

Environmental health literacy meeting explores research for better communication

By Joe Balintfy

More than 120 researchers, community partners, and health care professionals, as well as federal, state, and tribal representatives, came together at NIEHS Sept. 22-24 to advance the field of environmental health literacy. Dozens more joined remotely via [watch parties](#)

(http://tools.niehs.nih.gov/conference/peph_annual_meeting_2014/index.cfm/conference/viewpage/id/741)

in California, Georgia, Kentucky, Michigan, Minnesota, Montana, Oregon, and Washington.

Environmental health literacy has recently emerged as a distinct field within health education and risk communication. The theme of the annual [meeting](#) (http://tools.niehs.nih.gov/conference/peph_annual_meeting_2014/index.cfm) of the NIEHS Partnerships for Environmental Public Health (PEPH), Communication Research in Environmental Health Sciences — Environmental Health Literacy, emphasized the importance of conducting research to better understand how to effectively communicate with communities.

“We cannot promote healthier lives without people getting involved, and we cannot do that without excellent communication,” said NIEHS and National Toxicology Program Director Linda Birnbaum, Ph.D., in her opening remarks. “We need to shift our focus from solely the production of educational and risk communication messages, and apply the principles of communication research to discover the elements that will best support environmental health literacy.”

Communication is key

The meeting planners arranged for presentations on different aspects of communication research, as well as a number of interactive discussions among the diverse range of attendees about how to be successful with environmental public health messages.

“What I observed from the meeting was a lot of active conversation from the different partners, whether community resident, researcher, health care professional, or federal representative,” said Liam O’Fallon, program lead for [PEPH](#) (<http://www.niehs.nih.gov/research/supported/dert/programs/peph/>)

. In a series of small table discussions, attendees shared different communications approaches and the challenges of how to apply communications research methodologies to environmental public health efforts.

O’Fallon and Symma Finn, Ph.D., health scientist administrator in the NIEHS Division of Extramural Research and Training, presented on two key aspects of communication research — how to quantify and measure stages of environmental health literacy, and the role that cultural influences play in public understanding of environmental risk.

Finn suggested that the numerous cultural influences, such as media and films, that underlie public understanding of environmental risk need to be taken into account when developing health risk messages. She noted other presentations at the meeting explored best practices for targeting messages to specific audiences.

“There were many excellent talks that provided examples of current research efforts, such as the work to develop Indian health indicators for use in tribal communities, the use of geographic information systems to communicate risk in an easily understood visual format, and successful efforts to target and educate health professionals about environmental health risks,” said Finn.

Group discussions and collaboration

The three-day meeting fostered collaboration by providing for group discussions after presentations, a series of workshops, and



Birnbaum set the stage for the meeting by emphasizing the importance of community outreach and engagement that can contribute to environmental health literacy. (Photo courtesy of Steve McCaw)



Sara Wylie, Ph.D., assistant professor of anthropology at the Social Science and Environmental Health Research Institute at Northeastern University, gave one of 11 workshops. Wylie showed how balloon mapping can be a community-based approach to environmental health research (see related [story](#)). (Photo courtesy of Joe Balintfy)

breaks for attendees to view posters and to network.

“I think there were a lot of opportunities for communication researchers to meet environmental scientists,” pointed out Kami Silk, Ph.D., associate dean of graduate studies and professor of communication at Michigan State University. She shared a table with Rachel McIntosh-Kastrinsky, an environmental health fellow at the U.S. Environmental Protection Agency, who echoed the feeling that there is room for even more collaborative work between environmental health science researchers and communication researchers. “Scientists and communications people — we all need to come together,” she said.

Participants also emphasized that new media, including social media, are forces that can help push environmental health literacy and public health forward.

(Joe Balintfy is a public affairs specialist in the NIEHS Office of Communications and Public Liaison.)



From left, McIntosh-Kastrinsky and Silk shared the importance of listening as part of the communication and collaboration process. (Photo courtesy of Joe Balintfy)



Wylie's homemade satellite includes a reused plastic juice bottle, rubber band harness, and inexpensive digital camera, which can detect hydrogen sulfide contamination and map thermal pollution. (Photo courtesy of Joe Balintfy)

What is environmental health literacy?

Early in the meeting, O'Fallon shared a definition of environmental health literacy, to spark discussion within the context of the NIEHS commitment to communication and community engagement. “At its most basic level, environmental health literacy is the understanding of the link between environmental exposures and health,” he said.

O'Fallon emphasized the underlying issue of connecting the public perception of human health to how health can be affected by environmental exposures. He also proposed an environmental health literacy model, adapted from [Bloom's Taxonomy of Educational Objectives](#)

(http://en.wikipedia.org/wiki/Bloom's_taxonomy)

, which could be used to measure levels of environmental health literacy and to examine impacts of communication interventions.

Referring to closing comments by Gwen Collman, Ph.D., director of the NIEHS Division of Extramural Research and Training, O'Fallon said, “She took that model and populated it with the types of research questions you might ask to achieve comprehension at each of its literacy levels.”

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