

***TWO ROADS DIVERGED ----,  
AND THAT HAS MADE ALL THE DIFFERENCE***

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Relevant education for environmental health practitioners continues to be a vexatious challenge. Today, I have been requested to offer a few observations, and then suggest some questions to be considered by academicians, practitioners, public policy makers and business and industry leaders.

To paraphrase Robert Frost, **“Two roads diverged in a wood,”** and schools of public health followed the money trail that lead toward health care and basic science research rather than the field of environmental health practice, **“and that has made all the difference.”**

Schools of public health have long and proud histories. Schools were developed to educate practitioners who had the potential to lead. The emergence of schools of public health was a significant factor in the development of sound environmental health programs. Schools of public health had the unique capacity to inculcate competencies in the environmental health sciences, as well as develop an environmental health philosophy and vision. Due to efforts of schools of public health, environmental health practitioners contributed significantly to:

- improving environmental health activities,
- improving the health status of the public, and
- improving the quality of our environment.

As intended, graduates earned practitioner leadership roles at all levels of the public and private sectors.

When I attended a school of public health in the mid-fifties, all of my professors including the Dean, had enviable reputations and histories of achievement as practitioners prior to appointment to the hallowed halls of academia. All taught from bases of practice as well as theory. To my knowledge, none of my professors was deeply involved in research. They all served as role models and mentors for their students, and they understood and glamorized the potentials of the field of practice. Invariably, weekly Friday afternoon guest lecturers were distinguished federal, state and local practitioners. I still recall, and often quote, some of the pearls of wisdom offered by those practitioner “giants.”

- Today, in the Year 2000, environmental health is a high priority issue in our society. It is demanded by the public, the media and political leaders, and is widely considered to be an entitlement.

- Today, environmental health is a complex, multifaceted, multidisciplinary, and interdisciplinary field of endeavor engaged in by a wide spectrum of disciplines, professions and others within a **bounteous array** of public and private organizations.
- Today, 90 to 95% of environmental health activities are assigned to agencies **other than health departments** at the state level,, and there is a similar trend at the local level.
- Today, as differed from earlier times, I am not aware of a single director of a lead state environmental health agency who could be classified as an environmental health professional.
- Today, expenditures and numbers of personnel for environmental health account for roughly half of the field of public health practice and is, therefore, the **largest single component of the field of public health**. Few public health leaders recognize this fact because the widely referenced annual reports of the Public Health Foundation do not include the expenditures of the 90 to 95% of environmental health activities **not** administered by health departments. This under-representation of environmental health expenditures continues to make environmental health appear to be but a minor player in the field of public health.

Most environmental health practitioners may be classified as **environmental health professionals**, or as **professionals in environmental health** such as geologists, biological scientists, chemists, physicians, engineers and attorneys, among others. Probably less than 5% of the workforce are environmental health professionals. Few **environmental health professionals** are utilized by agencies other than health departments. And even in health departments, most environmental health practitioners are **professionals in environmental health** rather than environmental health professionals. **Both categories are essential components of any comprehensive effort.** The mantle of leadership falls to those who earn it.

All practitioners, however, would benefit from continuing education in such basic environmental health competencies as epidemiology, toxicology, risk assessment, risk communication, risk management, as well as an inculcation of an environmental health vision and philosophy. The philosophy must include an understanding of the scope, the values, the goals and the marvelous potential of environmental health practice. Whatever disciplines and professions **are** involved, all must be competent to do a public health job.

I have enjoyed a rewarding career in public and environmental health, commencing as an entrance grade sanitarian and retiring as a state Cabinet Secretary for Health and Environment. But more significant than having titles; developing agencies, laws, ordinances; holding offices and receiving recognition, I am most proud of my successes in mentoring scores of professionals who went on to more prestigious roles. By placing a high value on competency, I encouraged scores of personnel to earn graduate degrees in public or environmental health. At one time, I was in the enviable position of having

individuals with such graduate credentials as Director of the State Environmental Agency, Director of the State Public Health Agency, Director of the State Scientific Laboratory System, and as State Epidemiologist. Importantly, all had started at the local level. In the state environmental agency, the Director as well as every division director and district manager had an MPH or closely related graduate environmental health degree. I also developed and gained passage of a state law requiring that a director of a local health department have an MPH. That was at a time when schools of public health produced professionals for the **field** of practice. For me, those were days of Camelot.

Most of my personnel went on to greener pastures. Two of these long ago protégés recently called me for lunch. I want to tell you a little about these two as examples of the potential of individuals having the necessary competencies for the **field** of practice.

I hired both right out of college as entrance grade sanitarians when I was Director of the Albuquerque Health Department. I admonished that everyone should be re-potted every few years so as not to become root bound. I encouraged both to earn their MPHs in environmental health. I recruited both back to New Mexico while I was Director of the New Mexico Environmental Improvement Agency. One became Director of Field Operations, one became Director of OSHA. At later dates, each became Director of the Environmental Improvement Agency. A new Governor eventually left both with the need to seek more rewarding responsibilities --- the potential price of leadership ventures.

One subsequently became Santa Fe City Manager, Vice President of the University of Arizona, Deputy Assistant Secretary of Defense for Environment, a key environmental health position with BDM International, Director of Environmental Management for Los Alamos National Laboratories, and was recently recruited to become Vice President for Material Stewardship for Kaiser-Hill -- the contractor responsible for cleaning up Rocky Flats, because Tom Baca has the competency and confidence to get the job done.

The other was subsequently appointed Regional EPA Director of Environmental Services, resigned to become Director of Environmental Quality for the State of Arizona, a new Governor intervened, and Russell Rhodes is now Director of Environmental Affairs for Public Service Company of New Mexico.

Neither Tom Baca or Russell Rhoades could ever resist a challenge.

Both practitioners continue to **achieve** and enjoy their careers utilizing competencies acquired while earning an MPH during the days when schools of public health placed a high priority on educating practitioners and emphasizing environmental health.

I could cite numerous similar examples, but I have mentioned Tom Baca and Russell Rhoades to emphasize the benefits of competency to practice in the **field** of environmental health, and to stress the importance of mentoring as a gratifying leadership responsibility.

Now, for a few questions for you to consider individually:

- Do schools of public health still function to “enhance health in human **populations** through **organized community effort**” in accordance with the goal of the agency that accredits schools of public health? Or do most graduates serve in health care and research settings rather than as practitioners?
- Do schools recognize that **public health is not health care**, that public health and health care are in eternal competition for the budget dollar, and that increased emphasis on health care by schools has not served the needs of the field of environmental health practice?
- Has the emphasis on health care and basic science research created by the **choice of money trails** diluted and redirected the nature of curricula in schools of public health?
- Are schools “isolated from public health practice” as alleged by the IOM Report on the Future of Public Health?
- Are schools generating personnel who are competent, willing and available to vie for top level **managerial, policy and other leadership positions** in the varied spectrum of roles in the field of environmental health practice?
- Why are institutions such as the Kennedy School of Government and law schools, rather than schools of public health, preparing students for environmental health policy and leadership roles?
- Do schools of public health still have justifiable reputations as **prime incubators** of environmental health practitioners?
- Can many questionable environmental health priorities and policies be attributed to the shortage of practitioners having competencies in environmental health?
- Do schools offer courses in:
  - environmental health finance as well as in health care finance,
  - environmental health law as well as in health care law,
  - environmental health policy as well as in health care policy, and
  - environmental health administration as well as in health care administration?
- Have schools of public health constructed and consistently traveled bridges reaching various **public and private** environmental health practitioner interests such as:
  - federal, state and local environmental agencies,
  - planning agencies,
  - conservation groups,
  - agriculture,

- energy,
  - defense,
  - public works,
  - transportation,
  - resource development and utilization,
  - economic development
  - professional and trade groups, and
  - environmental health advocacy groups?
- Have schools incorporated **relevant educational competencies** for environmental health practice such as those recommended by the *Report of the Faculty/Agency Forum*, the HRSA Report *Blueprint for Education and Training*, and the HRSA publication *Educating Environmental Health Science and Protection Professionals*?
  - Do schools utilize the talents of academically qualified environmental health practitioners both as faculty and as guest lecturers to enhance student opportunities to develop practitioners competencies, and to serve as **mentors and role models** for the field of practice?
  - Do schools assure internships in the field of environmental health practice?
  - Do schools **seek the counsel and cooperation** of environmental health practitioners to identify and fund applied research needs?
  - Do schools and practitioners **collaborate** to actively seek financial support for educating environmental health practitioners?
  - Do schools and practitioners collaborate to develop financial support for relevant environmental health continuing and distance education?
  - Do school faculty **believe** there is a paucity of environmental health competencies in the practitioner workforce?
  - Are schools of public health **concerned** that few environmental health practitioners are being developed by schools of public health?

And for the final question, **Do you believe there is a problem?**

If you **do not** believe there is a problem, practitioners lacking environmental health competencies will continue to be responsible for most environmental health programs at all levels of the public and private sectors.

If you **do** believe there is a problem, **a successful effort to construct an additional money trail** designed to **regain** leadership for educating environmental health

practitioners will require a diligent, coordinated effort by academicians, policy makers, professional and trade groups, industry, and public and private practitioners.

Unlike cold fusion, you will not get something worthwhile with little or no effort.

If you **do** choose to construct an **additional** money trail, Robert Frost might add approvingly, “**That too, will make all the difference!**”