Chapter 16
Health Professionals Can Protect Water Quality:
Tools for Educators, Advocates, and Practitioners

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ABSTRACT

Emerging research shows adverse health outcomes such as diabetes, obesity, cancer, and neurotoxicity from water pollutants such as flame retardants, endocrine disruptors, and pharmaceuticals. Medical waste and energy use affects water quality and quantity. This chapter provides strategies for health professionals to promote water stewardship at personal, organizational and policy levels. Organizations such as Health Care Without Harm, Alliance of Nurses for Healthy Environments and the Ecology Center offer resources for improving education of health professionals and provide allies for change. Individual advocacy through writing op-eds, policy briefs, meeting with legislators and participation in coalitions allows health professionals to interpret the science behind the need for policy changes. Recommendations for health care curricula prepare students to develop sustainable practices through inter-professional collaboration. Environmentalists can use this information to better engage health professionals in promoting change.

INTRODUCTION

Abundant, clean, safe water should be a concern for all health care providers, such as nurses, physicians and pharmacists. Water is essential for human health. People may live months without food, but will die of dehydration if denied water for just a few days. As such the quantity of available water is critical to health, and so is its quality.

Health care providers (HCPs) should participate in protecting this vital resource to promote the wellness of the community. Such water stewardship is an essential aspect of practicing preventative medicine, ensuring the health of people and the environment that sustains them. This chapter provides a framework and resources for including water stewardship in the education of health care professionals. Although the real-life examples will focus on nursing practice and nursing education, the topics and strategies can be adapted for pharmacists, physicians, nutritionists, social workers or others involved in health care. This chapter will also prove useful to advocates and environmentalists to facilitate outreach to health professionals. A public health philosophy is used to develop a hierarchy of interventions for HCPs to demonstrate water stewardship: 1) individual behavior and practice changes; 2) institutional reforms (e.g. schools or hospitals), and; 3) strategies for reshaping public policy (local, county, state, and federal levels).

Major portions of this chapter are devoted to strategies aimed at changing institutional and public policy, motivated by practical concern for the common good, rather than from any political platform. Effecting change of the scale necessary to reverse trends in water pollution requires actions tackling every level of society as a non-partisan issue. The Health Impact Pyramid (Frieden, 2010) depicts that health interventions aimed solely at convincing *individuals* to make sustained behavior changes--the peak of the pyramid--have less impact than population-based approaches that promote the likelihood of healthy choices. The base of the pyramid represents greater impact through policies that promote water quality; sustainable energy and waste management systems; and manufacturing processes and products that protect workers, neighborhoods and consumers from harmful chemicals and toxicants. Therefore, the objective of this chapter is to provide numerous strategies to foster informed and prudent dialogue among health care professionals, communities and policy-makers that advance environmental and human health.

BACKGROUND

The philosophy for this chapter is grounded by the definition of health promoted by the World Health Organization (WHO, 1948), and in the conceptual framework of determinants of health—both physical and social (Healthy People 2020, 2014). According to the WHO, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (1948, Preamble). In the US, the practice and education of health providers historically focused on the treatment of disease, or a "medical model", but the WHO definition speaks to a more holistic state of health that results from determinants of well-being. HCPs must be attentive not only to the bio-medical aspects and health be-havior of individuals, but also to the physical and social structures that shape human behavior and make holistic health possible. Physical structures include the built and natural environment, and social structures include cultural values and political systems. Together physical and social structures combine to drive and constrain community attributes. Will healthy or unhealthy behaviors prevail? Will social justice or

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