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Communication as an Essential Component of Environmental Health Science

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Editor's Note: This is the first of two columns this month about the Environmental Health Training in Emergency Response (EHTER) Awareness Level course. NEHA strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we feature a column from the Environmental Health Services Branch (EHSB) of the Centers for Disease Control and Prevention (CDC) in every issue of the *Journal*.

In this column, EHSB and guest authors from across CDC will highlight a variety of concerns, opportunities, challenges, and successes that we all share in environmental public health. EHSB's objective is to strengthen the role of state, local, and national environmental health programs and professionals to anticipate, identify, and respond to adverse environmental exposures and the consequences of these exposures for human health. The services being developed through EHSB include access to topical, relevant, and scientific information; consultation; and assistance to environmental health specialists, sanitarians, and environmental health professionals and practitioners.

The conclusions in this article are those of the author(s) and do not necessarily represent the views of the Centers for Disease Control and Prevention.

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The science of health communication is becoming as central to the field of environmental health as the science of epidemiology. Within the 21st century, such events as Hurricane Katrina, H1N1 influenza, and concerns about chemical exposure in imported drywall have demonstrated the value of communication as a means of protecting

public health. When such events occur, health professionals must seek disease control interventions but also address audiences' information needs. Health communication science is an essential underpinning for such activities.

Health communication science provides a research-based foundation for developing strategies to inform and influence individual

and community health decisions. The use of research adds scientific rigor to health communication planning and implementation. Health communication professionals are uniquely trained and qualified to conduct communication research, develop effective and duplicable health promotion strategies and campaigns, and evaluate communication effectiveness.

The U.S. Department of Health and Human Services (HHS) included health communication science among the Healthy People 2010 objectives. HHS states that during the first decade of the 21st century, health communication has been an essential contributor to improved personal and community health. Public health professionals must continue to build an accessible, robust reservoir of high-quality, audience-appropriate environmental health information tailored to segments of the population, especially the underserved. Additionally, because environmental health events often are highly visible and polarizing, environmental health professionals would benefit from receiving training in health and risk communication, effective communication methods, and emerging communication technologies.

The HHS mandate also reflects a growing realization that health communication science has made substantial contributions to environmental health. Communication science has helped to develop such enhancements to public health practice as

- a large body of health communication research,
- risk communication tools and methods,
- methods for communicating effectively with news media and other audiences,
- audience segmentation tools to reach culturally and linguistically diverse communities, and

- plain language and other tools to improve health literacy.

These contributions have improved public health message delivery and promoted behavior change. For example, communication helped to address successfully a recent outbreak of cryptosporidium in Utah and Texas.

The practice of communicating with and engaging communities directly makes environmental health unique. Communication of health interventions and recommendations must reach defined segments within affected communities. Environmental health communicators need to collaborate closely with public health scientists to formulate and deliver information and recommendations to affected communities. Messages need to consider literacy and educational levels, audience demographics, local beliefs and values, socioeconomic issues, and discrimination, as well as the potential for stigma that may be attached to issues.

The evolving science of health communication is not without challenges. One such challenge is the notion that health communication is a “soft science.” Occasionally, environmental scientists believe they already are effective health communicators, and they may bypass health communication professionals. Such actions have led to difficulties in message delivery and community interaction. The professional environmental health

community would benefit from establishing a culture in which health communication is an essential component of environmental health science and communication specialists are as indispensable as toxicologists, epidemiologists, or medical officers.

Yet before such a goal can be attained, health communication science must overcome a number of challenges. These include, but are not necessarily limited to, the following:

- the need to develop rapidly an acceptable level of subject matter expertise in a range of diverse technical topics in order to translate science effectively for lay audiences,
- the burden of dramatic increases in the number and nature of communication channels (e.g., text messaging, blogs), and
- cultural and linguistic differences of an increasingly diverse population.

Health communication science is prepared to meet such challenges. The multidisciplinary field of health communication synthesizes knowledge from a range of other disciplines including behavioral science, psychology, and marketing. In cases of natural disasters, emergencies, and situations with the potential for confusion and outrage, decades of research in risk and high stakes communication provide guidelines to produce desired public health outcomes. More recent research is documenting effective uses of social media

and web-based communication. Audience segmentation—that is, the ability to divide an audience into somewhat homogeneous groups—is one tool with which to create audience-centered communication, thus improving message effectiveness.

Among lessons learned from practice is that early in the team-building process, health communication specialists should become an integral part of the environmental investigation and response activity. A benefit of adding a communication specialist to scientific teams is the assurance that essential messages will reach the target audiences. The development of accurate, clear, timely, and understandable health messages is not only cost-effective—it can save lives.

The bottom line is that because health communication specialists provide the communication expertise and combination of research and practice to ensure that health recommendations and messages reach the target audience, they are essential to the success of environmental health interventions. 🌍

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