

► ENVIRONMENTAL HEALTH ACROSS THE GLOBE

Communicating Environmental Health Science Effectively to the Public

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Editor's Note: We are familiar with the phrase, “Environmental health is extremely local.” While environmental health affects most of us on the local level, we also understand that environmental health is universal and does not know borders. The location, geography, people, and conditions can differ but the science and principles of environmental health do not. In this column, the National Environmental Health Association (NEHA) will present environmental health issues and topics from a global perspective. Understanding environmental health on a global scale can help us recognize how that influences our local spheres and provides learning opportunities to broaden our perspectives.

The conclusions of this column are those of the author(s) and do not necessarily represent the views or official position of NEHA.

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Recently, Dr. David Dyjack, CEO of the National Environmental Health Association (NEHA), was requested to be a European technical workshop rapporteur. The program focused on communicating environmental health science effectively to the public. Dr. Dyjack joined speakers from the World Health Organization, Radiotelevisione Svizzera, Mosquito Alert, and the University of Applied Science and Arts of Southern Switzerland, among others, to craft strategies useful for the environmental public health community. The workshop was organized by the European Mosquito Control Association and was convened on December 2–4, 2024.

In keeping with NEHA's mission to build, sustain, and empower an effective environ-

mental health workforce, the purpose of this summary is to provide our readers with insight into issues of common concern for our profession, independent of where in the world they occur.

The workshop attracted approximately 80 scientists from 18 countries. In large measure, these professionals work on practical mosquito challenges throughout Western and Central Europe and the Mediterranean. The universal challenge of the *Aedes* genus, particularly *Aedes albopictus*, represented the elephant in the room. Not surprisingly, roughly 90% of the attendees shared that they did not possess formal training or education in communications and storytelling.

The workshop agenda was comprised of three segments. An opening panel provided

level setting, which established a common understanding of the communication challenges in contemporary Europe. This segment was followed by presentations of case studies in Greece, Austria, Belgium, France, and Switzerland. The third segment was facilitated by experts who led small group exercises in risk communication, community engagement, partner communication, media relations, and visual arts.

Workshop themes and principles bubbled to the surface that we describe in the following text.

Panel Session

Several important principles were shared during the opening panel discussion.

- **Principle 1:** Communication is the backbone of public health. It enables the flow of critical information that drives health decisions, builds trust, and empowers communities. Effective communication ensures that people have the knowledge and tools they need to protect their health and the health of their loved ones.
- **Principle 2:** Communication should be customized to profoundly local needs and sensitivities. Customizing communication is not only necessary for effective engagement but also a matter of respect, trust, and ethical responsibility. Localized communication fosters understanding, ensures relevance, and increases the likelihood of successful outcomes by addressing the real concerns and realities of a target community. It builds a bridge between public health initiatives and the people they are designed to serve.
- **Principle 3:** People process information through their values, beliefs, and adsorbed identities. These powerful lenses are used to filter and interpret all information.

These personal and social constructs not only shape the way we understand the world around us but also dictate how we react to new ideas, information, and even contradictory facts. The idea that people process information through their values, beliefs, and absorbed identities is grounded in psychological and social theories about cognitive biases, identity formation, and social influence. People have an emotional relationship with data.

- **Principle 4:** Where possible, align communication expectations and thread them into federal, regional, and local levels. A unified narrative is essential for effective public health practice. It ensures that public health messages are consistent, trustworthy, equitable, and efficient. This narrative also helps to build trust, optimize resources, and prevent misinformation. When communication is coordinated across all levels of government, it supports a unified response to public health issues, enhances community engagement, and improves overall health outcomes. Ultimately, alignment facilitates a more responsive, inclusive, and successful public health system.
- **Principle 5:** Cultivate trust. Building trust with communities requires sustained effort, empathy, and integrity. By being transparent, consistent, inclusive, and accountable, you can foster meaningful relationships that help communities feel valued, heard, and respected. Trust is not something that can be demanded or rushed; it must be earned over time through actions that demonstrate commitment to the well-being of the community and its members.
- **Principle 6:** Follow the lasagna principle. The metaphor of lasagna is used to represent

layers—or routine contributions to public awareness of mosquito control issues. Continuous communication and presence build familiarity and trust over time. Environmental health professionals should develop relationships with the media and plan to contribute to the news regularly.

Case Studies

The case studies provided during the workshop highlighted insight into local issues, practice, and strategies for communication effectiveness. A study shared from Switzerland revealed that 80% of mosquito risk is associated with conditions of individual homes and adjacent properties. This finding means that communication strategies must be targeted at individual homeowners, including door-to-door campaigns.

Speakers shared that public health is inherently political, as has been our experience in the U.S. Examples of how election cycles interfere with public health campaigns were shared. Speakers felt our profession should anticipate the distortions created by the political environment. Finally, a deep dive into imported cases from endemic areas, such as South America and the Caribbean Islands, were found to be important in France. Traveler and immigrant health and safety have implications for society at large.

Intensive Small Group Training Modules

The training module on risk communication and community engagement was led by an expert from the World Health Organization.

Strategies centered on how best to deliver messages were a priority of this segment. Countering how we are traditionally trained as scientists to carefully explain uncertainties, methods, and conclusions, the speaker

recommended we get to the concluding message point first when speaking to the general public. Then we can provide the details and caveats. The importance of avoiding negative words and body language were emphasized. As scientists, we should be committed to explaining why an intervention is important. Finally, the art of confronting disinformation and misinformation was explored, and knowing when and how to address falsehoods.

The media relations segment was led by a seasoned journalist. He described the five Ws of reporters that are customarily identified in their work: who, what, where, when, and why. He provided insight into storytelling and the elements of a good story—context, conflict, solution, and impact. In summary, humans convey information by telling stories and most critically, humans remember stories.

The final technical session centered on graphic design and visual arts. A university professor shared how font and colors used in graphics deliver subconscious messages such as danger or serious scientific content. At the same time, fonts and shapes by themselves can convey multiple messages. A cultural context is an important factor to consider for visual communications.

Dr. Dyjack had the privilege of summarizing the conference proceedings and ended with sharing the sentiments of American poet, Maya Angelou: “I’ve learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.” 🌸

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