PUBLIC HEALTH: A BLURRED VISION

Prepared for presentation April 6, 1994
University of South Carolina School of Public Health
by
Larry J. Gordon
Visiting Professor of Public Administration
University of New Mexico

My presentation today is from the viewpoint of a practitioner, as I have spent most of my career working as a public health official striving to prevent or solve public health problems. However, my involvement in academia for the past six years has allowed me the freedom to think, research, speak, and write without the ideological influence of some Governor or Mayor whom I was serving.

Properly prioritized and targeted disease prevention, health promotion, and environmental health and protection programs --- all preventive in nature, --- will not only yield improved health status and longevity; a brighter future for our families; less social problems; less unwanted pregnancies and children; less problems for our criminal and corrections systems; enhanced educational achievement; a more liveable environment; a better quality of life for all; and in many cases, will lead to lowered health care costs. All of us in public health should know this, and be practicing what we preach. But do we really?

Do we really agree on what public health is? Are we devoting our efforts and careers to good public health practice? I suggest that this may not always be the case.

For example: There is no common definition of public health. I define public health as the art and science of preventing disease and disability, prolonging life, promoting health and efficiency of populations, and insuring a healthful environment through
organized community effort. However, a great many of my highly respected peers do not agree with that definition. Many appear to mistake the organizational responsibilities of the U.S. Public Health Service, or a public health association, or a state health department, or a local health department, or a school of public health with the field of public health. If we don't know what we are selling how can it be marketed? Are we selling a horse, a buggy, a Cadillac, a rocket ship, or a disorganized bundle of spare parts for something we don't understand? Some assert that there is strength in the diversity of public health, but there is also confusion, competitive priorities, a lack of unity and focus, and lack of understanding by personnel involved in public health as well as by our political leaders.

Many appear to confuse public health with anything related to health, including health care. Health care, however, is the diagnosis, treatment, or rehabilitation of a patient under care and is practiced on a one-on-one basis. Health care is certainly not public health!

Public health practitioners appear to be suffering an identity crisis, and a misplaced sense of euphoria. Perhaps they have felt slighted and inadequately funded to the end that they are eager to identify with anything that includes the word "health." Perhaps the identity crisis is due to the fact that there does not appear to be a common definition or uniform understanding of public health. Perhaps the identity crisis is due to the fact that public health is not a unified discipline or profession, but is a cause engaged in by a wide variety of disciplines and interests. Or perhaps some public health practitioners recognize that 96% of total health services dollars are spent on health care, with an estimated 1% of the health services dollars being spent for public health, and they find it seductive to aspire to be an
element within the 94% rather than within the 1%. Or perhaps the identity crisis is due to the fact that many public health personnel originally had their professional roots in health care and have overwhelming latent proclivities to practice health care rather than public health. Or perhaps the identity crisis is a manifestation of the reality that many public health practitioners simply do not understand the basic differences between public health and health care. Or perhaps the identity crisis is due to some public health practitioners not really believing in the primacy of disease prevention, health promotion, and environmental health and protection as differed from health care. Or, as I previously stated, perhaps the identity crisis reflects the fact that some practitioners confuse the field of public health with the organizational scope of the U.S. Public Health Service or a specific health department, or with the programs offered by some school of public health. Or perhaps some public health practitioners do not understand that public health continues to be in eternal competition with health care for the budget dollar, just as certainly as public health must compete with other basic governmental functions such as public safety, public welfare, public works, corrections, public education, and national defense.

Public health practitioners should ingest a healthy dose of skepticism regarding the current national health care debates, while enhancing their efforts to improve the delivery of properly designed and prioritized public health and environmental health and protection services delivered primarily through our varied and complex system of state and local health agencies.

As a practitioner, I practiced public health and environmental health and protection in the trenches as well as at the policy levels at the city, county, district, state and national
levels. In various leadership roles and as a state cabinet secretary for health and environment, I dealt with local, state and federal legislative bodies for almost forty years and was consistently enlightened that health care is not public health, public health is not health care, and certainly environmental health and protection is not health care. As a cabinet secretary, I invariably determined that any reasonable requests to expand my health care budget would probably be granted, and in fact, my health care budget was frequently increased in the absence of a departmental request. Not so for public health or environmental health and protection. My number one priority has always been public health and environmental health and protection. But while always advocating public health and environmental health and protection as my priorities, my health care budget was increased disproportionately. I frequently found it somewhere between difficult and impossible to gain approval for one more public health nurse, or one more environmental health scientist, or one more public health educator, or one more public health physician, or one more public health dentist, or one more public health nutritionist, or one more public health laboratory scientist while being criticized by legislators for not requesting more for our department’s health care programs. On many occasions, I experienced legislative bodies transferring funds from public health to support health care. On one occasion, my environmental health and protection budget was reduced in order to shore up the constantly escalating medicaid budget. During legislative budget hearings, the rooms were filled with effective health care advocates wearing their caps, banners and badges. Only once in my years of experience did a non-departmental advocate for public health appear to testify. That individual was a public health nurse. We do not have an organized constituency for prevention. Society takes the
marvelous successes of public health for granted.

Those public health personnel who are demonstrating euphoria and giddiness by believing that health care reform will enhance public health programs may be in for a rude awakening and become disillusioned victims of worshipping the god of health care in vain, rather than pursuing the cause of public health. The national health care reform efforts are designed to contain health care costs and improve access to health care services —, not public health. In fact, the price tag for revamping our nation’s health care system may well utilize revenues that might otherwise be available to support or enhance public health and environmental health and protection services. By the time our political leaders are through utilizing funding sources for national health care reform, even less federal and state sources may be available for basic public health and environmental health and protection measures. Few of our political leaders appear to understand that basic public health and environmental health and protection services delivered through state and local agencies have done more, and can continue to do more, to enhance the health status and quality of life of our citizens than can health care measures. Public health, properly staffed and supported, stands ready to effectively attack the current leading causes of death and disability as it has in the past. Many public health activities are highly cost effective for preventing disease and disability, but more importantly, public health must be also marketed on the basis of improved quality of life, extended life span, and enhanced quality of the environment. While public health measures do prevent disease and enhance life quality and longevity, all such activities do not reduce health care costs. Each public measure must be evaluated individually and in all its dimensions. A few examples, however, indicate that:
• Prevention of only 3 percent of the incidence of coronary by-pass operations can achieve a reduction amounting to nearly $240 million a year.

• Lead abatement of a typical pre-1950 housing unit can prevent nearly $3,000 in treatment costs for each case of lead toxicity.

• Prevention of only two major communicable disease outbreaks per state each year with each affecting 200 people, could achieve a savings of up to $10 million a year.

• Prevention of one new HIV infection for every five persons identified as HIV-positive results in savings of $15 to $25 for every $1 spent in counseling, testing, referral, and partner notification and counseling.

• The estimated cost of water fluoridation for an individual's lifetime is equal to or less than the cost of one dental restoration to treat a tooth with caries.

• For each dollar invested in a smoking cessation program for pregnant women, about $6 is saved in neonatal intensive care costs and long-term care associated with low birth weight.

While I am not deprecating the need to deal with access and economic problems of the health care system, it should be understood that health care reform in the absence of improved public health services will be not deal effectively with the health problems of our communities. Health care reform in the absence of improved public health services will be another expensive governmental experiment and a misplaced priority. Health services must be viewed as a continuum, with environmental health and protection, disease prevention, and health promotion preceding health care on the continuum. However, the most important precursors to improved human health status include genetic potential, economic
considerations, and educational achievement.

I have always believed that it is inappropriate for public health departments to deliver more than minimal health care services. Many health departments have, however, become deeply involved in health care as a matter of choice as providers of last resort, or due to political necessity. Public health has seemingly become obsessed by, or subsumed by, health care, resulting in a lack of clarity, focus, definition, priority, and emphasis for public health, as well as ineffective marketing of public health. Public health may have collectively "shot itself in the foot" by making health care reform such a priority rather than focusing on the priority of marketing public health services and improving the health status and quality of life of the public.

In short, public health has become a blurred vision.

Public health leaders believe that public health is an excellent and essential product, but why hasn't the product -- enhanced health status of the public -- been better recognized and supported? Do we have a problem with the product, the need, the marketing, or the sales persons? Perhaps public health organizations should take a page from the private sector and commission a comprehensive national marketing analysis to develop recommendations to succinctly define the product, determine priority needs and demands, describe the market, recommend marketing strategies, and implement effective marketing recommendations.

Health care reform may require many clinical preventive services currently delivered on a community basis through public health departments to be delivered through the health care system. And health care reform could result in public health departments re-emphasizing those public health services remaining within their domain. Or it could result in
a de-emphasis of community based public health measures.

With regards to public health aspirations being strengthened by health care reform, I am reminded of a statement occasionally made by one the Governors for whom I worked. Particularly during legislative sessions he would say, "Blessed are those who expect little, for they shall not be disappointed."

Many imbued with conventional public health wisdom and public health egocentrism do not view the world as our political leaders do. It would be interesting and very useful to study why so many in public health are so politically naive, and often disdainful of the political process. Do we attract and retain a certain type of individuals and culture, or do we fail to properly train public health personnel to understand and constructively impact the various public policy elements within our political systems?

I will now spend use a few minutes discussing environmental health and protection more specifically.

You will note that I generally use the term "environmental health and protection", rather than environmental health, or environmental protection. I do this because all environmental health and protection programs share a public health goal and are usually based on public health standards. The differences are in their artificial organizational settings. For peculiar territorial reasons, some people term the programs environmental health if they are the responsibility of an agency called a health department, and environmental protection if they are not the responsibility of a health department. We should be building and travelling bridges between all the various agencies involved instead of
creating terminology and turf barriers.

Concern for the quality of our environment and related public health implications has never been more intense. Political leaders and ordinary citizens, whether liberal, moderate or conservative, express concern over the quality of our environment.

But there is widespread disagreement regarding environmental health and protection priorities, acceptable risk, and organizational issues.

Several recent national documents have had some impact on the future of environmental health and protection, as well as relationships with the rest of the public health community. The Institute of Medicine Report on the Future of Public Health provides thoughtful material which should studied critically by every public and environmental health and protection professional. The emphasis of the report is on personal health, health care, and relationships to the medical community with occasional, though significant reference to the importance of environmental health. Environmental health and protection agencies outside health departments were not visited or included in the IOM study. By relying on inadequate data provided by the Public Health Foundation, the IOM report contributes to the misunderstanding of, and inadequate emphasis on, environmental health and protection by the public health community as well as community and political leaders.

The IOM document does not provide adequate consideration of the complexity and magnitude of environmental problems facing our nation and the world. Only two of the 22 Committee members were well-known environmental health and protection experts. I do not find that consultation was developed with any of the various national environmental health and protection associations. The IOM Report discusses the important issue of effective
relationships with the medical care profession, but is silent on equally essential relationships with planning agencies, transportation authorities, environmental groups, agricultural groups, engineering societies, developers, manufacturers, educators, and economic development officials with whom environmental health and protection programs must network and coordinate.

Healthy People 2000: Disease Prevention and Health Promotion Objectives for the Nation, developed by the U.S. Public Health Service, is another important national report. The first draft of the environmental health component was not only dismal, but counter-productive to the cause of environmental health and protection. There were glaring inadequacies and errors pertaining to professional education, air quality, and hazardous wastes. And a list of the issues ignored in the original draft was, at the same time, a list of many of the priority areas in environmental health and protection. Those issues ignored included: solid waste management, water supply, water pollution, noise pollution, food protection, radiation protection, vector control, institutional and recreational environmental health; as well as the environmental health aspects of energy production, transportation systems, land-use, and resource consumption. And finally, the draft did not include such global environmental health and protection issues as possible global warming and stratospheric ozone depletion, desertification, deforestation, planetary toxification, and over-population.

I developed and transmitted a critique regarding specific environmental health and protection inadequacies in the draft Year 2000 Report to the U.S. Public Health Service Office of Disease Prevention and Health promotion, and had a number of discussions with
personnel in that Office. I was pleased with their timely and positive reaction. The
environmental health chapter was entirely revised and changes were made that addressed
many of my concerns. The environmental health objectives in the final document are
certainly not perfect, but they are much improved while still lacking in comprehensiveness.

Some of us thought we had made our point regarding the Year 2000 document prior
to the follow-up USPHS conference designed to publicly release the final recommendations.
However, the conference provided an instructive case study regarding top level Public Health
Service attitudes regarding environmental health and protection. Specifically:

- There was no workshop on environmental health and protection.
- There was no program participant charged with discussing environmental health and
  protection.
- I did not identify any participant from EPA, the nation's leading environmental
  health and protection agency.
- Few of the speakers even mentioned public health or environmental health and
  protection, but chose to discuss "health care." Environmental health and protection
does not identify with health care, the one-on-one treatment or rehabilitation of a
  patient.
- A film was shown which purported to depict health status in the Year 2000, but not
  a frame or word thereof was devoted to air, water, wastes, food protection or other
  environmental health and protection issues.
- I had called four of the major program participants prior to the conference
  requesting that they provide some balance, some indication of support, interest, or
even recognition of the environmental health objectives. None of them even
mentioned the environmental health objectives.

Perhaps the most significant environmental health experience at the conference was
the invited EPA band. And that only served to remind me of the title of the book "And The
Band Played On."

And then another instructive episode occurred following adoption and distribution of
the Year 2000 Objectives. The USPHS developed a draft of criteria for selected health status
indicators to be used by federal, state, and local health agencies. This was an eight page
document which may have been useful for disease prevention, health promotion, and health
care. However, the PHS had again essentially ignored environmental health, environmental
quality, environmental standards, environmental regulations, air quality, water pollution,
water supply, food protection, solid wastes, hazardous wastes, toxic chemicals, occupational
health and safety, noise pollution, radiation, environmental health and protection personnel,
environmental health and protection laboratories, and global environmental problems.

I responded to this draft requesting inclusion of the previously mentioned issues.

To make a long story short, here is the rest of the story. The criteria were finalized
and published and did not include any of our recommendations. It is as if some components
of the U.S. Public Health Service don't know or care that the environment exists!

Another episode occurred more recently when I developed and transmitted several
pages of detailed recommendations to the Council on Education for Public Health so that
environmental health and protection education would be improved and emphasized in
accredited schools of public health. These recommendations were also ignored.
But despite these horror stories, the future of environmental health and protection is bright for those professionals who have the necessary knowledge, skills, demonstrated leadership ability, and understand and participate in the environmental changes which will continue to take place. Those who are inflexible and rely on past accomplishments, the status quo, and organizational turf will be numbered among extinct species.

Environmental health and protection continues to be a matter of local, national and global debate. Globally, priority issues include species extinction, possible global warming and stratospheric ozone depletion, wastes, desertification, deforestation, planetary toxification and, most importantly, overpopulation. Excessive population contributes to all the foregoing as well as to famine, war, disease, social disruptions, economic woes, and resource and energy shortages.

At the national level, a 1990 Roper poll found that, in terms of public perception, at least 20% of the public considered hazardous waste sites to be the most significant environmental issue.

But contrary to public perception, the 1990 report of the Environmental Protection Agency's prestigious Science Advisory Board lists ambient air pollutants, worker exposure to chemicals, indoor air pollution and drinking water pollutants as the major risks to human health. In my opinion, food protection and unintentional injuries, while not EPA programs, should be added to any list of environmental priorities impacting human health.

EPA's REDUCING RISK also states that:

"...there is no doubt that over time the quality of human life declines as the quality of natural ecosystems declines....over the past 20 years and especially over the
past decade, EPA has paid too little attention to natural ecosystems. The Agency has considered the protection of public health to be its primary mission, and it has been less concerned about risks posed to ecosystems. EPA's response to human health risks as compared to ecological risks is inappropriate because, in the real world, there is little distinction between the two. Over the long term, ecological degradation either directly or indirectly degrades human health and the economy. Human health and welfare ultimately rely upon the life support systems and natural resources provided by healthy ecosystems.

A December 1991 survey conducted by the Institute for Regulatory Policy of nearly 1300 health professionals indicated that:

"Over eighty-one percent (81%) of the professionals surveyed believe that public health dollars for reduction of environmental health risks in the United States are improperly targeted."

Taking all of this into consideration, it must be emphasized that utilizing sound epidemiology, risk assessment and risk communication are among the most critical environmental issues of today and tomorrow. While resources should be allocated to address actual and significant risks, public perception drives the response of elected officials and public agencies. Environmental health and protection professionals usually have greater expertise in dealing with technical program issues than those in such areas as risk assessment, epidemiology, prioritization, fiscal impacts, risk communication, agency management and public policy.

As public health practitioners:
• We should understand the role of science in determining public policy, and place a high value on science in developing public policy.

• We should recognize the misuse or absence of science in an effort to justify a position or alarm the public.

• We should recognize the difference between science based facts and public perception.

• We should be scientifically critical. Too many so called "professionals" are actually only regulators and functionaries, ever ready to accept, promote and enforce the current party line or misinformation.

• We should recognize that the some of the news media are frequently a conduit for an abundance of misinformation and a shortage of critical scientific inquiry behind many of the various "catastrophe-of-the week" issues.

• We should recognize that if all the alleged environmental catastrophes were scientifically factual, our nation would have many times the actual morbidity and mortality rates.

• We should question reports which base a problem on finding one anecdotal example, e.g., one cancer patient near a hazardous waste site, that capitalizes on appeal to the emotions. Many epidemiologists term this the "I know a person who ...." syndrome.

• We should beware of individuals and organizations purporting to use "science" to front and further their organizational and political objectives. Peer reviewed science does not depend on media manipulation, Hollywood personalities, or slick public
relations.

• We should beware of "predicted" morbidity and mortality figures pulled out of the air by self-styled "experts."

• We should learn and practice the art of risk communication. Few public health personnel understand and practice effective risk communication. Instead, risk communication is usually considered to be a speech, a press release, a letter or a leaflet. This is one of the reasons that public perception of risk is frequently at variance with that of scientists.

• We should always question, challenge, investigate alternative solutions, and analyze existing and proposed regulations and standards to determine the validity of their scientific base. Existing programs, standards and regulations tend to be magical, take on lives of their own, and are seldom challenged. A standard in motion tends to remain in motion in a straight line unless impeded by an equal and opposite force. Public health professionals should provide the scientific "equal and opposite force" to challenge any prevailing misunderstanding of risk.

• We should understand that an unnecessary or poorly designed or overly expensive program becomes even more difficult to stop or alter once a bureaucracy or an industry is developed to promote the program.

• We should remember that people tend to overestimate risk from rare but dramatic events. People also tend to underestimate common events such as violence, unintentional injuries and deaths, and tobacco induced delayed homicide and lingering suicide. People disdain changing preconceived notions about risks and priorities.
People are quick to dismiss evidence as erroneous or biased if the information contradicts their preconceived opinions.

- We should understand that many Americans, and even some public health practitioners, seem to exhibit a love of calamity. Some groups are applauded and profit from false predictions of environmental calamity, some of which become translated into public hysteria and public perception, thence into political action, and finally into expensive and unnecessary programs and public policy. Those promoting such hysteria accept no responsibility for their false statements and prognostications.

- We should define problems before proposing solutions, and fit solutions to problems rather than the problems to solutions. Some groups seem to consistently have solutions waiting for problems.

- We should realize that the proper standard for environmental health and protection is not always "zero-risk", but should be "net benefit", or "net impact." Zero-risk may not be economically or practically attainable, and the cost of pursuing zero-risk for one particular issue may preclude resources essential for addressing more important problems. Unnecessary emphasis on zero-risk may also lead to false expectations and undue public alarm.

And finally:

- We should be wary of accepting problems based only on extrapolations and correlations rather than on good epidemiological and toxicological studies.

If we consider correlations only, we would probably conclude that:

**CARROTS WILL KILL YOU!** After all,
• Nearly all sick people have eaten carrots. Obviously the effects are cumulative.
• An estimated 99.9% of all people who die from cancer have eaten carrots.
• 99.9% of people involved in auto accidents ate carrots within 30 days prior to the accident.
• Some 93.1% of juvenile delinquents come from homes where carrots are served frequently.
• Among people born in 1849 who later ingested carrots, there has been a 100% mortality.
• All carrot eaters born between 1900 and 1910 have wrinkled skin, have lost most of their teeth, and have brittle bones and failing eyesight, if the ills of eating carrots have not already caused their deaths.

Additionally, we would conclude that:

STORKS BRING BABIES

The number of storks in Europe has been decreasing for decades. Concurrently, the European birth rate has also been declining.

Obviously, we would be foolish to accept these correlations as evidence that storks bring babies or carrots cause illness and death. The science of epidemiology attempts to sort out from myriad chance correlations those meaningful ones which might involve cause and effect. It is important to understand, however, that epidemiological methods are inherently difficult and that it is not easy to obtain convincing evidence. There are also many sources
of bias. For example, because there are so many different types of disease, by chance alone one or more of them may occur at a different frequency in any given small population. The science of toxicology helps provide evidence as to whether a relationship is credible.

**ORGANIZATION**

Environmental health and protection programs continue to be diversified and transferred to state "EPAs" as they were more than 20 years ago at the federal level. There are many agencies which administer environmental health and protection programs at all levels of government. There is no standard organizational model for environmental health and protection programs.

At the federal level, these agencies include the Environmental Protection Agency, the Occupational Safety and Health Administration, the U.S. Public Health Service (including the National Institute of Environmental Health Sciences, the Centers for Disease Control, the Indian Health Service, the Food and Drug Administration, the Agency for Toxic Substances and Disease Registry, and the National Institute for Environmental Health and Safety), the Coast Guard, the Geological Survey, the National Oceanographic and Atmospheric Administration, the Fish and Wildlife Service, the National Marine Fisheries Service, the Nuclear Regulatory Commission, the Corps of Engineers; and the Departments of Transportation, Agriculture, and Housing and Urban Development. Major departments administering proprietary programs include Defense, Energy, and Interior.

Environmental health and protection has increasingly ceased being a responsibility of public health departments at the state and federal levels since the creation of the U.S.
Environmental Protection Agency in 1970. At the local level, however, public health departments tend to be the lead agencies for a number of traditional environmental health activities.

For many years, I suggested that something like 75% of state environmental health and protection activities were administered by environmental health and protection agencies other than state health departments. A recent study conducted by the Johns Hopkins School of Public Health indicates that I have been wrong. The figure is greater than I had been suggesting --- more like 85% to 90% of state level environmental health and protection activities are administered outside the purview of state health departments. By comparing state level environmental health and protection expenditures with other public health expenditures as reported by the Public Health Foundation, we find that states spend approximately the same total amounts on environmental health and protection as they do on all other public health programs administered by state health departments. This fact requires those in the broad field of public health to have greater recognition of the size and importance of environmental health and protection efforts as key components of the field of public health.

Most local environmental health and protection programs are components of local health departments. However, a number of jurisdictions have established separate environmental protection or environmental management departments. Environmental health and protection activities are also administered by such local agencies as public works, housing, planning, solid waste management, special purpose districts, and regional authorities.
The trend to organizationally diversify environmental health and protection programs will probably continue in response to the increasing complexity and importance of environmental health and protection, in response to the demands of environmental advocates, and in response to the changing priorities of many health departments as they become increasingly involved in health care issues in addition to public health. It is unrealistic to develop programmatic relationships between hazardous waste management, for example, and any one of a number of health care treatment and rehabilitation programs. The drift of federal, state and local health departments toward more and more health care (as providers of last resort) may translate into less and less leadership for environmental health within such health departments. However, regardless of the titles or organizational arrangement, the lead agencies for environmental health and protection should be comprehensive in programmatic scope; staffed by personnel having the requisite public health competencies and leadership skills; have program design and priorities based on sound epidemiology, toxicology and risk assessment data; and have adequate analytical, data, legal and fiscal resources.

We must believe that anything as important as environmental health and protection deserves and demands organizational support, visibility and effectiveness which may translate into organizational diversification and programmatic change, and we must understand that environmental constituents and political leaders frequently demand such change.

Environmental personnel who identify only with traditional health departments may be an endangered species eking out a frustrating existence in a constantly shrinking programmatic environment.

As separate environmental health and protection organizations are created, every
effort should be also made to insure that all environmental health and protection programs are transferred, so as not to fragment the environmental health and protection effort itself. Many jurisdictions have rationalized that such programs as food, water supply, and liquid wastes are "health," while air, water pollution and waste programs are not "health." In fact, all such programs share public health goals and are based on public health standards. All such programs should be prioritized together. All require the same type of program methods, laboratory support, legal resources, epidemiology, prioritization, risk assessment, risk communication, risk management, surveillance and data.

In the future,

- We should collectively understand that organizations, programs and public expectations will not be static.
- We should realize that are no final answers; and that problems, organizations, programs, and personnel competency needs will continue to evolve and become more complex.
- We should remember that many public and environmental "healthers" have mistakenly tended to resist rather that lead changes in programs, organizations, and personnel competencies.
- We should believe that anything as important as environmental health and protection deserves and demands organizational support, visibility and effectiveness which may translate into organizational diversification and programmatic change; and we must understand that environmental constituents and political leaders frequently demand such change.
• We should understand that every community and state has many "health agencies", but that only one is specifically titled a health department.

• We should recognize that the cause of environmental health and protection is being served in a variety of agencies.

• We should understand that in some jurisdictions, public health is being subsumed by health care, and that it takes a high degree of fantasy to develop a working programmatic relationship between health care (which is the treatment or rehabilitation of a patient under care) and hazardous waste management, or health care and pollution control, or health care and safe drinking water, or health care and food protection, or health care and any other environmental health and protection activity.

• We should encourage environmental health and protection professionals to seek key leadership and scientific roles in all types of environmental health and protection agencies.

We must realize that the scope of environmental health and protection concerns now includes ecological issues as a full partner. Whatever long-term health threats may be, the public also knows that pollution kills fish, dirties the air, creates a foul stench, ruins rivers, destroys recreational areas, and endangers species.

We should develop improved methods to prevent environmental problems, as differed from curative efforts and clean-up. While the field of environmental health and protection identifies with prevention, a preponderance of effort is devoted to solving problems created as a result of earlier decisions and actions taken by the public or private sectors. Therefore,
public health personnel must become effectively involved in the planning and design stages of
energy production and alternatives, land use, transportation methodologies, facilities
construction, and resource utilization: as well as design, development and production of
products which may negatively impact human health or delicate ecological balances.
Environmental policy must be based on prevention if there is to be any hope of preventing
further resource depletion, ecological dysfunction, and minimizing the health impacts of
environmental contaminants.

And finally, we should ensure that schools of public health and other programs
educating environmental health and protection personnel are inculcating the competencies to
be effective in a wide variety of organization settings. Graduates must be competent not only
in the basic public health sciences, but also in analytical skills, communication skills, policy
development, program planning skills, cultural skills, financial planning and management
skills, and leadership skills. It is also essential that incumbent personnel be "retreaded" with
these skills through effective continuing education mechanisms.

AND IN CONCLUSION,

Public health continues to be difficult to sell, whereas health care continues to be
demanded and better funded. Public health programs, unlike health care issues, lack an
effective constituency. Public health has always been a rocky road, as it provides no
immediate gratification or feedback. It requires the ability to look to the future, which is not
a customary trait of our political leaders who are looking to the next election rather than the
status of their constituents health in coming decades. Public health does have the glamour
associated with hospitals, organ transplants, emergency medicine, diagnosis, treatment and
rehabilitation. However, the excitement and effectiveness of the products of public health have not been convincingly marketed, and public health has not competed well with health care.

Seventy-five years ago, a warning about inattention to public health agencies was issued to the Medical faculty of Maryland, and except for the decimal points the following statement is still true:

"With the appropriations for health insurance running into millions of dollars annually, it goes without saying that legislative bodies will not materially increase the appropriations for their health departments. Owing to this fact, there is a decided probability of sickness insurance acts endangering the very existence of State health department by absorbing all of the funds available for health work. Our statesmen and lawmakers must, therefore, be careful that proper and ample provisions are made for health machinery in any sickness insurance act."

Leadership on the road to improved public health and environmental quality is not an easy route. There are many potholes in the course of providing effective, priority services. The journey requires vision and steadfastness of purpose, as it is beset by emotional pressures, tempting comfortable detours, political surprises, and frequently offers no short-term gratification or pay-off. There are no rest stops along the way.

The public health arena is bright for those professionals who have the necessary knowledge and skills, and who demonstrate vigorous leadership in marketing and implementing disease prevention, health promotion, and environmental control strategies that target priority public health and environmental problems. Many of these priority threats are
linked to lifestyle risk factors and environmental hazards.

We should be affirmative regarding public health and understand, explain, promote, market, sell, interpret, propose, advocate, and communicate the need for improved public health services. We should not allow public health services to be left halfway between leprosy and quarantine stations.

We must have a clear, crisp, definable, and marketable vision of public health and its potential for the enhancement of health status, our quality of life, and the future well-being of our families and communities.

If the national public health community cannot agree on the destination required for improved public health, then it doesn’t make much difference which road is taken to get there.

A basketball coach would say, "Let’s get back to the basics." Perhaps we need a spirited half-time change in our game plan. Let’s get realistic, and put an end to our identity crisis, our misplaced euphoria, our fantasies, and an end to our blurred vision of public health.