At the same time, improved infant and child health is assuring that a larger proportion of Americans will become productive members of our society.

Control of industrial health hazards, developed from continuing research and applied in

many of the Nation's industrial establishments, protects the majority of workers in the United States from occupational diseases. Prevention of accidents in industry, through safety devices and education, has reduced dramatically the death rates due to industrial injuries. The savings in productivity and compensation costs as a result of health and safety services in industry are incalculable. Some large industries, for example, have reduced the man-days lost from nonoccupational illness by 50 percent, with a concurrent decrease in sickness and accident payments of 35 percent.

Vocational rehabilitation programs, which include medical and hospital services when required, are returning more than 60,000 Americans to productive occupations annually, at a total cost of less than \$33 million. Before rehabilitation, the total annual earning of these people is about \$16 million. The first year after rehabilitation, their total income is \$116 million. A recent study shows that the cost of rehabilitating 376 families in West Virginia was less than the \$225,000 they had been receiving annually in public assistance. No longer dependent on public funds, these families are now earning about \$500,000 a year.

There are gaps in our current public health methods, it is true, but these gaps point up the tremendous importance of research. Since World War II, the United States has launched the most intensive medical research offensive in the history of our country or any other. This campaign is acquiring powerful momentum. The flow of findings predicted 5 years ago is now appearing. If continuity of medical research is maintained, substantial progress toward effective means of dealing with the chief killers and cripples of today is assured for tomorrow.

The potential gains to the Nation in better health for our people and in economic savings are stupendous. The investment required to maintain the current research effort and to extend it into unexplored fields, like the investment in public health and related services, is small when placed beside the Nation's expenditures for hospital and medical care, and still smaller when placed beside the costs of illness

and needless death in terms of lost productivity and dependency.

The Job Today

The investment in public health, though small in comparison with other expenditures, is substantial. Are we making the investment yield the best possible returns?

Many responsible health officials believe that we cannot answer that question without much more careful study of our programs and practices than is the general custom. Public health is a part of, and is influenced by, the great social and economic forces which operate in any dynamic civilization. It functions best when its leaders are alert to the changes occurring and when they take the initiative to keep public health practice responsible to the changing needs of the people.

We have a responsibility to see to it that the jobs given us to do are done with maximal efficiency; without needless duplication and expense, but with full attention to health needs. That is a large order in this day of rising prices and personnel shortages.

The major shifts in the causes of death and disability are familiar to all of us. The chronic diseases are becoming more and more significant as the population ages and the toll of acute infectious diseases is reduced.

Long-term disability due to chronic diseases is a heavy burden to the sufferer and a tremendous economic cost to the Nation. The chronicity and disabling effects of tuberculosis and syphilis have given public health workers striking evidence of this fact. Notable success against these two infectious diseases has been achieved during the past 10 or 15 years. However, tuberculosis deaths still cost the United States annually 1 million years of future working-life and \$350 million for hospital and medical care. Paresis in male patients alone costs an estimated annual loss of \$112 million in income.

In assessing our needs for personnel and funds, we must scrutinize our practices in every program and be prepared to concentrate our forces upon the most effective techniques. We must abandon techniques that careful evaluation studies reveal to be nonproductive. Many

public health practices which we have conceived as universally essential and universally applicable may have very limited value in dealing with the health problems of today as our social and physical environment changes. The basic skills of public health workers are, however, adaptable; what is wanted is the most effective utilization of those skills combined with the most effective utilization of the new instruments and agents flowing from scientific research and development.

Our past successes in public health have led many of us to believe that "more of the same" will accomplish results and that the public will continue to increase support on that basis. A popular song gives us the answer: "T'aint necessarily so!" Our task today, therefore, is to learn quickly how to spend better the funds for which we are responsible, whether they are derived from Federal, State, or local taxes, or from public subscription and private donations.

Chronic Disease Prevention

At the present time, a major strategic goal of public health is to strike at the roots of chronic disease by preventive methods. Preventive knowledge and methods in the field of chronic disease are such, however, that the practicing physician and the hospital have the major share in achieving this strategic goal of public health.

A basic problem in public health today, therefore, is to devise means whereby the skills of the private physician, the public health staff, and the hospital may become increasingly united for the prevention of disease and its disabling effects, and the promotion of health.

Our public health experience in syphilis control has given us valuable guidelines as to what is needed to bring about such effective utilization of resources. Medical science has provided both efficient laboratory tests to detect infection and remarkably effective therapies that can be administered by the general practitioner in his office, as well as by the outpatient department. Public health has developed effective case-finding and followup procedures, as well as other supporting services valuable to the physician. As a result, we can expect a continued decline in syphilis if the united efforts of public health

department staffs and private physicians are not relaxed.

This victory was not won overnight. It has taken more than a quarter of a century of co-operative research, of trial and error, of patience and persistence to achieve the present hopeful position in syphilis control. Even now we cannot say that we have all the answers, that there will be no further scientific or administrative advances in syphilis control. But we have developed methods which other programs may profitably emulate or adapt.

We have made a beginning in tuberculosis control, also; but case finding and therapy in this field, useful as they have been, have not attained a demonstrated efficiency comparable with that in syphilis control. Other chronic disease control programs, such as heart disease and cancer, are still in experimental stages. Although there are a few promising developments here and there about the country, effective preventive programs in these fields await new findings in basic and applied research.

The Community and Public Health

Responsible citizens in every walk of life have an intellectual interest in medical research and an intellectual concern that its vital mission be accomplished. But it is the public health services in the local community that command the emotional interest and concern of every citizen. The adequacy or inadequacy of local public health services has an immediate impact on each family, each individual.

More than ever before in history, public health today is the product of the local community. Unquestionably, the pioneer movement to stimulate local initiative in the prevention of disease is the most significant contribution of the public health profession to the Nation's welfare. The pattern of local health service has been developed by the profession and sometimes has been offered to communities for adoption with relatively little consideration of the tremendous social changes in this country, and of the shifts in population, in patterns of community life, and in health problems.

During the past 5 years, the United States Congress, after careful study, has not accepted proposals for specific, increased Federal aid to

local health units. This fact should stimulate the public health profession to analyze critically the lag in the development of full-time local health units.

The Congress represents and is responsive to the will of the people in health matters, as in other matters. There has been no lack of congressional interest in public health, and there is no lack today. The factors which operate to retard the development of local health units are many and complex. Let us consider briefly a few of the principal influences.

Since the end of World War II, the Congress has been faced with enormous financial demands upon the Federal Government. Nationwide concern has mounted, and with it has come a demand for increased State and local responsibility and independence in many domestic enterprises, including public health. Parallel with the increase in national and personal income, as well as in prices and taxes, there has been a growth and extension of Federal grants-in-aid to the States. The present system of Federal aid to the States is complex and involves many fundamental questions of governmental functions and fiscal responsibility. It is indeed a major problem in Federal, State, and local administration.

Federal-State Relations

Recognizing the seriousness of the problem and the necessity for rational solutions, the President of the United States has proposed—and legislation has been introduced in Congress—to establish a temporary Commission on Governmental Functions and Fiscal Resources whose major responsibility would be to study and make recommendations to Congress on the entire field of Federal activities in aid to State and local governments. Under the proposed legislation, the commission would be composed of 25 members: 15 to be appointed by the President and 5 each by the Senate and the House of Representatives. The commission would be expected to submit its report and recommendations in March 1954.

In a message to Congress on this subject, President Eisenhower, commenting on the national problem of Federal-State relations, said: "To reallocate certain of these activities between

Federal and State Governments, including their local subdivisions, is in no sense to lessen our concern for the objectives of these programs. On the contrary, these programs can be made more effective instruments serving the security and welfare of our citizens."

This is a statement of policy to which every responsible public health worker will subscribe. We must not wait, however, until the proposed commission has made its recommendations. We must begin now our studies of how our programs can be made more effective. As long ago as 1945, the Public Health Service pointed out that a larger share of the costs of basic health services should be borne by State and local governments. In general, this has occurred; but the major increase in State and local health expenditures has been in the fields of hospital and medical care.

I would urge the physicians, the health officers, and the citizens of our towns, counties, and States to work toward providing more financial support for the worthwhile old and planned new programs. Everyone should understand that the total financial obligations of the Federal Government, the current effort to bring the Federal budget into balance and ultimately to lower taxes, may well make it necessary to reduce Federal grants-in-aid to the States for public health work. Such a reduction should not be reflected in lessened service. The elimination of unnecessary and low priority projects, increased State and local appropriations, and greater voluntary support should more than balance any loss of Federal grants.

The continuing role of the Public Health Service will be to help the States with studies and demonstrations, or pilot programs, and technical leadership. We should all remember this basic principle of our democracy: Initiative and major action are the province and responsibility of the citizens and the States, free from any Federal paternalism that might destroy initiative in the public interest. We can expect that the Commission on Governmental Functions and Fiscal Resources will provide official agencies with an agreed, proper base for future Federal-State relations and Federal financial grants in the health field.

State and Local Responsibility

There should be substantially increased State and local activities in public health services—prevention of disease, environmental health, promotion of family and individual health, and medical rehabilitation of the disabled. This philosophy was expressed by the Hoover Commission when it reported: “The health of the Nation demands maximum employment of present scientific knowledge to control disease, and of research to find new methods for the prevention of disease. . . . The Nation’s future can best be protected by using every means to prevent disease, rather than by providing unlimited hospitalization to treat it.”

Until more State governments and legislatures and more local communities have adopted this philosophy, until they become zealots in its application, we can expect little progress in the further development of local health services. Public health workers as salesmen must also critically evaluate the product they wish to sell, in terms of the specific health needs and resources of specific communities.

It would be difficult to say, for example, to what extent our public health practices have been influenced by the truly remarkable advances in the prevention and treatment of acute communicable diseases during the past decade. Are our demands for laboratory procedures and public health nursing services in this field realistic? Are we providing services, once valuable, but no longer necessary? Improved technology in food production, processing, and distribution also challenge many of our standard sanitation techniques devised to protect us in earlier days. In the meantime, many serious needs remain unserved. Yet, we frequently base our estimates of costs and personnel required for local health services on the standard techniques that were defined 20 or 30 years ago.

Program Appraisal

The shortage of professional personnel in all categories is still acute. This statement, I realize, is growing a little shopworn. Thousands of speakers have made it from hundreds of platforms since the beginning of World War II. If we are not careful, it can become a dangerous

sedative to lull our awareness that we are doing so little to meet the personnel needs.

Our public health economists are the first to tell us that the available criteria for measuring “shortages” of personnel are far from specific. At best, such measurements afford us only a means for detecting the uneven distribution of health personnel. We have not yet developed sufficient scientific data on the effectiveness of specific techniques or on the functions and the performance of the different categories of professional workers to permit a completely realistic appraisal of our needs.

A few significant studies have been completed in the fields of hospital nursing and dental care. Others are in progress on the utilization of physicians’ time in office and hospital practice. These point inevitably to the conclusion that many of our difficulties in staffing could be overcome by more efficient utilization of personnel in “scarce” categories, by increased use of less scarce personnel in related professions, and by increased use of well-trained, nonprofessional personnel.

During the past year, the Public Health Service attempted to develop a study of the amount and kinds of nursing service required to meet the minimum needs of local health departments. We found that studying the needs of a single type of service is not enough. Nor is it enough to study the needs for other types of personnel. We must have broader studies, aimed at determining the types of organization that will be most effective in meeting the health needs of different types of communities. On this basis, staffing requirements can be assessed efficiently.

Many local health organizations as now constituted cannot cope with today’s problems—with the chronic diseases and impairments, with the health needs of the aging, with the chemical environment, and similar problems of contemporary society. Newer programs have been initiated to deal with some of these problems, but they do not always fit into the traditional structure of local health organization.

If public health tomorrow is to be a more effective instrument for service to the community, we must be vitally concerned today with appraisal of our current programs and

practices. We must be vitally concerned that the methods we propose are adaptable to the needs of different types of communities. Local health organization is indispensable and it must be strengthened—if tomorrow's health is to eclipse that of today. But public health must learn new ways of organization as well as new operating techniques in order to develop the kind of local health service that will meet tomorrow's needs.

Conclusion

Public health today is a part of public health yesterday and of public health tomorrow. Yet, tomorrow public health workers of all categories will be facing many of the same routine tasks. There will be the usual backlog of work, with additional tasks arriving every hour. There will be the same problems of staffing and recruitment; the same questions, seemingly unanswerable, about how to do today's job without

enough people and money. There will be little time to step back and think.

Somehow we must find time for reflection. Public health today is in a period of transition: a period in which we may see a realignment of the sources of financial support and of the functions of many organizations engaged in public health and related services. Yet, this can be one of the healthiest periods in the history of organized public health services. For if the public health profession responds to the demands of today with full exercise of the scientific method in which we have been trained, rather than with emotional attachment to the tasks of the moment, we can vastly improve our operations; bring the influence of preventive medicine and environmental health to bear upon related services; and extend the tested techniques and skills of public health into many fields still awaiting cultivation. This task is at once the task of public health today—and tomorrow.

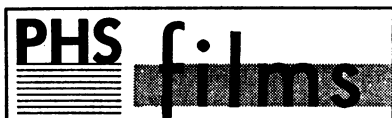
Public Health Service Staff Announcements

Elisabeth Boeker, Public Health Service nurse officer, is the first nurse to be sent to Iraq under the Point IV technical aid program. Miss Boeker will work with Iraqi nurses and other health aides to assist in developing public health nursing services in that country. She will advise the Iraqi Ministry of Health on nursing matters. In Basra she will help organize the nursing section of a new local health department and train public health nurses.

Margaret E. Benson has been appointed chief of infectious and tropical disease nursing of the Public Health Service Clinical Center at the National Institutes of Health. Miss Benson has served in various staff nursing and instructional capacities at the Minneapolis General Hospital

and the University of Minnesota School of Nursing. Since 1951 she has been special consultant to the Division of Nursing Resources, Bureau of Medical Services, Public Health Service.

Meral Loewus, a Public Health Service nurse officer, has been assigned to the Technical Cooperation Administration Mission to Iran where she will direct nursing education at the Nemazee Hospital of Nursing in Shiraz. The hospital, scheduled to open next year, is being built by the Iran Foundation, and the mission is helping provide staff members until their Iranian counterparts can take over. Miss Loewus will work with Iranian nurses in setting up the new school of nursing. Until recently, she was associate professor in the department of nursing at Montana State College.



Community

Fly Control Operations

16 mm., sound, black and white, 12 minutes, 1952.

Audience: Sanitarians, entomologists, public health personnel, and students engaged in or interested in community fly control.

Available: Loan—Public Health Service, Communicable Disease Center, 50 7th St. NE., Atlanta 5, Ga. Purchase—United World Films, Inc., 1445 Park Ave., New York 29, N. Y.

A successful fly control project as carried out in a typical town is shown in this film, designed to educate the residents of a community in fly control and to gain their support in the project.

The film presents a basic plan of attack that can be used to control flies in any community—education, sanitation, and chemical control.

These three measures are developed in the film by showing the procedures carried out by visiting State fly control specialists, local public health and municipal officials, and residents. The community is surveyed to estimate the number of flies present. The main fly breeding sites—exposed garbage, animal shelters and waste, industrial waste, and insanitary privies—are located. Residents are shown how they can aid in eliminating some of the fly breeding sites. Help is given city officials in solving the more expensive municipal problems of fly control.



Fly control supervisor carries education program to schools.



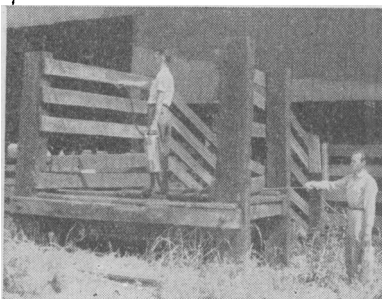
Community fly control supervisor advises mayor's committee on major municipal problem (open garbage dump).



Citizens' response to educational program—keeping animal waste in containers in privately owned animal shelters.

Insecticides are used for immediate relief and as a supplementary measure in the difficult problem areas, but basic sanitation is emphasized as a necessary factor in the permanent control of flies.

These measures, the film points out, will control fly problems but will never completely eliminate them. Routine vigilance must be continued indefinitely by making periodic fly counts, by keeping a check on possible breeding sites, and by using insecticides to combat occasional small outbreaks.



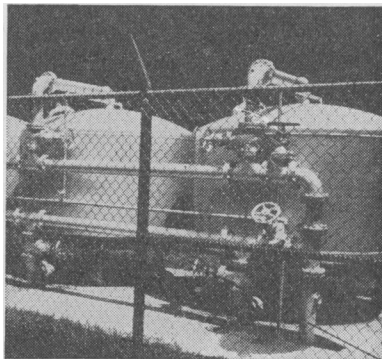
Fly problem site (stockyards) treated with residual spray.

Swimming Pool Sanitation

35 mm. filmstrip, sound, color, 8 minutes, 1952

Audience: State training officers, sanitarians, and others interested in desirable swimming pool characteristics and operational procedures.

Available: Loan—Public Health Service, Communicable Disease Center, 50 7th St., NE., Atlanta 5, Ga. Purchase—United World Films, Inc., 1445 Park Avenue, New York 29, N. Y.



Rapid gravity filters.



Cleaning pool.

This filmstrip shows some of the physical characteristics and the operating procedures basic to swimming pool sanitation.

Planning and construction: details size considerations, ratio of deep to shallow water area, overflow gutters, desirable provisions for recirculation type pools, units of the recirculation system, and several different filter methods.

Operation: includes provisions for operation such as dressing rooms, scheduling of sanitary operations, emergency preparations for breakdowns, and bathhouse maintenance.