Environmental Health—What Can’t We Do?

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Environmental health/environmental public health refers to the branch of public health that focuses on understanding how environmental factors can affect human health and well-being. It involves assessing, mitigating, controlling, and preventing environmental hazards that can have adverse effects on individuals or communities.

Environmental health considers factors, including air quality, water quality, food safety, sanitation, waste management, hazardous substances, occupational health, and the overall built and natural environments we all work and live in. It aims to identify and mitigate potential health risks associated with these factors.

Practitioners can conduct research, monitor and assess environmental conditions, develop and implement policies and regulations, provide education and outreach, and collaborate with other sectors to address environmental health issues. The ultimate goal is to protect and improve public health by minimizing or eliminating environmental risks and promoting environmental sustainability.

The specific roles within the environmental public health workforce can include environmental health officers, public health inspectors, epidemiologists, toxicologists, occupational health specialists, environmental scientists, environmental engineers, sanitarians, and policy analysts, among others. Each role contributes to different aspects of environmental health, but all are important to recognize.

As I think about the importance of the work done on a daily basis, I often think about how closely environmental health is aligned with Maslow’s hierarchy of needs. Maslow’s hierarchy of needs is a psychological theory that suggests humans have a set of hierarchical needs that must be met to reach their full potential and achieve self-actualization.

At the base of Maslow’s hierarchy are physiological needs, which include basic requirements for survival such as food, water, shelter, and sleep. Environmental health plays a critical role in ensuring access to clean air, safe drinking water, safe food, adequate sanitation, and proper waste management. By addressing these foundational issues, environmental health directly contributes to meeting the physiological needs of individuals.

Moving up the hierarchy, the next level consists of safety needs, including personal and environmental safety, protection from hazards, and access to healthcare services. Environmental health professionals work every day to identify and mitigate environmental risks such as exposure to pollutants, hazardous substances, or unsafe working conditions. By promoting safe and healthy environments, we contribute to fulfilling the safety needs of individuals.

The third level in the hierarchy is the need for love and belonging, which encompasses social connections, relationships, and a sense of community. Environmental health is often called on by community members when no one else has responded and can foster community engagement, collaboration, and awareness. We create opportunities for people to come together and address shared environmental concerns. By promoting a sense of belonging and cooperation, environmental health efforts contribute to fulfilling social needs.

The fourth level of Maslow’s hierarchy is the need for esteem, which involves feelings of achievement, recognition, and self-worth. Environmental health work can contribute to enhancing self-esteem by empowering individuals to take control of their environment, make positive changes, and participate in decision-making processes related to their communities.

At the top of the hierarchy is self-actualization, which refers to achieving one’s full potential and personal growth. While environmental health might not directly address self-actualization, it can support creating the necessary conditions for individuals to focus on higher-level needs by ensuring a foundation of physiological well-being, safety, social connections, and self-esteem.

As I reflect on the important role the profession has in our communities, it is also imperative to recognize the continual changes in environmental public health practice, often dictated by national or international events. It
is apparent to me that many of us have worked through a number of both unexpected and predictable changes. These instances have likely created some long days and sleepless nights as we worked to address these challenges while we struggled to maintain the important programs and activities that protect community members and must not be cast aside. Our plates runneth over.

**Increased Awareness and Concern:** Over the past three decades, there has been a notable increase in public awareness and concern about environmental issues such as air and water pollution, new diseases and vectors, climate change, and many more. The accessibility of information (validated or not) often brings new issues to community activists and the media that in turn must be addressed. These changes have led to a greater demand for action from governments, businesses, and individuals.

**Advancements in Technology and Data Analysis:** Environmental health practitioners now have access to advanced technologies and tools for data collection, monitoring, and analysis (if we can afford them or if our agency leaders empower us to access them). GIS, remote sensing, and big data analytics have revolutionized the way food safety and environmental data are gathered and used for decision making. The affordability and access to various air and water quality measuring devices make citizen science efforts more and more common. Artificial intelligence (AI) is poised to have a big impact on environmental health practices, too.

**Focus on Climate Change:** Climate change has emerged as one of the most critical environmental challenges of our time. Environmental health professionals are increasingly focusing on understanding the health impacts of climate change, such as extreme weather events, changing disease patterns (e.g., locally transmitted malaria in Florida), and the health consequences of rising temperatures. Environmental health staff are often part of community teams that develop climate action and mitigation plans, as well as have a role in the planning of cooling centers.

**Health Impact Assessments:** Health impact assessments (HIAs) have become more prevalent in environmental health practice. HIAs evaluate the potential health effects of proposed policies, projects, or developments, helping decision makers to make informed choices that consider public health implications. HIAs can be powerful tools to address social determinants of health.

**One Health Approach:** The concept of One Health has gained traction, recognizing the interconnection between human health, animal health, and the environment. Environmental health practitioners are collaborating with professionals in other disciplines, such as veterinarians and ecologists, to address health challenges holistically.

**Environmental Justice:** There is again growing recognition of environmental injustices, where vulnerable and marginalized communities bear a disproportionate burden of environmental hazards. Environmental health practitioners are increasingly advocating for equity and justice in environmental decision making and policy implementation.

**Regulatory Changes:** Environmental regulations have evolved over the last 30 years to address what science has identified as risks to our health. Stricter and new environmental standards and regulations have been implemented to protect public health. The focus on per- and polyfluoroalkyl substances (PFAS) is the most recent example that affects drinking water and so much more.

**Global Issues:** Environmental health is increasingly recognized as a global issue that requires international collaboration. The global food supply system is a great example.

**Response and Recovery:** Environmental health professionals were called on to assume many new roles during the COVID-19 response. Those roles ranged from enforcement to technical assistance as we learned to adapt to the best science available. These roles in recovery from natural disasters are not new, but as disasters are larger and more frequent there is also a larger demand for time and staff.

Environmental public health professionals must continually build their knowledge and be agile in responding to unique circumstances and changing priorities. The environmental health practice continues to evolve as challenges and opportunities emerge in the ever-changing landscape.

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