

AMERICAN JOURNAL OF PUBLIC HEALTH

Who Will Manage the Environment?

Interest in the quality of our environment and related public health implications has never been more intense. Political leaders, whether liberal, moderate, or conservative, know that they must at least profess to provide leadership in a wide variety of environmental health issues.

The United States is spending billions of dollars to manage and clean up our environment, but there are not nearly enough well qualified persons to implement these programs. This personnel shortage is serious. It could very well lead to a worsening of the present crisis in spite of the money being spent.

A paper in this issue of the Journal on the federal environmental health workforce' describes some of the environmental health personnel issues at the federal level. Similar conditions prevail at other levels of government and in the private sector.

It is no longer a question of *whether* our environment will be managed, but rather *how* and by *whom*. The "by whom" is at least as important as the "how" since the priorities and methodologies of the "how" are largely determined by the nature and quality of the environmental health workforce.

The public health community has not perceived the environmental health workforce as a priority or as their responsibility for the past 20 years. This abrogation of public health leadership has contributed to the widespread deficits of properly trained environmental health personnel. Environmental activists without public health training are exerting greater influence on environmental health policies and priorities than the public health community. Individuals with little knowledge of epidemiology, biostatistics, toxicology, and risk assessment are filling key environmental agency positions which require such knowledge.

The Congressional Office of Technology Assessment concluded that a shortage of experienced and technical experts may explain the current lack of quality performance and may cause a major bottleneck in an expanded Superfund program.

The OTA report also suggested that current educational programs may not be able to prepare sufficient numbers of some professionals.

A recent report by the Health and Human Services Department, Bureau of Health Professions concluded that there are shortages of environmental health personnel in nearly every category, and that only 11 percent have formal education in public health.³ It estimated a need for 120,000 more professionals in order to effectively address the various environmental health problems identified to date.

To a significant degree, schools of public health have also abrogated their responsibility to educate environmental health practitioners. Most of today's environmental health practitioners are being trained in accredited environmental health programs outside schools of public health.

The recent Institute of Medicine Report on *The Future of Public Health* states, "many observers feel that some schools have become somewhat isolated from public health practice and therefore no longer place a sufficiently high value on the training of professionals to work in health agencies."³ The report recommends that "schools of public health should establish firm practice links with state and/or local public health agencies . . .-3

Environmental health programs - in whatever agency they are institutionalized-share public health goals. The programs and administering agencies would not exist except for the public health rationale. An "EPA" or an "OSHA" is a health agency as much as a state health department. We should make every effort to ensure that these primary environmental and occupational health agencies are comprehensive in programmatic coverage, staffed by appropriate professionals, and programmed on the basis of sound epidemiology, toxicology, and risk assessment information.

The public health paradigm demands that education for environmental health and the design of agency programs be geared to primary prevention rather than the current practice of secondary prevention. Most environmental health programs are curative in nature, reacting to decisions made earlier by other governmental and private sector interests. Appropriately trained environmental health professionals need to become involved in a preventive mode at a time when initial decisions are being made regarding land use, resource utilization, energy alternatives,

transportation methodologies, population policies, economic development, and public education. This means that public health trained personnel should seek leadership roles in a wide variety of settings, rather than only in health departments.

Except for a few leaders, environmental health inputs are noticeably absent in the current debates over such global issues as ozone depletion, global warming, over-population, global toxification, desertification, and deforestation, all of which pose threats to human health and world ecology. Environmental health science leaders need to be prepared to be constructively involved in the planning to counter such global threats to our delicate ecological system.

Many of our nation's environmental health ills can be traced to the lack of goal-oriented, interdisciplinarily trained environmental health science practitioners. Other professionals in environmental health—such as geologists, chemists, attorneys, engineers, physicists, and biologists— are essential, but are not trained in the basic public health sciences which have a health goal and orientation.

While the private sector plays an important role, protection of the environment is primarily the responsibility of various levels of government. Most environmental health activities at the state and local levels are matters of national policy, mandated by federal requirements. Therefore, solving the environmental health workforce problems should be a governmental priority. Experts at a recent Public Health Service Bureau of Health Professions workshop stated that "government has failed to provide the leadership . . . for developing the supply of properly trained personnel that is essential for effective and comprehensive program management."

Appropriately trained environmental health personnel will not guarantee resolution of all our environmental health problems, but, without them, the task is impossible.

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