

MOVING FORWARD TO BE ALL YOU CAN BE!

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I can't resist opening by quoting a few of the Paradoxical Commandments written by Kent M. Keith. Many of you may have heard or read them, but they have some relevance to my later comments all of which are based on my own experiences.

If you are successful, you will win false friends and true enemies.

Succeed anyway.

Honesty and frankness make you vulnerable.

Be honest and frank anyway.

The biggest men and women with the biggest ideas can be shot down by the smallest men and women with the smallest minds.

Think big anyway.

People favor underdogs but follow only top dogs.

Fight for a few underdogs anyway.

What you spend years building may be destroyed overnight.

Build anyway.

People really need help but may attack you if you do help them.

Help people anyway.

Give the world the best you have and you'll get kicked in the teeth.

Give the world the best you have anyway.



The practice of environmental health is both an art and a science. My presentation today will cover a few aspects of the art of environmental health practice.

Today, I will briefly discuss a number of issues facing environmental health practitioners, but will primarily address those of you who desire to lead and change the status quo rather than play "follow the leader." Much of the material I will cover may be strange to some, but will be more useful if you will study my presentation when you have time to absorb the ideas covered. You all know there is an incubation period for bacteria, but remember that there is also an incubation period for ideas. So be it with this presentation.

I understand your State Motto is "FORWARD," and **forward** is how environmental health practitioners must think and act in order to be all they can be: **forward** in vision, **forward** in competence, **forward** in risk issues, **forward** in building bridges of communication, **forward** in public relations, **forward** in achieving top leadership positions in a variety of public and private agencies, and **forward** in understanding and marketing the benefits of environmental health. By moving **forward** in such components, you will "Be All You Can Be."

I commenced my career as a local sanitarian and am **proud** of having served as a county sanitarian, a district sanitarian, state food sanitarian, and the chief sanitarian in a metropolitan health department. These positions were stimulating experiences and precursors to a public service journey of promotions and appointments to a dozen managerial and policy roles in official and voluntary organizations, as well as in academia. But I am only one of numerous environmental health practitioners who have taken advantage of opportunities to move **forward** into top positions in the public and

private sectors as well as in academia. Environmental health practitioners have earned positions as state health directors, state environmental directors, state cabinet secretaries, state laboratory directors, deans of schools of public health, high level officials in the department of defense and the department of energy, and admirals in the U.S. Public Health Service. These achievers have clearly demonstrated the career opportunities available to those desiring to move **forward**.

Experience as an environmental health practitioner is an excellent route to pursue a variety of managerial and policy roles in the broad and complex field of environmental health, as well as in the broader field of public health. Environmental health practitioners not only manage a wide variety of environmental health problems, but should also be involved in epidemiology, risk assessment, risk communication, risk management, public relations, community planning, regulation, inter-personal relations, policy development, technical reports, sampling and surveillance, analyses and interpretation of analyses, developing priorities, program design and evaluation, and administration.

Now, let's turn our attention to some of the areas in which practitioners need to move **forward** and **be all they can be**. Some of the **forward** issues we will briefly discuss include:

- Moving **forward** to eliminate negative attitudes and actions
- Moving **forward** to understand and embrace the field of environmental health
- Moving **forward** to develop that special attribute, the gift of vision
- Moving **forward** to convert vision into reality through leadership
- Moving **forward** to practice good public relations
- Moving **forward** to market your product

- Moving **forward** to develop an appropriate terrorism role
- Moving **forward** to plan for environmental health
- Moving **forward** to embrace ecological issues
- Moving **forward** to assess, communicate, and manage risk
- Moving **forward** to build and travel bridges, and
- Moving **forward** to prepare for the future of environmental health.

DO YOU WANT TO MOVE FORWARD TO ELIMINATE NEGATIVE ATTITUDES?

I hear “woe is me” from many environmental health practitioners who **choose** to perceive that their glasses are half-empty rather than half-full. Some proclaim they “get no respect,” they moan their negativism in publications and at various conferences, they engage in the blame game, and they ignore their individual responsibilities for problem solving. Many practitioners believe that some "magic bullet" such as recognition through certification, registration or licensure is an answer. Such recognition is professionally satisfying, but is not an answer to perceived woes. Elected officials and other policy officials are seldom impressed by such measures. Many feel an infusion of funding granted without regard for merit is necessary, but this is not an answer. Many believe that talking to each other is doing something, and that someone else is going to lead the way and remedy their problems. However, as in the title of a popular country-western song, this syndrome is “Looking for Love in All the Wrong Places,” and is not an answer.

The “defeatist and blame someone else” attitude appears to have increased during this era in which environmental health is a high priority issue demanded by the public, demanded by political leaders, and widely considered to be an entitlement. Thankfully,

numerous outstanding environmental health leaders have not fallen into the trap of defeatism and victimization, and continue to be think **forward**, excel and earn recognition.

Many environmental health practitioners need to lift themselves out of their conventional mindsets. They are available, they want to serve, but they do not have clear concepts of moving **forward**. Many have not developed internal gyroscopes and do not understand who they are, or their potentials. When referring to our State Legislature, one Governor for whom I worked frequently quipped: "Blessed are those who expect little for they shall not be disappointed." Likewise, those environmental health practitioners who expect little will not be disappointed. Conversely, those who expect accomplishment and are prepared to move **forward** will not be disappointed. If you want the world around you to change, you must have a positive attitude and participate actively in the solution.

DO YOU WANT TO MOVE FORWARD TO UNDERSTAND AND EMBRACE THE FIELD OF ENVIRONMENTAL HEALTH?

When I use the term environmental health, I use it to embrace the terms environmental health **and** environmental protection. Most environmental protection programs were originally administered by public health departments and were termed environmental health. The content and public health goal of those programs now commonly termed environmental protection did not change with their assignment to other agencies. For more than thirty years, many public health leaders have been shooting themselves in their collective foot by proclaiming environmental protection as something

different and apart, rather than fully embracing and leading environmental health **and** protection efforts. This dichotomy has resulted in creating organizational barriers rather than effective bridges of understanding and cooperation.

The problem of identification continues to plague environmental health practitioners. Many environmental health practitioners believe that opportunities begin and end within the scope of their own organizations, and definitions of environmental health vary accordingly. Instead of defining broadly and embracing the comprehensive field and associated opportunities, they misguidedly define narrowly and develop organizational and mental barriers by believing that environmental health practice is limited to specific agencies rather than the challenging spectrum of public and private entities involved. Opportunities for careers and leadership abound in a diverse assortment of organizations at the local, state and federal levels, as well as in academia and the private sector.

Various federal, state and local environmental health organizations continue to define and redefine to the detriment of a clear, consistent, comprehensive and marketable understanding of environmental health. The “**Committee on the Future of Environmental Health**” recommended a comprehensive approach designed to embrace the field of practice. This Committee, following widespread input and peer review from such groups as NEHA, CDC, NCEH, APHA, HRSA, EPA, ATSDR, ASPH, NCLEHA, various state and local health departments, ASTHO, NACCHO and others -----, defined Environmental Health as follows:

Environmental health 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; disease vectors; safety hazards; and habitat alterations.

In the absence of this widely referenced and accepted definition, practitioners do not know if they are marketing a buggy whip or a rocket ship. Environmental health must be consistently marketed in an organized fashion to ensure the understanding and support of the public, including the media, civic leaders and elected officials.

Environmental health is **valuable**, environmental health is **essential**, and environmental health is **marketable**. Perhaps we should coin a slogan for environmental health such as:

"Environmental Health: You Can't Live Without It." This should be on environmental health agency letterheads, documents, leaflets, reports and bumper stickers.

The following facts regarding the size and complexity of the field of environmental health practice are important to understand:

1. First, 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. Practitioners must take advantage of the magnitude and societal importance of their field of practice.
2. Secondly, environmental health is a profoundly complex, multifaceted, multidisciplinary and interdisciplinary field of practice engaged in by a wide spectrum of disciplines and professions within a broad array of public and private organizations.

3. Thirdly, 90 to 95% of state level environmental health activities are assigned to agencies other than health departments, and there is a similar trend at the local level.
4. And finally, at the state levels, environmental health expenditures and numbers of personnel account for roughly 50% of the field of public health practice and is, therefore, the largest single component of the field of public health.

The foregoing facts signify numerous opportunities for those practitioners prepared to move **forward**. The opportunities are particularly outstanding for individuals willing to qualify for and engage in policy and top management roles in the varied and complex spectrum of public and private agencies having environmental health responsibilities. Necessary changes are made at leadership and policy levels. Most practitioners, however, feel more comfortable and competent in technical roles than in managerial and policy roles.

Regrettably, many uninformed individuals in the public health establishment tend to view environmental health as a minor and frequently aggravating single activity, instead of a major spectrum of essential programs of community and indoor air quality, food protection, water supply, solid and hazardous wastes, toxic chemicals, water pollution control, industrial health and safety, ionizing radiation, land use planning and vector control.

DO WANT TO MOVE FORWARD TO DEVELOP AND PURSUE A VISION?

The articulated community environmental health vision statements I have reviewed from scores of agencies vary widely from no concept, through a meaningless

short sentence such as “Healthy People in Healthy Communities,” to a few well developed statements. Some acknowledge only a fragment or the tantalizing rainbow-like spectrum of a vision. This remarkable variation is due to lack of a common understanding of the field of practice, as well as a paucity of imagination on the part of many individuals in managerial roles.

The following quote from Alice in Wonderland is instructive for all of us regarding the need for a vision:

“Would you tell me, please, which way I ought to go from here?” asked Alice.

“That depends a good deal on where you want to get to,” said the cat.

“I don’t much care where,” said Alice.

“Then it doesn’t matter which way you go,” said the cat.

As we consider elements of a vision for environmental health, it may be that, like Alice, many practitioners don’t care where they go. For them, it certainly doesn’t matter whether they have a vision or not.

Every practitioner should be an active participant in developing and pursuing a meaningful vision for community environmental health that should be more than blurred imagination.

- You **should** envision communities in which environmental health measures contribute substantially to preventing disease and disability, as well as reducing health care costs.
- You **should** envision communities in which the public considers environmental health to be an important entitlement for the common good.
- You **should** envision communities in which environmental health problems are

- measured and defined **prior** to designing and implementing programs.
- You **should** envision communities in which environmental health is based on sound risk assessment and epidemiology, as well as the primacy of prevention.
 - You **should** envision communities in which ecological considerations are embraced as components of environmental health because, in the long run, a deteriorating environment is a threat to public health and the economy.
 - You **should** envision communities in which citizens understand that a quality environment is an important factor in sound economic vitality.
 - You **should** envision communities in which environmental health outcomes contribute to minimizing social problems.
 - You **should** envision communities in which the quality of the environment contributes positively to educational achievement.
 - You **should** envision communities in which the quality of life is enhanced by effective environmental health services.
 - You **should** envision communities in which environmental health practitioners possess the broad array of competencies necessary to address community environmental health problems.
 - You **should** envision communities in which the public, the media, and policy makers constantly travel broad two-way environmental health communication bridges.
 - You **should** envision communities in which public and private sector officials seek the input of environmental health practitioners prior to developing policy and taking actions that impact environmental health.

If environmental health practitioners and community leaders embrace the foregoing as components of a vision for environmental health, then environmental health policy, environmental health goals, environmental health objectives, environmental health program design and environmental health priorities will be developed to achieve the vision.

Remember that developing and pursuing a vision is a continuing journey rather than a destination. It is not a single step exercise in a staff meeting or retreat.

DO YOU WANT TO MOVE FORWARD TO CONVERT VISION INTO REALITY THROUGH LEADERSHIP?

Many outstanding environmental health leaders consistently move **forward** and earn recognition by their peers, recognition by the public and private sectors, and respect and recognition by public policy leaders and elected officials. However, many others are content to simply complain. So what leadership traits are necessary to convert vision into reality?

Here are a few traits that are practiced by scores of real leaders:

- They constantly pursue that coherent vision that provides a platform on which to base and market their mission, their goals, their objectives, their programs and their policy recommendations.
- They possess the necessary competencies and are confident in applying their knowledge, skills, and abilities.
- They have the commitment to change the status quo.
- They stand up for their beliefs, they practice persistence and resilience, and they

accept the fact that if you want a place in the sun you have to expect a few blisters.

- They engage in controversial issues as appropriate, and realize that trying to please everybody is a key to failure.
- They do not rely on someone else to solve their problems.
- They are the change agents they want to see.
- They recognize that while talking to each other may be satisfying, it is not a solution to inadequate achievement and recognition.
- They understand and impact the political process, rather than viewing it with disdain.
- They lead in developing public policy, rather than simply following and reacting.
- They seek to be accountable by developing and striving for measurable outcomes.
- They consistently market the benefits of environmental health that include:
 - reduced disease and disability,
 - lower health care costs,
 - enhanced community economic vitality,
 - enhanced productivity,
 - enhanced community educational achievement,
 - fewer social problems, and
 - enhanced quality of life in a more livable environment.
- They routinely utilize the complex array of essential public information, networking and marketing possibilities to ensure support.

- They do not blame someone else for their perceived problems. They look **inward** for solutions!
- They understand that professionalism is in the eye of the beholder and must be derived from achievement and resultant recognition by peers, subordinates, the public, and public policy leaders.
- They take the “The Road Less Traveled” by thinking **outside** the box and being willing to be out of step with their peers. And finally,
- They understand that support and recognition must be achieved the old fashioned way: **They Earn It!**

Effective environmental health leadership is profoundly complex and frequently controversial, and is invariably the result of individual abilities and initiatives. Many of our great leaders have been dedicated individuals who achieved eminence not because they wore the right labels or belonged to the right organization, but because they had the right ideas, the right information and the right leadership at the right time. The mantle of leadership falls to those who earn it, and belongs to no group by divine right.

The issue of leadership continues to be a prominent challenge. Environmental health leaders must take the lead in making it all happen! Otherwise, we are simply talking to each other, and believing that talking to each other is accomplishing something. Do not assume that others will address the challenges of your field of practice. Leadership depends on individual environmental health practitioners fulfilling their responsibilities.

As noted previously, environmental health practitioners have a solid record of achievement in a wide spectrum of roles in a variety of public, private and academic

organizations. But many environmental health practitioners appear reluctant to engage in the controversies inherent in policy and management roles. Most top management positions do not offer career protection beyond the ability of an individual to earn the respect and support of peers, subordinates, the public, the media and elected officials.

Leadership on the road to improved environmental health is not an easy route. Leadership requires **vision**, leadership requires **competence**, and leadership requires **commitment**. Remember that only **dead** fish move **with** the current.

DO YOU WANT TO MOVE FORWARD BY MENTORING?

Many practitioners who have experienced outstanding careers in public and environmental health are most proud of their roles in mentoring scores of practitioners who subsequently earned leadership roles and significantly contributed to enhancing public health and the quality of the environment. Such mentors have enjoyed encouraging, counseling, teaching, supporting, and guiding individuals who were capable and sincerely interested in moving **forward** to become all they can be. They have admonished such protégés that they should occasionally be re-potted so as not to become root bound, and have encouraged them to enhance their competencies so as to become outstanding professionals. Remaining in the same role too long may be toxic for the organization and career thwarting for the individual.

Meaningful mentoring is a basic leadership responsibility. Mentoring provides the opportunity to nurture, to guide, to counsel, and to inculcate values as well as information about the splendid challenges, myriad opportunities and potentials of the field of practice. Mentoring allows mentors to enhance the careers of practitioners, thereby providing continuity of leadership excellence akin to creating institutional DNA.

Mentoring frequently results in protégés being qualified and selected as successors to the mentors as the mentors themselves assume new challenges

Mentoring is not for everyone. Mentoring requires an implicit understanding and two-way relationship between the mentor and protégé. Mentoring requires time, mentoring requires desire, and mentoring requires effort on the part of both parties. Mentoring requires that the mentor have the requisite competencies and experience, as well as a comprehensive vision of the field of practice. Some desiring to be protégés may not be suitable matches for the mentor.

Mentoring requires long-term relationships, not temporary alliances. Good mentors may have rewarding opportunities to counsel and support his/her protégés for many years. But mentors should encourage protégés to develop their own professional wings as rapidly as possible. While figuratively “standing on the shoulders of the mentors,” protégés must develop their own visions and internal gyroscopes and should not be clones of the mentors.

Quality mentoring results in pride for the mentors, achievement and recognition for the protégés, and constantly improved public health and environmental quality.

DO YOU WANT TO MOVE FORWARD BY PRACTICING GOOD PUBLIC RELATIONS?

Abraham Lincoln stated that:

Public sentiment is everything, with it nothing can fail, without it nothing can succeed. He who molds public sentiment goes deeper than he who enacts statutes or pronounces decisions. He makes statutes or decisions

possible or impossible to execute.

Public relations encompass everything that creates an impression of the practitioner, the agency and the activities. The impression is created through the manner in which practitioners conduct their affairs, through their appearances, through their interpersonal relations, through their competence and vision, through their attitudes and openness, and through all of their actions.

Environmental health is the **public's** business, and will not be properly understood or supported in the absence of **continuing** public information to the news media, target groups, citizen groups, professional groups, elected officials, and other agencies involved in the field of environmental health.

News media receive uncounted numbers of "canned" news releases, and these frequently go unnoticed. The **personal** touch is much more effective. Everything in an official agency should be open to the media unless specifically prohibited by legal requirement. Be honest and be open. Make frequent contact with the reporters covering your agency or functions. Go out of your way to impart information. Develop a calendar or timely seasonal information items. Have a cup of coffee with the reporter. Tell the reporter of your needs and problems as well as your successes. Encourage qualified personnel at all levels to impart information within their spheres of responsibility. For major issues, request a meeting with news editors to gain editorial understanding and support. Do these things routinely and develop sound media relationships rather than expecting immediate support during an unforeseen emergency.

And do these things with your elected officials. Meet them in person. Give them tours of their districts pointing out environmental health problems that you have impacted

or still need to solve. Create maps of their jurisdictions indicating the locations of environmental health problems.

I continue to hear about the “invisible profession.” As a long time practitioner, I find this invisibility **unbelievable**. If a given program or agency is “invisible,” practitioners should re-evaluate their own attitudes and efforts. The fault is invariably with the **messengers** rather than the **messages**. For years, my various agencies were extremely visible. We had TV, radio and print media messages emanating from a variety of departmental personnel several times weekly. Environmental health is of profound interest to the public. Do not blame the media!

And, do not hide **your** lights under a bushel!

DO YOU WANT TO MOVE FORWARD BY MARKETING YOUR PRODUCTS?

Machiavelli wrote that, *"All armed prophets have been victorious, and all unarmed prophets have been destroyed."*

Marketing and marketing research are environmental health armament tools that have not been effectively utilized for the field of environmental health. Many practitioners view marketing and market research tools with disdain. Most confuse marketing with public relations. News releases, pamphlets, leaflets, media appearances and other similar tools are valuable, but are not marketing.

Effective marketing requires a working knowledge of the benefits of environmental health, as well as a comprehensive vision for environmental health.

A simple definition of marketing for the field of environmental health is:

The process of planning and executing the conception, the promotion, and the

distribution of ideas and services that satisfy environmental health objectives.

However, marketing in the absence of **marketing research** will result in an expensive and ineffective shotgun approach rather than a targeted approach. It is implementation without planning.

Marketing research is the function that links the public to the marketer through information designed to identify and define marketing opportunities and problems; that generates, refines and evaluates marketing actions; that monitors marketing performance; and that improves marketing as a process. Marketing research specifies the information used to address these issues, designs the methods for collecting information that manages and implements the data collection process, that analyzes the results, and that communicates the findings and their implications to the marketer.

Marketing research requires data collection tools, analytic tools, and presentation tools that are not ordinarily in the arsenal of environmental health practitioners, thereby necessitating the services of marketing research assistance. Marketing research will encompass environmental health services optimization; market penetration; public awareness, attitude and behavior tracking, and public satisfaction measurement. Market research will assess environmental health problems and needs, formulate research objectives and strategies, design effective questionnaires and sampling plans, manage data collection and processing systems, prepare and present insightful and actionable analyses, and integrate recommendations into workable action plans.

I repeat that environmental health is **valuable**, environmental health is **essential** and environmental health is **marketable**. But effective marketing research and marketing have not been conducted for the field of environmental health. The **market** has not been

understood, **core customers** have not been identified, important **market shifts** have been ignored, **marketing efforts** have been launched with no defined targets in sight, and efforts have failed to reach and impact the market.

Marketing research is widely utilized by the private sector, but has been ignored as an essential tool to achieve the objectives of environmental health.

Agencies such as the NCEH and EPA should cooperatively develop a national marketing strategy that will be an effective tool for state and local agencies.

DO YOU WANT TO MOVE FORWARD TO ENSURE AN APPROPRIATE TERRORISM ROLE?

Our Nation's environmental health workforce varies tremendously in competencies to effectively address potential terrorism issues. There is little documentation that specifies clearly defines roles and necessary competencies for the tens of thousands of environmental health practitioners in federal, state and local agencies. This large and important public health workforce should be in a position to play a key role in preventing and responding to terrorism events. Currently, most disaster preparedness plans suggest limited roles for environmental health and place practitioners in support roles for other public health functions and even for health care.

Environmental health practitioners have skills, competencies and legal responsibilities to routinely address vital health and safety problems related to water supply, toxic chemicals, hazardous wastes, water pollution, disease vectors, food safety, community air pollution, indoor air quality, industrial health and safety, and ionizing radiation. However, with few exceptions, these environmental health practitioners would

be in disarray or ignored in the event of a terrorism episode. This lack of role definition and defined competencies and training for environmental health practitioners for terrorism preparedness constitutes a disservice to our nation's public health efforts and citizens.

Strong bridges of cooperation linking the scores of agencies delivering environmental health programs at the local, state and federal levels should be developed to ensure a comprehensive environmental health approach to terrorism prevention and response.

CDC is an excellent institution, but is basically a medical agency. Needs are viewed through the lenses of medically oriented top staff. CDC leaders do not view environmental health in a comprehensive manner because of their turf issues within CDC and with EPA, FDA, OSHA, USDA, Interior and numerous other agencies that have major national environmental health responsibilities. And CDC does little to relate to the state agencies where 95% of state environmental health responsibilities are assigned to agencies other than health departments. The preponderance of CDC terrorism funds are used for the health care sector, some for public health, and certainly an inadequate amount for environmental health. CDC terrorism funding is widely used for a variety of contractors most of which have little real understanding of the values, scope, importance and potential of environmental health.

While it has a huge bioterrorism initiative, CDC has been **profoundly remiss** in fulfilling its environmental health responsibilities with regard to terrorism. CDC, in cooperation with other agencies, should develop a **“Guide to the Terrorism Prevention and Response Role and Competencies for Environmental Health Practitioners.**

The Guide should be instructive in the areas of major potential routes of exposure, including:

- Water supply
- Food supply
- Community air pollution
- Indoor air pollution
- Animal and vector borne diseases
- Toxic substances, and
- Industrial health and safety.

Each of the foregoing areas of potential exposure should have subsections dealing with competencies for biological, chemical, and radiological insults.

DO YOU WANT TO MOVE FORWARD TO EMBRACE ECOLOGICAL ISSUES?

Environmental health programs have traditionally been justified, designed, and administered based on a public health rationale. As environmental problems, priorities, public and political perception, public involvement, goals, and public policy have evolved; ecological considerations have become increasingly important. Whatever long-term health threats exist, the public and public policy leaders know that pollution kills fish, limits visibility, creates foul stench, ruins lakes and rivers, degrades recreational areas, and endangers plant and animal life. Environmental health practitioners must

develop competencies to embrace ecological issues as precursors to health problems. They must understand that ecological changes are previews of incipient public health problems. Failure to embrace ecological components has been among the reasons many environmental health responsibilities have been assigned to agencies other than health departments.

The U.S. Environmental Protection Agency's Science Advisory Board stated 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.

DO YOU WANT TO MOVE FORWARD TO ASSESS, COMMUNICATE, AND MANAGE RISK?

Everything in the practice of environmental health is based on risk ---- risk assessment, risk communication, and risk management involving one or more environmental health problems. The issue of how risk is assessed, communicated and managed is among the most critical environmental health problems faced by society, and

is the central theme of this conference. Public perception drives the actions of elected officials. However, public perception of environmental health priorities and problems frequently differs from that of environmental health practitioners.

Considering the serious differences in perceived priorities between scientists and those of the public and political leaders, risk assessment must be considered an environmental health tool to be utilized by all interests involved in protecting the health of the public and the quality of the environment. Utilizing sound scientific principles to **assess** risk is vital to **communicating** risk, **recommending** priorities, **designing and administering** risk management programs, **requesting** funds, and **evaluating** control efforts.

Risk assessment has always been utilized informally and even intuitively by public policy makers and environmental health practitioners. Risk assessment mathematical models have been comparatively recent developments. Whenever a decision or recommendation has been made to develop a policy or manage an environmental problem based on available information, a risk assessment has been performed.

Frequently, environmental health practitioners must make emergency decisions based on incomplete but compelling information without having the luxury of waiting until incontrovertible evidence is available. This practice is performed daily by environmental health practitioners charged with managing such risks as food, water, air, radiation, toxics, noise, and unintentional injuries.

Risk communication ranks high among the more significant challenges in moving **forward**. Risk assessment is merely academic in the absence of continuing effective risk communication with the general public, with various interest groups, with public and

private organizations, and with public policy officials. Many practitioners continue to view risk communication as a one-way process composed of official pronouncements, advisories, letters, leaflets, booklets, and other such materials. As a group, environmental health practitioners have been particularly inept as risk communicators.

Effective risk communication requires complete openness throughout the process, and requires the involvement of the public as actions are being planned, rather than after the fact. Lack of risk communication results in priorities and policies that differ considerably from those based on good environmental health science.

Effective risk communication requires a continuing relationship between practitioners and the public even in the absence of a crisis. Risk communication on a single-issue crisis basis is doomed to be less than optimal.

The environment and the health of the public will be best served by prioritizing problems based on the best of risk assessment measures and experienced professional judgment, coupled with effective risk communication and risk management.

DO YOU WANT TO MOVE FORWARD BY PLANNING FOR ENVIRONMENTAL HEALTH?

Planning for environmental health (as differed from program planning) is a fundamental prevention function. Environmental health should be grounded in prevention, but a preponderance of efforts and funds are currently devoted to remediation of contamination and pollution created as a result of earlier actions taken by other interests in the public and private sectors. Environmental health practitioners must have the knowledge, skills and legal authority to become effectively involved in prevention

during the planning, design and construction stages of:

- energy development and production,
- land use,
- transportation methods and systems,
- facilities,
- resource development and utilization, and
- product design and development.

Developing the capacity and the **authority** to function effectively in planning for environmental health is necessary for environmental health practitioners to function in a primary prevention mode, rather than secondary prevention or treatment of the environment after the contamination or pollution has been produced and emitted.

DO YOU WANT TO MOVE FORWARD BY BUILDING AND TRAVELING BRIDGES?

Environmental health practitioners must develop and constantly travel bridges of communication and cooperation connecting a wide variety of groups and agencies involved in the struggle for a quality environment and enhanced public health. A few such interests include land use, energy production, transportation, resource development, health care, public works, agriculture, conservation, engineering, architecture, colleges and universities, economic development, chambers of commerce, advocacy groups, trade and industry groups, and elected officials. These relationships should be dictated by organizational policy, rather than being left to chance or the ever-changing parade of personalities.

AND FINALLY, ARE YOU PREPARED TO MOVE FORWARD TO ADDRESS THE FUTURE OF ENVIRONMENTAL HEALTH?

Environmental health will continue to increase in complexity, and the public will increasingly expect and demand effective services. Demographic changes, resource development and consumption, product and materials manufacturing and utilization, wastes, global environmental deterioration, technological development, international terrorism, changing patterns of land use, transportation methodologies, energy development and utilization, and continuing organizational diversification of environmental health will create additional and unanticipated challenges.

Practitioners must build castles rather than merely lay bricks. They must manage the environment utilizing a plethora of tools, rather than merely inspecting and reacting. Environmental health practitioners must have a vision, a philosophy, a comprehensive view of the field of practice, and understand and market the benefits of environmental health.

The future of environmental health is bright for those who are prepared to be all they can be. There are many potholes in the course of protecting public health and environmental quality. The journey requires vision and steadfastness of purpose, as it is beset by difficult pressures, tempting comfortable detours, political surprises, and frequently offers no short-term gratification or pay-off. There are no rest stops along the way if you wish to survive, thrive and move **forward**.

Environmental health will continue to be basic to the health of the public and the quality of our environment. Environmental health problems, programs, organizations and

requisite practitioner competencies will evolve in ways that are as yet unforeseen.

Anticipating and meeting the future of environmental health will ensure a bright future for those practitioners who are prepared to move **forward**

By taking the steps necessary to be **all you can be**, you will **achieve**, you will move **forward**, and you will **lead**. Now is the time to renew your personal **quest for the best!**

And remember: Environmental health: You can't live without it!

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County Sanitarian,

and is a Commissioned Officer (Navy Captain), U.S. Public Health Service Inactive Reserve.

Gordon also served as President of the 55,000 member American Public Health Association; Chair of the National Conference of Local Environmental Health Administrators; President of the New Mexico Environmental Health Association; Chair of the APHA Section on Environment; Co-Chair of the APHA Action Board; a member of the APHA Science Board; and is a consultant to numerous national public and private groups such as Underwriters Laboratories.

He was a founder of the Council on Education for Public Health (the national accrediting agency for schools of public health), a founder of the American Intersociety Academy for the Certification of Sanitarians (now the American Academy of Sanitarians), as well as a long time member of the National Environmental Health Science and Protection Accreditation Council (the national accrediting agency for environmental health and protection academic programs.)

He has over 240 professional and technical publications.

Gordon is a recipient of the:

National Society for Public Administration (New Mexico Chapter) Distinguished Public Administrator Award - 1996
Univ. of Michigan School of Public Health Alumni Society Distinguished Alumnus Award - 1995
Distinguished Leadership in Environmental Management Award, American Society for Public Administration - 1994
County of Los Angeles Lester Breslow Award for Distinguished Service in Public Health - 1994

University of New Mexico Alumni Association Zimmerman Award for bringing credit to UNM-1993
New Mexico Governors' Distinguished Public Service Award - 1988
American Public Health Association Sedgwick Award (the highest honor bestowed by the APHA) - 1987
American Lung Association Clinton P. Anderson Award for Outstanding Efforts to Improve the Health and Environment of New Mexicans - 1987
New Mexico Public Health Association Larrazola Award - 1987
American Academy of Sanitarians Wagner Award for Leadership Ability and Professional Commitment - 1984
New Mexico Hospital Association Commendation for Leadership in Health Care - 1981
Honorary Fellow Royal Society of Health for Distinguished Work in Connection With the Promotion of Health, London, - 1981
National Environmental Health Association Snyder Award - 1978
New Mexico Public Health Association Award for Distinguished Service - 1970
National Secretaries Association International, Boss of the Year Award - 1970
New Mexico Sanitarians Association Award for Outstanding Contributions to Sanitation - 1967
Sanitarians Distinguished Service Award, International Sanitarians Assoc. - 1962
Western Branch, American Public Health Association Sippy Award for Meritorious Service to Western Public Health - 1962
National Environmental Health Association Mangold Award for Outstanding Contributions to Professional Advancement - 1961
Samuel J. Crumbine Award for Outstanding Development of an Environmental Sanitation Program - 1959

Gordon planned and gained legislative authorization for the:

Albuquerque-Bernalillo County Environmental Health Department,
New Mexico Scientific Laboratory System,
New Mexico Environmental Improvement Agency (now the Environment Dept.), and the
New Mexico State Health Agency.

He also developed and gained enactment of numerous state and local public health and environmental health statutes, regulations and ordinances; testified before the Presidential Committee on Executive Reorganization recommending the creation and scope of the Environmental Protection Agency, and testified before Congressional Committees supporting the passage of several key federal environmental health statutes.

Gordon is listed in:

Who's Who in America, 1988 - current
Who's Who in the West, 1970 - current