

# Environmental Health in the School Setting: The Role of the School Nurse



National  
Association of  
School Nurses

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## *Position Statement*

### **SUMMARY**

Environmental health is a branch of public health that is concerned with all aspects of the natural and built environment. The World Health Organization (WHO) defines environmental health as those aspects of human health and diseases that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health (WHO, 2011).

It is the position of the National Association of School Nurses (NASN) that the registered professional school nurse (hereinafter referred to as school nurse) is the health expert in the school setting. With a public health focus, the school nurse has the educational and clinical background required to understand the issues of environmental health in the school setting and is in a prime position to advocate for a sustainable healthy school environment.

### **BACKGROUND**

In the school setting, environmental health is affected by the complex interaction of factors inherent in the school's location, its occupants and school activities. Some include, but are not limited to, building materials (insulation and carpets), materials used in art, music and science classrooms, computer labs, health rooms, playground equipment, food preparation areas, waste management supplies and equipment, cleaning products, pest management equipment, fragrances, heating, cooling, and ventilation equipment, gymnasium areas, sports fields, outside parking including recreation areas and custodial and maintenance supplies and equipment.

The WHO recognizes that clean air in schools, homes, offices and other public buildings where people spend a large part of their time is a basic requirement of life and an essential determinant of health and well-being (WHO, 2011, Foreword, p. xv). The Institute of Medicine (IOM) states that asthma, cancer, cardiovascular failure, and developmental defects and delays are known ill-health effects from substandard environmental conditions (IOM, 2011). More than 50 million children attend public school every day for 6-8 hours, making schools the places for prevention – but also mitigation – of chronic health conditions (Department of Education, National Center for Education Statistics – cited in Environmental Protection Agency [EPA], 2012a, p. 2; Duff, 2013). During these hours, children may be exposed to the various contaminants in their building (Paulson & Barnett, 2010, NASN, 2011).

Children have developing organ systems that are highly susceptible to environmental stressors and are at a higher risk of exposure to toxic environmental substances; they breathe more air and drink more water than adults, are physically closer to – and spend more time on – the ground, and engage in more hand-to-mouth contact than adults. As a result, they are more vulnerable to the effects of air and water pollution, pesticides, and other toxins (EPA, 2012b; Paulsen & Barnett, 2010). Children also experience higher exposure rates to environmental pollutants than adults, increasing their vulnerability to potentially harmful chemicals. All these issues contribute to children receiving less than optimal learning experiences and higher absenteeism rates (IOM, 2011).

### **RATIONALE**

A child's environment plays a role in many chronic conditions faced by children today: premature birth, lead poisoning, asthma, some childhood cancers, and some birth defects (Children's Environmental Health Network [CEHN], 2012). For children asthma specifically has many potential causes and triggers that are found in schools: dust mites, cockroaches, rodents, mold, tobacco smoke and outdoor pollution, all with potential for triggering asthma episodes in children (CEHN, 2012). With a training and clinical background that incorporates public health,

the school nurse is ideally placed to assess the learning environment for risk factors, educate the community on the impact of environmental exposure, and advocate for the need to address environmental pollution issues. As the first responder, the school nurse is able to identify trends and abnormal illnesses that may be the result of environmental toxin exposure. The school nurse has the credibility to provide scientifically sound information about environmental issues and toxin exposures to school and community leaders and is well placed to serve on committees that affect safe environmental practice (Agency for Toxic Substances and Disease Registry [ATSDR], 2012).

## CONCLUSION

“Environmental preferability, sustainability, ‘green’, reducing your environmental footprint...these terms have become part of our everyday lexicon as schools, businesses, households, and the public sector have increasingly focused on strategies and tactics designed to reduce their negative impacts on the environment and human health” (Balek, 2012, p. 16). Poor environmental quality results in children suffering ill health and lost academic instruction during their school years. The long-range burden of this will often continue into their adult lives, resulting in adults with chronic health conditions, and may affect their opportunity to excel in a chosen career.

The school nurse is witness to the daily consequences to school children when they arrive at the health room or are absent from school, but the associated costs resulting from doctor visits, hospitalization, and loss of working days for parents affect the greater community. These repercussions may result in financial hardship on the family and subsequently an economic strain on the nation’s economy. By advocating for a healthy school environment, the school nurse will provide children with a greater chance for a healthy future, with reduction of chronic disease. The school nurse promotes a healthy future for children by providing them education about their illness and teaching them to also advocate for themselves regarding environmental factors contributing to their illness.

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