



## **Position Statement Health Professionals and Environmental Health Education**

With the widespread presence of environmental health hazards in our communities and in our world, health professionals must be prepared to diagnose, treat and prevent health conditions related to environmental exposures in their patients and communities. The public expects their health care providers to be prepared to deal with health problems related to environmental health hazards, but all too often providers are not equipped to respond effectively.

Environmental health is defined as "freedom from illness or injury related to exposure to toxic agents and other environmental conditions that are potentially detrimental to human health."<sup>1</sup> Poor environmental quality is estimated to be directly responsible for approximately 25% of all preventable ill health in the world.<sup>2</sup> In 1998 and 1999, 80% of crop farms and 74% of households used pesticides.<sup>3</sup> In 2001 nearly 40% of American children lived in counties that exceeded the eight-hour ozone standard at least one day.<sup>4</sup> In the U.S., the rates of asthma increased 73.9% during 1980-1996.<sup>5</sup> The total costs of environmentally-attributable diseases in American children are estimated at \$54.9 billion annually.<sup>6</sup> To address the broad range of environmental health issues, such as outdoor and indoor air quality, water quality, hazardous waste and toxics, Healthy People 2010 includes several environmental health objectives and highlights the critical role of health care providers in health education and health promotion.<sup>7</sup>

The need for improvements in health professionals' environmental health knowledge has been expressed by leading health institutions. The Institute of Medicine recommends the integration of environmental health concepts into all levels of medical and nursing education.<sup>1,8</sup> The American Medical Association encourages physician educators in medical schools, residency programs, and continuing medical education sessions to devote more attention to environmental health issues and encourages physicians to educate themselves about pesticide-related illnesses.<sup>9, 10</sup> The American Academy of Pediatrics encourages pediatricians to become informed about air pollution problems in the community and published a book on the identification, prevention, and treatment of childhood environmental health problems.<sup>11,12</sup> The American College of Preventive Medicine has urged funding and support for the Agency for Toxic Substances and Disease Registry in their efforts to educate health care providers on toxic substances and how to prevent exposure to these substances.<sup>13</sup> The Ambulatory Pediatric Association has established the National Fellowship Program in Pediatric Environmental Health and proposed competencies for pediatric environmental health specialists.<sup>14</sup> The U.S. Department of Health and Human Services Division of Nursing has included the ability to recognize environmental health problems affecting patients and provide health protection interventions as one of the essential primary care nurse practitioner competencies.<sup>15</sup> Finally, the American Nurses Association has resolved to broaden its work in occupational and environmental health and apply the precautionary approach when an activity raises threats of harm to human health or the environment.<sup>16</sup> A survey of environmental medicine content in U.S. medical schools found that 75% of medical schools require about seven hours of study in environmental medicine over four years, and a survey of

Migrant Clinician Network clinicians found that approximately half had not had any training or courses related to environmental and/or occupational health.<sup>17, 18</sup> A survey of chief residents of U.S. pediatric residency programs found that fewer than half of pediatric programs routinely include pediatric environmental health issues in their curriculum, other than lead poisoning and environmental exacerbation of asthma.<sup>19</sup> A majority of nurse practitioner program directors stated there should be greater emphasis on environmental health in their programs; and a majority of medical school deans and family practice residency directors believed moderate emphasis on environmental health in their programs would be ideal.<sup>20-22</sup> Finally, after physicians attended an interactive asthma seminar, children seen by these physicians experienced fewer hospitalizations and fewer subsequent emergency department visits.<sup>23</sup>

Health professionals and other stakeholders participating in the National Forum for the *National Strategies for Health Care Providers: Pesticides Initiative*, organized by The National Environmental Education & Training Foundation, agreed that addressing environmental health conditions should be part of routine primary care and recommended the creation of a position statement on the need for environmental education for health care providers, especially for physicians, nurse practitioners, physician assistants, nurses, nurse midwives, and community health workers, who work at the frontline of the health care system.<sup>24</sup>

Therefore, The National Environmental Education & Training Foundation recommends that professional associations, decision-making bodies, academic institutions, and practice settings of health care providers endorse the need to address health conditions associated with environmental exposures, and:

- adopt environmental health education and practice skills standards so that health care providers learn and integrate information about environmental exposures in clinical, educational, and preventive health care activities
- incorporate clearly defined environmental exposure educational competencies and practice skills, including the ability to elicit an environmental exposure history, into health care provider education and practice
- use validated tools and resources available through an array of mechanisms, such as professional journals, newsletters, central internet sites, and professional meetings to recognize, manage, and prevent health effects from environmental exposures
- appoint an environmental health “faculty champion” at each medical and nursing school to ensure long-term integration of environmental health content into medical and nursing school curricula
- update requirements to include the recognition, management, and prevention of health effects related to environmental exposures in medical, nursing, and other health care provider education
- promote incentives for faculty to teach core competencies, including financial incentives in the form of grants for faculty development, curriculum development, research, instructional teaching and training aids, and expert consultants; clinical access; release time for faculty development, curricula development, and establishing appropriate clinical sites and teaching venues
- facilitate access to environmental health continuing education programs

March 28, 2008

**The following organizations endorse The National Environmental Education Foundation's Position Statement, Health Professionals and Environmental Health Education (as of March 28, 2008):**

Ambulatory Pediatric Association  
American Academy of Pediatrics  
American Association of Colleges of Nursing  
American Association of Occupational Health Nurses  
American Association of Pesticide Safety Educators  
American College of Occupational and Environmental Medicine  
American College of Preventive Medicine  
American Medical Student Association  
American Nurses Association  
American Public Health Association  
Association of Academic Health Centers  
Association of Clinicians for the Underserved  
Association of Faculties of Pediatric Nurse Practitioners  
Association of Occupational and Environmental Clinics  
Center for Children's Health and the Environment at the Mount Sinai School of Medicine  
Children's Environmental Health Network  
Greater Boston Physicians for Social Responsibility  
Institute for Children's Environmental Health  
Learning Disabilities Association of America  
Migrant Clinicians Network  
National Association of Pediatric Nurse Practitioners  
National Association of School Nurses  
National Medical Association  
National Nursing Centers Consortium  
National Student Nurses Association  
Physicians for Social Responsibility  
Physician Assistant Education Association  
University of Medicine & Dentistry of New Jersey School of Public Health

## References:

1. Pope AM, Snyder MA, Mood LH, eds. *Nursing, Health & the Environment, Institute of Medicine Report*. Washington, DC: National Academy Press; 1995.
2. WHO. *Fact sheet 170*. Geneva, Switzerland: WHO, 1997.
3. Donaldson D, Kiely T, Grube A. 1998/1999 Pesticide Market Estimates. Washington, DC: US EPA, Office of Pesticide Programs, 2002.
4. U.S. Environmental Protection Agency. *America's Children and the Environment: Measures of Contaminants, Body Burdens, and Illnesses*. 2<sup>nd</sup> edition. February 2003. Publication EPA 240-R-03-001.
5. Mannino DM, Akinbami LJ, Moorman JE, Gwynn C, Redd SC. Surveillance for Asthma --- United States, 1980—1999. Division of Environmental Hazards and Health Effects, National Center for Environmental Health, Centers for Disease Control. MMWR. Surveillance Summaries. March 29, 2002/51 (SS01);1-13. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5101a1.htm>. Accessed November 11, 2003.
6. Landrigan PJ, Schechter CB, Lipton JM, Fahs MC, Schwartz J. Environmental Pollutants and Disease in American Children: Estimates of Morbidity, Mortality, and Costs for Lead Poisoning, Asthma, Cancer, and Developmental Disabilities. *Environmental Health Perspectives*. 2002; 110(7):721-728.
7. U.S. Department of Health and Human Services. *Healthy People 2010*. 2<sup>nd</sup> ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
8. Pope AM, Rall DP, eds. *Environmental Medicine: Integrating a Missing Element into Medical Education, Institute of Medicine Report*. Washington, DC: National Academy Press; 1995.
9. American Medical Association. H-135.973 Stewardship of the Environment. CSA Rep. G, I-89; Amended: CLRPD Rep. D, I-92; Amended: CSA Rep. 8, A-03.
10. American Medical Association. Report 4 of the council on scientific affairs, educational and informational strategies for reducing pesticide risks (resolutions 403 and 404). 1994.
11. Committee on Environmental Health. Ambient Air Pollution: Respiratory Hazards to Children. *Pediatrics*. Jun 1993; 91(6):1210-1213.
12. American Academy of Pediatrics Committee on Environmental Health. *Pediatric Environmental Health*. 2<sup>nd</sup> ed. Etzel RA, Ed. Elk Grove Village, IL: American Academy of Pediatrics; 2003.
13. American College of Preventive Medicine. Letter to Senate VA/HUD Subcommittee urging for increased appropriations for ATSDR for FY2004. 2003-045 (H). July 21, 2003. Available at: <http://www.acpm.org/2003045H.htm>. Accessed November 5, 2003.
14. Etzel RA, Crain EF, Gitterman BA, Oberg C, Scheidt P, Landrigan PJ. Pediatric Environmental Health Competencies for Specialists. *Ambulatory Pediatrics*. Jan-Feb 2003;3(1):60-63.
15. U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Division of Nursing. *Nurse Practitioner Primary Care Competencies in Specialty Areas: Adult, Family, Gerontological, Pediatric, and Women's Health*. April 2002.
16. American Nurses Association. American Nurses Association Adopts Precautionary Principle. October 2003.
17. Schenk M, Popp SM, Neale AV, Demers RY. Environmental Medicine Content in Medical School Curricula. *Academic Medicine*. 1996 May;71(5):499-501.
18. Liebman A, Harper S. Environmental Health Perceptions Among Clinicians and Administrators Caring for Migrants. *MCN Streamline: the migrant health news source*. Volume 7, Issue 2. May/June 2001.
19. Roberts JR and Gitterman BA. Pediatric Environmental Health Education: A Survey of US Pediatric Residency Programs. *Ambulatory Pediatrics*. Jan-Feb 2003;3(1):57-59.
20. Bellack JP, Musham C, Hainer A, Graber DR, Holmes D. Environmental Health Competencies: A Survey of Nurse Practitioner Programs. *American Association of Occupational Health Nurses Journal*. 1997 Jan;45(1):6.
21. Graber DR, Musham C, Bellack JP, Holmes D. Environmental Health in Medical School Curricula: Views of Academic Deans. *Journal of Occupational Environmental Medicine*. 1995 Jul;37(7):801-11.
22. Musham C, Bellack JP, Graber DR, Holmes D. Environmental Health Training: A Survey of Family Practice Residency Program Directors. *Family Medicine*. 1996 Jan;28(1):29-32.
23. Clark NM, Gong M, Schork MA, Kaciroti N, Evans D, Roloff D, Hurwitz M, Maiman LA, Mellins RB. Long-term Effects of Asthma Education for Physicians on Patient Satisfaction and use of Health Services. *European Respiratory Journal*. 2000;16(1):15-21.
24. The National Environmental Education & Training Foundation (NEETF). *National Forum Proceedings: National Strategies for Health Care Providers: Pesticides Initiative*. Washington, DC: NEETF; December 2003.