

THE HRSA REPORTS: AN AROMA OF ISSUES AND POSSIBILITIES

by

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At least fifteen projects funded by the Public Health Professions Branch of the Health Resources and Services Administration have dealt with issues of education for the field of environmental health and protection. Information and recommendations contained in the reports have had a significant impact on education for environmental health and protection. I have been privileged to have participated in a number of these projects, and have had access to all the reports. It would be impossible to address each of the recommendations contained in the reports, so I have been requested to offer an aroma of salient issues and possibilities identified in the various HRSA reports as well as the "Report on the Future of Environmental Health."

ISSUE: STANDARD DEFINITIONS.

The need to define terms and use standard terminology has been among the threads woven throughout the reports. I will itemize a few of the relevant definitions that will provide guidance for discussions throughout this meeting. Definitions are especially important inasmuch as we are fortunate to have a significant spectrum of disciplines and professions participating in this conference. In the absence of standard definitions, we will utilize valuable time re-inventing the wheel. Many of the definitions we will use have been peer reviewed by some 75 representatives of such agencies and groups as NACCHO, NCLEHA, APHA, NEHA, ASTHO, HRSA, CDC, NCEH, ATSDR, EPA, various state and local health agencies, and several accredited environmental health programs and schools of public health.

Using a standard definition for environmental health and protection is essential. **A product cannot be marketed if we don't know whether we're marketing a buggy whip or a rocket ship.** The definition for environmental health and protection was developed during the peer review process preceding publication of the "Report on the Future of Environmental Health." This definition will provide a framework for our discussions and the ultimate success of this conference.

Environmental health and protection is the art and science of protecting against environmental factors that may adversely impact human health or the ecological balances essential to long-term human health and environmental quality. Such factors include, but are not limited to: air, food and water contaminants; radiation; toxic chemicals; wastes; disease vectors; safety hazards; and habitat alterations.

ISSUE: SCOPE OF THE FIELD OF PRACTICE.

We are involved in a complex, multifaceted field. Environmental health and protection responsibilities are assigned to numerous agencies at the federal, state and local levels. At the federal level, such agencies as the Environmental Protection Agency, the National Center for Environmental Health, the Agency for Toxic Substances and Disease Registry, the National

Institute of Environmental Health Sciences, the Food and Drug Administration, the National Institute for Occupational Health and Safety, the Interior Department, the Agriculture Department, the Transportation Department, the Department of Energy, the Department of Defense, the Nuclear Regulatory Commission, the Coast Guard, the Occupational Health and Safety Administration, the Housing and Urban Development Department are among those delivering important environmental health and protection services.

At the state levels, some 90 to 95% of environmental health and protection activities are administered by agencies other than state health departments.

And at the local level, increasing environmental health and protection responsibilities are being assigned to agencies other than local health departments.

It is important that students be made aware of the opportunities that await them in all such agencies, not solely in health departments. We must expand students' horizons and potentials by imparting a broad vision of the spectrum of career possibilities.

ISSUE: DISCIPLINES AND PROFESSIONS INVOLVED.

Contrary to conventional wisdom, the field of environmental health and protection is not a profession, and is not a discipline. The field of environmental health and protection is profoundly multidisciplinary as well as interdisciplinary. Environmental health and protection is an effort engaged in by a varied assortment of disciplines and professions within a broad array of organizations. Most environmental health and protection practitioners may be classified as environmental health and protection professionals, or as professionals in environmental health and protection.

Environmental health and protection professionals are those who have been adequately educated in the various environmental health and protection technical (programmatic) components, as well as in epidemiology, biostatistics, toxicology, management, public policy, risk assessment and reduction, risk communication, environmental law, social dynamics and environmental economics.

Professionals in environmental health and protection are other essential personnel such as chemists, geologists, biologists, meteorologists, physicists, physicians, economists, engineers, attorneys, planners, epidemiologists, social scientists, public administrators and planners.

Both environmental health and protection professionals and professionals in environmental health and protection are essential to the success of a comprehensive environmental health and protection program. Few environmental health professionals are utilized by agencies other than health departments. Even in health departments most environmental health and protection personnel are professionals in environmental health rather than environmental health professionals.

ISSUE: CREDENTIALING.

Credentialing has been discussed in many of the HRSA reports, so it is apropos to define credentialing terms.

Credentialing is the formal recognition of professional or technical competence. There are two distinct means of credentialing: 1) individual credentialing, consisting of certification, registration, or licensure; and 2) institutional accreditation of education and training programs, colleges and universities

Certification is the recognition granted by a non-governmental agency or association to environmental health and protection personnel who have met specific requirements.

Certification is granted by such groups as the American Academy of Sanitarians, the American Industrial Hygiene Association, and the American Academy of Environmental Engineers. The field of environmental health and protection requires such a broad and varied spectrum of disciplines and professions that certification of all those involved within the field is not feasible. However, certification of specific specialists within the field may be an aid to prospective employers, and may offer a competency assurance to the public.

Registration is the acknowledgment by a governmental body that an individual possesses a specific set of qualifications.

Given the fact that the field of environmental health and protection necessitates the competencies of scores of diverse disciplines and professions, registration of all such personnel is not possible. Some personnel with specific job titles, such as sanitarians, are registered in accordance with varying standards in many states. Most such statutes provide for voluntary rather than mandatory registration. Some view sanitarian registration acts as measures designed to protect and promote the interests of specified groups rather than requirements designed to protect the public from unprofessional practice.

Licensure is the process by which a government agency grants permissions to an individual to engage in a given occupation upon finding that the applicant has attained the minimal level of competence necessary to ensure that public health, safety and welfare will be protected.

With the exception of engineers, attorneys, and physicians practicing in the field of environmental health and protection, most environmental health and protection personnel are not required to be licensed.

Accreditation is the acknowledgment that an educational institution or program maintains standards of education that qualify graduates for admission to higher or specialized institutions, or for the field of practice.

Examples of accrediting agencies include: the National Environmental Health Science and Protection Accreditation Council that accredits both graduate and undergraduate programs; the Council on Education for Public Health that accredits schools of public health, community medicine/preventive medicine programs, and health education programs; and the Related Accrediting Commission of the Accrediting Board for Engineering and Technology that accredits Industrial Hygiene programs.

Properly designed credentialing methodologies have the capacity to elevate the credibility and competence of specific components of the environmental health and protection workforce. However, credentialing methodologies should be individually evaluated to ensure that they are actually improving the quality of the workforce and protecting the environment and the health of

the public, rather than being self-serving. **The ultimate credential is public support and peer recognition earned by doing an outstanding job.**

ISSUE: MAGNITUDE AND SOCIETAL IMPORTANCE.

Academic environmental health and protection faculty, students and practitioners must realize the magnitude and importance of their endeavors.

- **Environmental health and protection is a high priority issue in our society. It is expected and demanded by the public, the media and our political leaders, and is widely considered to be an entitlement.**
- **Environmental health and protection is the largest single component of the field of public health in terms of numbers of personnel and expenditures.**
- **Environmental health and protection expenditures and numbers of personnel account for roughly 50% of the field of public health.**
- **At the state level, 90 to 95% of environmental health and protection activities are assigned to agencies other than health departments. There appears to be a similar trend at the local level.**

ISSUE: EDUCATION FOR LEADERSHIP, AS WELL AS MANAGING RISK.

The foregoing facts regarding the magnitude and importance of the field of environmental health and protection provide both challenges and opportunities. Environmental health and protection programs do an excellent job of providing skilled undergraduate personnel for the workforce. The field of practice also requires personnel for policy and top management roles in the complex spectrum of agencies having environmental health and protection responsibilities. Graduate level practitioners are more likely to achieve such leadership roles. The workforce requires a spectrum of personnel ranging from sub-baccalaureate surveillance and inspectional personnel through masters and doctoral levels. Unless such personnel are made available by our nation's academic environmental health and protection programs, most leadership positions will continue to be filled by individuals possessing other graduate academic credentials. This leadership and policy niche is no longer being adequately filled by schools of public health. Schools of public health have been gravitating away from developing environmental health and protection practitioners as they follow the money trail toward emphasizing research and health care rather than public health practice. **These changes provide an opportunity and a challenge for academic environmental health programs.** Students aspiring to leadership roles must be inculcated with skills in management, public policy, planning, political science, public finance, organizational behavior, public relations, and marketing. Environmental health professionals have a solid record of achievement in academia as well as top leadership roles in the field of practice. **The mantle of leadership falls to those who exhibit the necessary knowledge, skill, ability, and vision coupled with a strong desire.**

ISSUE: CORE COMPETENCIES.

Various HRSA Reports and the "Report on the Future of Environmental Health are replete with discussions regarding educational competencies. Each group assembled for the various projects listed varying competencies for practice. This variation is understandable and even desirable because:

1. A cookie-cutter approach is certainly inappropriate and stifling,
2. The field of practice is constantly changing,

3. Competencies may vary geographically,
4. The market focus may vary for different academic programs, and
5. Creativity is desirable.

Despite the foregoing, **core competencies requirements are basically universal** and should be inculcated in all students. Core competencies were discussed in depth at the time the National Environmental Health Science and Protection accreditation requirements were last revised, but that was some seven or eight years ago. At least four HRSA reports contain useful core competency recommendations. (These are the *Workshop on Preparation for Practice in Environmental Health*, the report *Educating Environmental Health Science and Protection Professionals*, the report of the HRSA-CDC sponsored *Public Health Faculty/Agency Forum*, and the draft of *The Crossroads Colloquium: An Examination of the Educational Needs for Environmental Health and Protection*). The latter report, developed by Nadia Shalauta and Tom Burke of the Johns Hopkins School of Public Health, and myself, is based on recommendations made last year at a conference designed to specifically discuss environmental health workforce needs in state level environmental health and protection agencies.

ISSUE: THE VALUE OF INTERNSHIPS.

Internships should be an educational requirement for all students not having significant prior experience in the field of environmental health and protection. Students frequently avow that internships have been among the most important components of their education. Additionally, internships are often an important step in gaining a job following graduation. Intern programs should have:

- Strong faculty and institutional support.
- Faculty allocated the time to devote to agency contacts, student placement, student counseling, and student evaluation.
- Responsible faculty who have had significant practitioner experience.
- Frequent faculty involvement with the interns and the agencies providing the internships.
- Opportunities for placement in a wide variety of private and public environmental health and protection agencies at the local, state and federal levels.

ISSUE: CONTINUING EDUCATION.

Academicians as well as practitioners must support relevant continuing education. Formal education in environmental health was once considered to be a vaccine that would prevent ignorance and ineffectiveness later on one's career. However, such formal education is inadequate by itself, and does not provide personnel all the evolving knowledge and skills required.

Continuing education is an essential component of both education and practice. Personnel learn more rapidly as they encounter specific problems in the field of practice. Distance-based training and education have an outstanding potential to significantly enhance practitioner skills and knowledge. Continuing education must be timely, relevant, convenient, economical, and strongly supported by managers in the field of practice.

ISSUE: THE VALUE OF ORGANIZATION.

Academic environmental health programs must develop an organization to achieve common goals. These would include:

- **Obtaining education, training, and demonstration funds from such agencies as HRSA, CDC and EPA as well as the private sector.**
- **Responding to inquiries from new or potential academic environmental health and protection programs.**
- **Marketing the value of accreditation and association to programs that might wish to apply for accreditation.**
- **Mutual aid in improving program quality.**
- **Insuring coordination between accredited programs and the National Environmental Health and Protection Accreditation Council, and**
- **Promoting utilization of graduates of accredited programs by all the various agencies having environmental health and protection responsibilities.**

Organizational development will be the most important outcome of this conference. Earlier this month, at a meeting entitled the *National Leadership Forum on Environmental Education for Health Care Professionals*, Neil Sampson, Associate Administrator of the Health Services and Resources Administration, emphasized that academic environmental health programs must develop an organization in order to achieve such common goals as I have outlined.

ISSUE: A GAME PLAN AND IDENTITY.

Academic environmental health programs must develop a vigorous game plan and purposeful identity. Such a game plan and identity will result in a clear, crisp, marketable vision of academic environmental health programs and their important role in incubating environmental health professionals for the enhancement of health status and the quality of our environment.