ENVIRONMENTAL HEALTH: PROGRAM PLANNING AND IMPLEMENTATION

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ABSTRACT

Environmental quality problems are interrelated and interdependent on developments and trends in personal health protection as well as social and economic considerations. A carefully planned environmental management program can help optimize a local or national health, social, and economic program, if it becomes an integral part of a total community improvement effort.

The economic and legislative foundation of a steadily increasing demand for environmental health services has been reviewed extensively over the past few years at conferences and symposia. Even if environmental science and technology had been standing still the very volumes of this mounting demand would compel us to find more efficient ways to meet it through a given supply of resources. But science and technology have not stood still and their vast growth require organization if research and development are to be translated into a comprehensive program of action.

While the close of 1971 saw pessimism as the dominant mood in assessing both the amount and rate of progress made toward improving environmental quality, there were significant developments which together set a basic framework for bringing about a better perception of solutions to environmental problems.

SIGNIFICANT DEVELOPMENTS

Allow me to briefly sketch these developments in fairly broad strokes, because they are relevant to the goals and objectives of the International Association of Milk, Food, and Environmental Sanitarians, and to the implementation of environmental management programs at all levels of government.

Attention given to problems of rural and urban communities has taken several approaches. The Rural Development Act of 1972 (P.L. 92-419) included a substantial effort to rebuild and revitalize the nonmetropolitan communities. The basic purpose of the Act is to provide an effective program to enable rural America to offer living conditions and employment opportunities adequate to impede the steady flow of rural Americans to our nation's large population centers. To assist rural areas in providing essential community facilities, the Act expands the existing loan programs for rural water, sewage, and solid waste disposal to include all other essential community facilities, such as firehouses and neighborhood centers.

In the field of water resources development, the Federal Water Pollution Control Act Amendments of 1972 represents a major investment in the improvement of water quality. These Amendments set as a national goal elimination of the discharge of all pollutants into receiving waters by 1985, and sets interim goals of providing for the protection of aquatic life and wildlife in and on water by 1983.

Recognizing the critical need to prevent and control air pollution, the U.S. Environmental Protection Agency has given notice of its intention to issue regulations setting up a mechanism for preventing significant deterioration of air quality in areas where air pollution levels currently are below the national ambient air quality standards.

In the field of consumer protection, the Food and Drug Administration (FDA) is implementing a 12 part program which is designed to provide the American consumer with specific and new information on the identity, quality, and nutritional value of a wide variety of general and special foods available in the Nation's Marketplace.

And finally, the Nation's fiscal system began in a significant way to acquire elements of balance and flexibility, through the enactment of revenue sharing. One of the major features of revenue sharing is the wide latitude it gives to State and local government officials in spending decisions. It provides flexibility to maximize the discretion of State and local officials in setting priorities with a minimum of Federal regulations and red tape.

But these developments and several others in the economic, social and environmental health fields have confronted public service programs as never before with substantive, and hard-hitting questions that cover a full spectrum of resource management in the

public sector. These questions inevitably focus on effective planning and implementation of programs and services, and deal with such issues as: What are the major goals and objectives? What are the priorities? How are they determined? With what rationale are public funds allocated among these? How do you define success so that officials know what they are accountable for and more importantly, what evidence is needed to support claims of effective delivery? Questions such as these clearly suggest the need for a rational and orderly process for planning and the implementation of specific environmental control programs.

This need is clearly evident at the local level, that level of government which has been grappling with environmental health issues long before they rose to their present proportion of State and nation-wide significance. This is as it should be because the local jurisdictions are closest geographically and jurisdictionally to many of the environmental problems impinging on the health and welfare of their citizens.

**Considerations of Planning**

As one who has been associated with urban environmental health programs for the past 15 years, I want to share with you some fundamental concerns and issues which have evolved from my own efforts to develop a rational and orderly process for urban environmental health services. At the outset I must confess my complete agreement with Mark Holli's assertion in 1952 that "The need for a healthful environment is common to all people; it cuts across boundaries of occupation, race, class, and politics. If it differs from neighborhood to neighborhood, and from region to region, it differs not in fundamentals but only in complexity."

This statement, in essence, is the foundation for development of goals and objectives for public efforts of environmental control. The delineation and clarification of these goals are continuing tasks for the environmental health administration because social and political purposes change and conflict, and so do the resources and the techniques available to achieve them.

In the past, public health and environmental health programs have been favored in competition for local funds. Few city councilmen or aldermen would question line-item appropriations for food protection, water quality surveillance, or rat control. This is no longer true because these consumer protection services are generating controversy and resources allocated for them are being carefully examined by the legislative branch of local governments. Today, defending a request for an increased budget can be a frustrating experience if the request is unsubstantiated by the kinds of knowledge obtainable through a formalized program plan and a sound mechanism for evaluating outputs of the program or service.

**Food protection**

Budgets for food protection can no longer be justified on the basis of the number of inspections per year because inspections are merely efforts and food protection activities are designed to accomplish the protection of food against infection, insure wholesomeness of food, and meet consumer expectations. Inspections alone will not accomplish these objectives. The program requires the necessary supporting services and facilities including an effective educational program, recordkeeping system, laboratory, and competent legal services.

Often we assume that an environmental health program or a policy is operating within a managed environment. In setting up and implementing a program we expect certain specific events to occur in very much the same manner as a work order initiates production in a factory. This does not really happen so easily, as can be verified by our experience in code enforcement.

There is a tremendous difference between the part of the world we, in regulatory agencies, can manage and the chaos of the uncontrolled world outside with which we must contend. This central fact makes the behavioral responses of those to whom the programs are directed critically important to its success or failure.

Turning again to food protection as an example, the District of Columbia is in the process of amending its General Food Regulations. While the actual task seemed fairly easy, our concern was not so much the legal, technical, and scientific aspects of the regulation but the reaction of the Washington food industry and the consumer groups. We now expect good results in the enactment and implementation of these regulations, not because of how strong or how weak they are, but because so much attention has been paid to the problem and the people involved. These so called exogenous forces come into play not only in the way people behave but also by the very fact that we live in a dynamic world where conditions and attitudes are undergoing constant changes. The inevitability of social and technological change in our society is another factor adding to the importance of the uncontrollability issue in planning and implementation of environmental health programs.

**Air pollution**

To use in Newark, N. J. and Washington, D. C.
today the same methods of air pollution control that were used in 1940 or 1950 is obviously not feasible. In both cities we experienced substantial increases in the levels of major pollutants especially from automobiles. This is exogenous, people are behaving differently now than they did 20 or 30 years ago, when it may have been easier to encourage commuters to leave their cars at home and use public transportation.

Perhaps we need to think more about probabilities and recognize that in many environmental health program and policy areas we cannot achieve 100% performance. In some programs a 30-40% success ratio may be a good justifiable result. We seldom face this problem in the beginning, when goals and objectives of programs are being formulated. But as Abel Wolman so aptly states: “The real difficulty in quick and easy solutions to problems generated in the environment rest forever in the fact that the issues are rarely if ever black or white.”

Housing

No where is this better illustrated than in local efforts to improve housing quality through codes administration. Those of us who have had the day-to-day responsibility for management and control of the residential environment know very well that we cannot separate the social and economic problems of urban dwellers from housing code enforcement.

Each time we intensify housing inspection and housing code enforcement we must be prepared to deal with questions of evictions and abandonment and related tenant-landlord issues. Granted the slum lordism should be combated with all means at hand but our experience has demonstrated that it is not only distracting but fruitless to focus solely on slum lordism which is more consequence and symptom than it is cause.

The economic and social problems of tenants in these situations may make it extremely difficult to motivate changes in attitudes, habits, and behavior for successful housing maintenance and upkeep. In this setting, a health educator, or social worker with training and experience in the behavioral sciences is far more productive than a graduate engineer, sanitarian, or environmentalist whose background and academic training is often limited to the physical and biological sciences. While there are scores of families that have resisted the effects of substandard neighborhoods, there are many more who lack the personal resources and degree of social commitment to accomplish this, and no level of code enforcement can substantially change the quality of their residential environment.

Developing Alternatives

Another important consideration in planning and implementation of environmental programs is development of alternatives, different ways of solving this problem or achieving that objective. This task is obviously difficult since it demands creativity. In essence we are trying to get many options on the table to start; then in the next step go back and filter out those that are really not feasible. But unless such alternatives are considered, programs will not stay attuned to changing objectives and priorities, nor will there be a proper balance between cost and effectiveness.

For example can a self-inspection program for environmental hygiene in medical care facilities achieve the same results as a routine inspection conducted by a regulatory agency? In water quality control, is it necessary to duplicate the bacteriological analysis already conducted by the water quality laboratory of the treatment plant? To what extent can we accept the inspections of other regulatory agencies for products (milk or food) originating in their jurisdiction or must we continue to send inspectors across state or local boundaries to ensure the safety of products which are shipped into our own communities?

These are questions which must be considered in comparing alternatives. We must identify explicit “trade-offs,” expressing what we have to give up in one alternative to get desirable outcomes from some other alternatives.

In addition we must be very explicit about the constraints we believe to be imposed by a specific environmental health problem. Constraints could be of numerous kinds—technological, legal, or fiscal. For example, meeting the standards imposed by the Clean Air Act of 1970 has several constraints, which have been clearly identified. But constraints are necessarily immutable. Laws can be changed, new revenue sources may be discovered and technological breakthrough may be made. So, what must be considered a constraint today need not preclude an option in the months and years ahead. Certainly the automobile industry is coming to realize this as it attempts to produce a “cleaner” car, through a reduction in vehicle emissions, and comply with the ambient air quality standards.

One of the most annoying issues in the planning and implementation of environmental health services is setting priorities. The difficulties here are both political and practical. Resources are rarely sufficient to do all we like to do so we must set realistic priorities. Will we concentrate manpower and money in air pollution control? In institutional sanitation of jails and prisons? In radiological health,
In food protection? In weed lot cleaning? In home injury control? or In rat control and neighborhoods?

As any administrator soon learns several factors help to determine priorities. For example, few local health agencies gave sufficient attention to the problem of rat bites and their sequelae before December 1967. However, in that year rat control became a priority for 26 urban centers in the United States. Why? Because Congress authorized expending Federal funds to reduce rat population in urban areas. Public Law 90-174 the Partnership for Health Amendments of 1967 authorized an increase in Federal funds that may be appropriated for grants under earlier health legislation. Prevention and control of childhood lead poisoning, the control of air pollution, and several other environmental control programs have shifted to the top of the "priority list" because of the availability of funds to carry out these public health programs.

**Conclusion**

Finally, I do not want to convey the impression that because we are constantly aware of the issues, which I have outlined, we are not apt to run headlong into a crisis. Each of us in state and local environmental health services have experienced management-by-crisis, and we have responded very well. But continuously operating in a crisis management environment often motivates us to toss out plans and policies. This is particularly true if plans and policies are not well developed in the first place.

Thus, it is imperative that we develop the best mechanism to determine plans, policies and procedures for providing environmental health services, put them into effect, defend them, and carry them out.

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**NEW BOOK ON ENVIRONMENTAL HEALTH AND SAFETY**

Herman Koren, Associate Professor, Health and Safety with specialization in Environmental Health, Department of Health and Safety, Indiana State University, Terre Haute, Indiana, has developed a book entitled Environmental Health and Safety which includes the latest views on institutional health, safety, and infection control. It is the first complete source where the student or administrator can find a detailed overview of all areas of this emerging public health specialty. Numerous programs and methods designed to aid in the solution of health and safety problems are outlined, many of which will prove especially useful to those involved in enforcing or complying with the Occupational Safety and Health Act of 1972.

The latest techniques in microbiology, air sampling, sterilization, detergent and disinfectant evaluation are covered by Dr. Koren. Also included is information that will prove fruitful for those who wish to develop an institutional occupational health program. Each contribution is oriented toward giving the reader a more comprehensive view of practical, workable programs to achieve maximum effectiveness in his exercise of environmental infection control and safety measure.

Students of nursing, community and public health, institutional management, hospital administration, nutrition, and medicine will find this text important and relevant to their field of study. Dr. Koren has also included much material of interest and value for administrators or superintendents who wish the latest information on the mechanics of environmental health and safety. Practicing health and safety specialists can find accurate, comprehensive, practical, and concise guidelines for effective action.

Dr. Koren has been Chief of Environmental Health and Safety, Philadelphia General Hospital; Associate, Department of Preventive Medicine, University of Pennsylvania Medical School, and Chairman, Committee on Hospital Sanitation, National Environmental Health Association. He is a Founder Diplomate, American Intersociety Academy for Certification of Sanitarians (one of 320 environmentalists elected to the academy in the world), and a Member of the Editorial Board of both the Journal of Environmental Health and the Journal of Milk and Food Technology.

Dr. Koren has developed a comprehensive undergraduate Environmental Health Program leading to a B.S. degree in Environmental Health Science. In the first six years the program has grown from 1 to 101 majors and has already graduated 77 students. He developed the internship concept and has placed 167 interns in paid internships in 9 states and Washington, D. C.