Emerging Trends in Public Health and Possible Reactions

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SERVICE to mankind, in any field, is essentially a matter of goals and processes. We are showing far greater sophistication in the selection and maintenance of our long-range goals than in handling ourselves as we undertake to move toward them.

With all the controversy about methods of payment for medical care, nearly everyone agrees that the ideal goal for America must be universal access to high-quality, comprehensive health and medical care. Yet it is in the more exact definitions of these terms that we have our arguments. It is in the selection and defense of intermediate goals for the practical programs of tomorrow that we fight our sharpest battles with our closest friends.

Peter Drucker, writing in *Harper's* in August 1960, indicated that the task of leadership for the future must emphasize the need to be relevant much more than the responsibility to be right. If we can lead into relevant paths, our effort, even though wrong, will focus attention on the important issues, will attract productive controversy, will raise the priority of the significant problem, and should thereby result in far more human progress. To be right though irrelevant will confuse and delay and merely postpone an attack upon the key issues of our times. Ibsen said, "I hold that man to be most right who is most closely in league with the future."

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In this present stage of rapid transition and controversy in public health, it is essential to find the threads that lead onward and which will strengthen into the major core of our future culture and productive efforts. We must identify them for several reasons: First, we are too philosophical a people to justify our day-to-day discussions solely by the expediency of the moment. Second, we are learning to appreciate as never before the great inherent conflict and competition between desirable choices of action. The third reason rests in the rapidity with which our scientific and social revolution is occurring, making a delay in action one of the most precipitous and often calamitous decisions we could make. Fourth, our citizens have begun to demand services in a way never before believed possible and have already shown themselves well able to follow false prophets if none other seeks to lead. The fifth reason should be the most important: Since the Renaissance, man has become increasingly aware that he can become the master of his own future. We therefore must study emerging trends so that we can influence them, bring them to greater and more rapid fruition if we deem them desirable, or slow them down and redirect them if we think they are undesirable.

What do we recognize as the most significant trends of the day, the trends that we believe are highly relevant to our future development? To which problems should we commit our greatest leaders, our most effective resources, our most critical scientific efforts? What are the implications for the future if we avoid the often unpleasant struggle to understand these trends and either redirect them or reshape our lives to

live with them more readily? Which intermediate goals, now the subject of intense studies and efforts, should receive priority because they are most closely related and relevant to these major trends?

The Emerging Trends

To an increasing degree, man is becoming the major cause of his own illness and death. Following our unbelievable progress against the epidemic diseases of the past, we see the emergence of a host of major chronic diseases as the key health problems of our day. At present, unable to attack these illnesses by the familiar methods of isolating an organism or producing a vaccine, we are faced with the need to understand their relationship to certain environmental factors that appear to increase greatly their danger to us as individuals.

We note the relationship of lung cancer to cigarette smoking and air pollution, both of which also have significant effects on carcinoma of the larynx, emphysema, chronic bronchitis, and several other diseases. We note the increasing importance of cardiovascular disease as a cause of death and are becoming concerned with its relationship to set patterns of life, such as a diet high in saturated fats, cigarette smoking, or emotional stress. We note the predominance of diabetes and are learning about its relationship to obesity. Accidents, almost entirely due to human failures and our inability to adjust our current environment to safety for all, have become one of our leading causes of death.

Poverty makes an unusual contribution to our health problems. In New York City, poverty is the third leading cause of death. For example, we could save 13,000 lives a year if the entire city could achieve the death rates now prevalent in its Flushing district. Flushing's death rate per 100,000 population (1960–63) from all causes was 950. The New York City rate was 1,121. The rates in the Flushing district, a busy, bustling community of a quarter of a million people, are not unattainable.

All about us we see other environmental factors, manmade, being scrutinized as potential health hazards. We see the increased use of ionizing radiation, we question the hazards of the indiscriminate and widespread use of pesticides, we are concerned about the large number of drugs that have been added to our environment, and we wonder whether many of the food additives now used might not present new hazards in a coming era.

The education and sophistication about health of the citizenry is increasing at a fantastic rate. The resultant demands for high-quality health services are growing far more rapidly than the resources that are available to meet them. This means not only that the health needs of our population are insatiable but that our citizens often look critically toward the efforts of our experts to meet them.

Sir Geoffrey Vickers, noted British physician and author, defined public health progress as a "periodic redefining of the unacceptable." The existence of poor health is rapidly becoming less and less acceptable to our population. Their willingness to redefine the unacceptable is proceeding at a far greater pace than our ability to meet the problems with useful solutions.

Our inabilities are many. First, we often lack the requisite scientific knowledge. Second, we often seem able to provide health only at a cost in money or a changed environment which is even further beyond the capacity of our people to accept. Third, we have serious deficiencies in the trained manpower required to provide the best that modern science has made available to meet health needs. What is most disturbing about this picture is the rapidly growing gap between available resources and the satisfaction of those health needs already recognized by the population. The city of New York will have 1 million people over the age of 65 by 1970. Providing competent medical and hospital services for this population, on the basis of our current organization of medical care, would result in a wholly unrealistic economic priority for health.

Health Compromises

There is an increased willingness to consider health not as a pure and incontestable human good but as a generally desirable element in active competition with other human needs such as economic gain, recreation, or just plain pleasurable living. A compromise with health is now becoming an accepted established pattern.

Noting that pigeon droppings have been found to contain the *Cryptococcus neoformans* responsible for several deaths in New York City each year, a leading local newspaper commented editorially that a few deaths per year were a small price to pay for the privilege of living with our feathered friends.

During those hectic months after publication of the Surgeon General's report on tobacco and health, several of the spokesmen for leading tobacco-producing States indicated that despite the now-recognized hazards to health, one should think twice before embarking on a course of action that would ruin the economy of so many areas of this nation.

There is a growing recognition that personal health is a community as well as a personal affair. It is no longer acceptable to see infant mortality rates in some areas of a single city four times that of other areas, tuberculosis and syphilis 10 times greater, and even general death rates substantially higher in certain deprived areas. Granted that services are available, but inadequately used, health leaders are recognizing that it is their responsibility to arrange and organize services in ways that would be more acceptable and utilizable to large groups within the population.

Our medical care system has long been tied to symptomatology as the major point at which service is first rendered. Our knowledge of the chronic diseases teaches us that to be maximally effective the attack must be made long before symptoms strike. People generally do not give much priority to such efforts. When it required merely the taking of a dose or two to be immunized against disease, the task was not so great. But when it requires a lifetime of effort to change pleasurable habit patterns, or repeated submission to detection tests, or routine physical examinations, then we find the problem quite different. In New York City today, despite rather heroic efforts in the development of citywide detection programs, we are finding less than one-fortieth of the unknown diabetics, less than one-fiftieth of the unknown cases of carcinoma of the cervix, and less than one-two hundredths of those patients suffering with subclinical glaucoma.

Chronic disease has become a way of life in our culture, and this is becoming increasingly true. We are going to have to learn to live with the diseases that we cannot cure. We must learn how to make productive the lives of increasing millions of people who look forward only to a steady rise in their disabilities and a decrease in their activities of daily living. The world will no longer be separated into those who are ill and those who are well. We must learn to recognize those aspects of our environment that might be changed to reduce the impact of clinical disabilities while we do our best to rehabilitate the individual. Medical need, in short, will become increasingly less medical and less episodic while it becomes more continuous and more ecologic.

Although major advances were made during the past few decades by superspecialists working intensively in ever-narrowing fields of human biology, an increasing amount of future progress against disease is going to come from that sadly neglected group that has been interested in comprehensive care for the masses. Without detracting from the enormous potential of additional studies in relevant biological fields, we have great need of scientists who can learn how to reassemble the human being into his component parts, restudy the interrelationships between them and learn how to understand man as a part of the total environmental system. The tuberculosis organism is no more virulent in the Harlem areas of New York City, our antibiotic drugs no less effective there, but the death rates from tuberculosis are 10 times higher in Harlem than in certain neighboring areas. While we would be delighted with major biological advances in the prevention and treatment of tuberculosis, we cannot ignore the tremendous impact that rearrangements in our human environmental system might make toward the control of this serious disease.

Possible Reactions

So much for the major emerging trends. The list could be much longer and subdivided or reclassified in a dozen different ways. We have enough to concern us for a long time to come. The true test of the relevance of these trends can only be made by the historians of some future era. In the meantime, man cannot sit idly by. Throughout this land he has undertaken hundreds of new approaches, passed

many laws, appropriated much in the way of resources for action programs, and has organized into thousands of groups to pursue one or another intermediate achievement that he believes will be effective.

It is important, above all, to realize that no one of the approaches should be considered as an end unto itself. Each must be answerable to our higher mission of universal access to high quality, comprehensive health, and medical care. Each must also be tested against what it fails to do as well as what it does, and criticized sharply for any harm it does to human life, as well as commended for the good. In short, each must be considered as part of the total ecology of man. Since man is not merely the passive recipient of ecology, everything that he contributes becomes part of the total system and feeds back to change, in some way, the many forces and factors to which he is subject.

I believe strongly that we must insist on man's realizing to the fullest degree that he will continue to be his own worst enemy. We can no longer divide the world, with regard to public health, into good and bad people. During the cholera years in New York City, prostitutes and drunkards were believed, on much good scientific evidence, to be the ones particularly singled out by the disease. Epidemics of typhoid fever were blamed on negligence in foodhandling and culpable, inadequate control of carriers. The patient with tuberculosis or syphilis who refused treatment and hospitalization while spreading infection could be singled out for special legal control.

But what can you say about the cigarette manufacturers whose continued prosperity is so important to the economic life of so many areas? How about the severe arthritic who supports himself and his small family by opening a tobacco shop across the street from the local high school? What would you say to the Wisconsin farmer who prides himself on the high saturated-fat cream production of his Guernsey cows? What about the Pennsylvania poultry grower who attempts to increase the consumption of eggs, or the drug industry with its major campaigns to persuade physicians that more and more patients would function better with additional tranquilizers? What do you think about the chemical or steel factory belching forth clouds of sulfur dioxide, hydrocarbons, and soft-coal smoke into the atmosphere, but whose products are truly essential to the security, economic life, and even the health of the people of this nation? How do you react to the American automobile, now one of our leading causes of death?

Decisions must become a matter of conflicting priorities for social good on the one hand and equally conflicting intolerances for social evils on the other. In both halves of this equation the word "conflict" appears as the essential word. In short, the solution can only be that public health, which has so long prided itself on objectivity, must learn to live increasingly with controversy, bitter controversy, subjective human-value controversy, but relevant controversy and hence intensely useful controversy.

Can we make controversy truly relevant? It is not relevant if we talk about prohibiting cigarette smoking as a national habit. Even though this might be right in terms of preventing lung cancer, we possess neither the resources, the will, nor the perseverance to carry through such a program. To be truly relevant, we must always keep in mind that what we are trying to attack is lung cancer and not one or another theory for its practical prevention. Practical measures change, our ability to institute them varies greatly, and we must always maintain flexibility. What we need is a sort of humility about the value of our resources and an arrogance in insisting that our long-range goals be pursued at all cost. While the cigarette industry can modify a nation's zeal to prohibit the manufacturing of cigarettes, it must never be allowed to blunt the nation's and its own responsibility to give priority concern to lung cancer.

In 1906 tuberculosis was the leading cause of death in New York City. At that time the city health department studies revealed that 75 percent of the dairy herds tributary to the local milkshed contained tuberculous cows and 10 percent of the street samples of milk were found to be infected with live tuberculosis organisms. About that time, pasteurization was being urged as a health measure. The dairy industry stated flatly that it could not and should not be forced to use this new technique. It would be economically ruinous and, more-

over, millions of babies would be deprived of milk because of the great increase in cost which would result.

Abel Wolman, professor emeritus, Johns Hopkins University, remarked how interesting it is that industry learns how to adapt to innovations even while fighting them. Certainly the story of our milk industry is a concrete example of this principle. Although progress did not occur overnight, the industry did learn how to develop pasteurization and steadily make it essentially the sole variety of milk available to our large cities. It is interesting that industry did not adapt through its own initiative. Keen public interest, as evidenced by a supreme concern with the prevention of tuberculosis and other milkborne infections, provided that correct degree of pressure which forced the industry to adopt the technical innovation of pasteurization without reducing the availability of milk.

There are numerous illustrations of Wolman's principle. During the recent Newburgh, N.Y., welfare controversy, many welfare experts around the country, while deploring the entire episode, took a new look at their own operations and developed better systems of welfare care.

Perhaps the best example of this principle in our immediate future is the poverty program. Geared to provide new services for newly formed groups within the poverty neighborhoods, these programs should provide an intriguing amount of useful competition to the entrenched agency programs of the present. I hope all of us who run such agency programs are willing to realize that defending our efforts is not our primary responsibility. What we are after are the answers to health and welfare needs in our midst. If the poverty programs develop new methods that are useful, if they are successful in building up new intolerances to human need, if they attract new priority attention to certain useful intermediate goals, then they will have more than justified their existence.

As man faces his future with the realization that he is becoming responsible for more of his own health problems, he can begin to develop a useful pattern of attack. While waiting for the human need concerned to become truly unacceptable, we must learn to do those things that keep focusing the nation's attention on the real issues, the real health problems. We must produce a large number of possible intermediate developments, bring each one before the public, and attempt to expand whatever small or large efforts we can within these fields. We should never seek to discourage any new approach.

In the controversy that develops about these intermediate achievements, we must retain our flexibility, our objectivity, our willingness to criticize and be criticized, and above all our acceptance of change. At the same time, we must always refer to and insist upon top priority for the major health problems, be it lung cancer, accidental death, or chronic disease.

As the unacceptable is redefined by the population, we may move forward, ever seeking the kind of measures that are more acceptable, and hence adaptable, to people. A safe cigarette, granted that it is acceptable to smokers, would be a far greater preventive for lung cancer than dozens of years spent in the development of antismoking clinics. The development of a program for the routine detection of carcinoma of the cervix, diabetes, and glaucoma among patients admitted to hospitals and clinics would be far more effective than huge educational programs aimed at urging people to attend special detection centers.

We sometimes forget that public health workers are not in favor of fluoridation of the public water supply because this procedure prevents dental caries. Several other measures are even more effective in the prevention of dental caries; namely, a drastic reduction of carbohydrates in the diet, brushing the teeth carefully after every meal, or taking a measured amount of fluoride periodically by mouth. None of these methods have ever worked to any measurable degree for any free-living population group. We are for public-water-supply fluoridation because this is the only practical method acceptable to the population that can and does reduce dental caries to a major degree. Fluoridation programs in our nation are growing as the people begin to realize this and become willing to appreciate the complete unacceptability of the enormous dental need that exists among our children.

Research is an important example of the principle of relevancy. The individual scientist in cardiovascular research knows he is working in a highly relevant field. He knows that any one of his tentative findings can only be a steppingstone to further knowledge. He also realizes that any of them may be proved false on further experimentation. Yet he constantly seeks to find intermediate gains and offer them for useful public testing and controversy. He is right to work in the relevant area of cardiovascular disease even though his studies may give wrong answers. He deserves our priority encouragement.

While much attention and the major share of funds from government have been offered on behalf of basic research, there is another kind of research that needs to be improved to a greater degree in this nation. I am referring to the type that makes it possible to "repackage" services for greater acceptability and use. American industry calls it "development" and spends far more in this direction than in the pursuit of basic knowledge. While I urge that Government spend even more than it does now for basic research, I believe the time has also come to invest huge sums in well-disciplined, well-planned, and well-criticized developmental research.

A few years ago, if all the poliomyelitis vaccine in the world had been placed on top of Mount Everest, there would have been only two cooperative patients, Tenzing Norkay and Sir Edmund Hillary. The rest of us would have been uncooperative because we could not climb Mount Everest to obtain the vaccine. Health education programs, courses in mountain climbing, and exhortations to become immunized against poliomyelitis perhaps might have persuaded a few more among the world's billions to join the climbers. The rest of us still would have had to be content to be labeled as uncooperative.

There is a simpler solution: merely bring the vaccine at least part way down from an Everest peak. At each lower level along the side of the mountain, more people could become cooperative. Finally, as the vaccine is distributed to every hamlet in the nation and made a part of every routine child-health clinic, school health program, or visit to a physician, the world could control poliomyelitis. How many of our services today are on Mount Everest as far as large numbers of the population are concerned? What broad avenues exist for research in repackaging our services so that people will be willing and able to use them!

Several years ago, in the Borough of the Bronx in New York City, we tried to persuade people to have tuberculosis chest X-rays. Our mobile unit was placed in certain residential areas, and people were visited in their apartments and given appointment slips. We discovered, to our dismay, that the people coming to the unit were not the ones whom we had visited. So we blocked one of the busiest streets in that part of town with the X-ray unit, not where people lived but in the business area where they moved to and fro along the sidewalk in large numbers. Because there was no inherent resistance to the tuberculosis X-rays and the unit blocked their path, people used it in large numbers.

There is a story told in New York City about a woman who lived opposite one of the leading rehabilitation centers of the world. She suffered a stroke and lay totally disabled for 3 years before finding out about the enormous array of top-level services that were available for her rehabilitation across the street. But the moral of the story is even more serious than it appears. After 3 years this woman finally learned where to obtain care. Yet 10 years after the event, the rehabilitation service in question had not learned how to leave its cloistered halls and seek out those thousands of patients needing its care.

New ways also must be found for adapting our categorical and specialist-centered resources to the needs of people through comprehensive, family-centered care. It is so much easier for the voluntary or government agency to raise money for a specific disease or a specific technique. One can understand the fight against mental diseases much more easily than a struggle for comprehensive family care. Yet, as the importance of preventive measures increases, as better packages of care are provided, as people suffer not one but dozens of different health problems simultaneously, it becomes essential that we develop a comprehensive approach to health and medicine.

We studied the large number of old people living in a single housing project in New York City and found several men and women in their closing years of life who were labeled as uncooperative patients. One such man had 12 major pathologic diagnoses and, at the time we found him, was attending no hospital clinics. The reason was simple. He had been told to attend no less than 10 separate specialty clinics. He was too sick to attend 10 clinics! The travel to and from the clinics, the interminable hours of waiting, the shuttling back and forth from clinic to clinic, the waiting in line for drugs at the pharmacy counter were all beyond his capacity. When we were able to bring a small branch clinic into the housing project itself, this man could receive the care he needed for practically every one of his conditions, and he readily accepted treatment. Three years later he was still at home with his wife instead of in a nursing home—the inevitable outlook for both of them for ending their lives; incidentally, at greatly increased cost to the city.

One of the most important things we must learn is how to adapt our categorical- and specialist-oriented resources to comprehensive care. We can do it if we insist that a categorical grant be spent on behalf of an individual only if it is part of a comprehensive total package. Categorical in origin, our funds, when translated into patient service, can be made part of the total family care. This requires the kind of leadership by public health authorities that we have not yet been skilled enough to develop. There is no reason why funds for mental health cannot be spent in comprehensive centers that also offer all other varieties of health care. Cancer detection need not be encouraged in isolated centers, but can be made part of a routine medical examination wherever a patient can receive such an examination.

Promising Developments

In New York City we are investing enormous effort and resources in attempting to attain comprehensive care. We are proud of our interdepartmental health council, composed of the commissioners of health, hospital, welfare, and mental health. The four departments have made this council a functioning reality, complete with a number of subcommittees composed of the bureau directors and other representatives of our respective agencies. Nearly every program that attempts to solve highly relevant health problems is an interdepartmental program.

One of the most interesting developments is joint facilities. For example, the population of 150,000 on the southern tip of Manhattan Island will receive the bulk of its health and medical care services from a local city hospital that is affiliated with a large voluntary teaching hospital and a medical school. The city health department will have a district health center within the hospital itself. The director of the hospital will be the acting district health officer for the area and will be responsible for all health activities in that zone.

A full-scale mental health program will be carried on within this hospital, directed by the same person, under the general guidance of the commissioner of mental health. We hope that by fastening on one man responsibility for the health and medical care of the total area, under the aegis of a cooperating large teaching hospital, we will be able to unite the various parts of the health and medical care scheme into a single system. We are also going to see that preventive medicine receives the proper amount of attention as part of the comprehensive care program.

In addition, we have established lesser degrees of cooperation and integration with a host of institutions in the city. Realizing that many agencies are not yet ready for a major undertaking in comprehensive care—nor for that matter is our own agency—we have been building bridges to them by developing more limited joint operations. At St. Vincent's Hospital we have supported a program in which the physicians in the outpatient department are identifying welfare patients and then checking on the other members of their families. By starting with the index case, they are building a family-wide approach to their patients. Other hospitals are running special clinics within our institutions as branches of their parent institutions. The director of the relevant service at the hospital supervises the activities within our buildings, and in a sense his staff become members of our staff, amenable to the pressures of broadening the scope of their program toward

more comprehensive care. In several district health centers, hospitals are now operating comprehensive maternal services, tied in with their own obstetric departments and including family planning.

Although this effort is still in its infancy, the results are unusually promising. Hospitals are becoming interested in the population beyond their four walls. They are beginning to feel a responsibility for the patient who fails to come for service as well as for the person who presents himself. A new medical school has appointed a committee with strong public health representation to plan the comprehensive community-medicine part of its school program. Its prospectus indicates that community medicine will be one of the three tripods upon which it plans to base its total teaching program.

Several major hospitals have been taking a new interest in their outpatient departments. These efforts are aimed at making the departments more comprehensive, developing better continuity with the patient at home, and engaging in far more preventive medicine. This has been accomplished primarily because of the intense spotlight that has been focused on the relevant problems: (*a*) the unmet medical care and health needs within the city and (*b*) the practical intermediate goals which result from a willingness to experiment and move slowly. In this way, proceeding step by step as fast as the individual institution is prepared to go, we public health leaders can encourage with bonus resources those institutions that will accept additional community responsibilities.

There is nothing new in these efforts. The steps are no different from those that New York City had to undertake in 1906 to persuade the milk industry to develop pasteurization. They are the same efforts we took to persuade the population of many cities that fluoride should be added to the water supply to meet the overwhelming unmet needs in dental care. They are no different from the efforts and the funds expended to develop a practical measles vaccine to control this serious disease. They are similar to what we would be doing if we undertook a massive program to control lung cancer, working step by step with the agricultural and industrial interests. Had the correct measures been initiated 10 years ago when it became fairly evident that cigarettes were the major leading cause of lung cancer, we would not now be faced with a dismal prospect of great concern in the nation, with increasing lung cancer mortality on the one hand and a complete absence of useful resources that can be applied on the other.

We started a program in coronary heart disease by developing the use of the Prudent Diet for 800 volunteers. As evidence accumulates that this diet is effective in the prevention of coronary heart disease, we will see industry developing an increasing number of substitute foods in a way that will not disorganize their economy and productivity. In our work with car manufacturers on automobile accident prevention, in our work with industry in reducing air pollution, even in our efforts to get cities to control water pollution, we are essentially following the same pattern.

What we need and should have is concerted leadership plus programs to encourage such efforts on a methodical basis. To date, such efforts have been hit and miss, often occurring despite, rather than because of, concerted human effort. How much more could be done if our major government grant programs and best public health brains would accept the task of encouraging that kind of research and development which, sensitive to the realities of our human systems and environmental mechanisms, would work toward the goal of greater health with that degree of flexibility, controversy, and useful criticism that will insure that we remain properly on our path!

Outlook for Environmental Health

In the panel discussion of Dr. James' address, Gershon Fishbein, publisher of Environmental Health Letter, Washington, D.C., commented on several facets of environmental health. Following are excerpts of his remarks.

. . . Man does not threaten the community nearly as much as the community threatens man. Once the individual was the carrier of tuberculosis or venereal disease and spread these conditions within the community, but today the community is the carrier back to man. Air pollution, pesticides, tensions, and poverty are some of the problems emitted from the community that threaten man. . . .

To understand the extent and nature of this threat, better men and tools are needed. It is lamentable that environmental health has not attracted to its ranks the caliber of scientists needed to mount a truly effective national environmental health program.

Environmental health desperately needs to be brought into the mainstream of American medicine. . . . There is plenty of room for the physiologist, the geneticist, and the biochemist, to mention a few. For example, the question of hypersusceptibility to various chemicals in the environment should challenge scientists of many disciplines.

The findings that individuals with an absence or deficiency of the enzyme glucose-6-phosphate dehydrogenase in their red blood cells are unable to metabolize certain widely used chemicals in industry should open an entirely new area of research in genetics, hematology, and pharmacology.

The association of unclean water with typhoid is rooted in history, but it has been supplanted in modern times by the demonstrable link of water pollution with hepatitis. The recent suggestion that cardiovascular disease may be correlated with the chemical content of local water has stimulated new research on the effects of sodium in water on cardiac patients restricted to low-salt diets. . . . Even in areas of clinical medicine considered far removed from environmental etiologies, the relationship may not be nearly so obscure as we might imagine. Cannot the environmental health scientist contribute to a fuller understanding of autoimmunity? Does not the occupational physician see in his daily practice new evidence which can be added to the research on carcinogenesis or even the quest for a biochemical basis of schizophrenia?

The essential mission of environmental health is to orchestrate the conflicting claims on man's health from many sources within his environment. Dr. James has mentioned some of them, notably air and water pollution, ionizing radiation, and pesticides.

Yet it is not enough to consider them singly, for all of these contaminants exert their effects synergistically on man. Acting in concert, they build on each other to form a total body burden in man and, collectively, represent the threat to man from his environment. . . . Dr. James has noted that we must learn to recognize those aspects of our environment which might be changed to reduce the impact of clinical disabilities while we do our best to rehabilitate the individual.

I heartily agree, but this condition will not come to pass by itself. Men and the governments that represent them must take the necessary first steps to recognize man in his totality and to organize their services on behalf of that concept. The range of these services is limitless. Environmental health traces man's ascent from the nucleic acids and stays with him throughout his life, assessing and attempting to cope with the hazards to his health arising from that environment.

. . . Environmental health is as old as Hippocrates and as new as tomorrow's smog, as small as an atom and as big as all outdoors, as simple as air and as complex as a nuclear reactor. If its past is inglorious and its present uncertain, its future as an exciting dimension in health protection is assured as long as man continues to tamper with the tools of his technology.

Program Notes

Reporting "Battered Children"

Under New York State's "battered child" law, medical and institutional personnel must report child injuries apparently caused by abuse or neglect either to a society for the prevention of cruelty to children or to the local county public welfare official. The law gives immunity from civil or criminal liability to any person making "in good faith" such a report of injury to a child under 16 years.

In not designating the police department as the place to report, the thinking was that police action is less likely to protect other children in a family or to guard the injured child from further harm. With an aim of prevention, rather than punishment, the New York law paves the way for help by a psychologist or psychiatrist caseworker, stated Dr. Dale E. Harro, director of the bureau of maternal and child health, New York State Department of Health.

Cigars or Pipes Not the Answer

The amount of smoke is a more important factor in development of lung cancer than the kind of smoke. Such is the conclusion of Dr. Katherine R. Boucot and Dr. David A. Cooper, investigators heading the Philadelphia Neoplasma Research Project.

A survey of 6,137 men aged 45 or older brought to light 142 cases of lung cancer, 76 of which were first visible on X-ray film during the period of study. Although cancer was found more frequently in the cigarette smokers, it was found to develop also in moderate or heavy smokers of cigars or pipes.

"We are amazed to note," said the investigators, "that smokers who inhale cigarettes continue to inhale when they switch to pipes or cigars. Therefore, we view with some anxiety the emphasis on cigarettes rather than on smoking per se."—*Clinical Notes on Respiratory Diseases*, Fall, 1963.

Licensing X-ray Technicians

A 1964 law empowers the New York State Health Department to license X-ray technicians and set standards for schools that train them. Under this law a seven-member board of examiners, composed of two radiologists, one general medical practitioner, two X-ray technicians, one health physician, and one hospital administrator, advises the health department.

Stroke Rehabilitation Success

Two-thirds of the 87 class 3 stroke patients in 3 Denver hospitals participating in a stroke rehabilitation program have been discharged to their homes, according to a 2-year progress report on the 3-year program. The rest went to nursing homes. Class 3 patients are those having catastrophic residual but potential for rehabilitation.

Two-thirds of those in class 4 (no potential for rehabilitation) were discharged to nursing homes.

These class 3 and 4 patients were among 399 admitted to the stroke program in Presbyterian, St. Luke's, and Porter Hospitals. Of patients neurologically assessed during the second year, 43 percent were categorized as class 3.

Countywide Health Departments

The 23d and 24th county health departments in upstate New York began operating January 1, 1965. The New York State Health Department has approved requests from their boards of supervisors for operation as countywide departments.

These are the 17th and 18th new county health departments in upstate New York since a 1946 revision of the Public Health Law increased State aid for such units. A full-time county department now receives 75 percent of its first $100,000 expenditures and 50 percent of further expenditures from the State.

Another county, Orleans, has also voted for a county health department if it can arrange with an adjacent county or counties to share three top officials—the health commissioner, senior public health engineer, and physiotherapist.

Radiation Protection in Kansas

A comprehensive set of radiation protection regulations went into effect in Kansas on January 1, 1965, after approval by the State board of health. By an act of the 1963 Kansas Legislature, the board was named as the agency responsible for State radiation control. Enabling legislation was included to permit Kansas to enter into an agreement with the Atomic Energy Commission.

After meeting certain criteria set forth by the AEC, Kansas signed a formal agreement with the commission on November 5, 1964.

Kentucky, New York, California, Mississippi, Texas, Arkansas, Florida, and North Carolina also have signed such agreements, which in general provide for the State to assume control of radioactive materials other than nuclear reactors and high-level waste disposal.

Checkups for Brooklyn Physicians

Hundreds of Brooklyn, N.Y., physicians underwent thorough physical examinations by their colleagues in December 1964 in a program sponsored by the Kings County Medical Society. Aims of the program were to protect the individual physician's health and give him an opportunity to demonstrate to the public the sincerity of his conviction that annual physical checkups are vital to health.

Items for this page: Health departments, health agencies, and others are invited to share their program successes with others by contributing items for brief mention on this page. Flag them for "Program Notes" and address as indicated in masthead.
