

Environmental Health

Position Statement

NASN POSITION

It is the position of the National Association of School Nurses (NASN) that to protect and promote the health of all children, robust environmental health protections must be in place, and the inequities that lead to environmental injustice must be eliminated. The environment is a powerful social determinant of health and a critical factor in our children's development, academic performance, and future socioeconomic status. The registered professional school nurse (hereinafter referred to as school nurse) assesses for environmental health hazards, implements and coordinates individual health and social interventions, and addresses social determinants of health based on the National Association of School Nurses (NASN) *Framework for 21st Century School Nursing™* (NASN, 2016), to positively influence children's environmental health (Campbell & Anderko, 2020).

BACKGROUND AND RATIONALE

The National Environmental Health Partnership Council defines *environmental health* as the branch of public health that focuses on the relationships between people and their environment, promotes human health and well-being, and fosters healthy and safe communities (American Public Health Association [APHA], 2020a, para. #1). Children are particularly vulnerable to the effects of the environment on their health (APHA, 2020b; World Health Organization [WHO], 2020a). Exposures to environmental hazards can occur at school, at home, or in the community (Firestone, Berger, Foos, & Etzel, 2016; Jones, Anderko, & Davies-Cole, 2020). Therefore, to protect and promote children's environmental health--prevention, intervention, and mitigation efforts must focus on all of these settings. The vast majority of U.S. children and youth, 56.6 million in 2019, (National Center for Education Statistics, n.d.) attend public or private schools. Unhealthy school environments compromise health, attendance, concentration, and academic performance (Paulson & Barnett, 2016). School nurses are often the primary health professionals who protect and promote child health and focus much of their attention and interventions in the school setting (NASN, 2018). School nurses are also ideally situated to advocate for policies and programs that improve community environmental health, particularly in under-resourced communities (Chalupka & Anderko, 2019; Kranjac, Denney, Kimbro, Moffett, & Lopez, 2018; Jones, Anderko, & Davies-Cole, 2020; Campbell & Anderko, 2020). School nurses, as change agents, advocate for healthy communities and seek to build health equity into policy and school nursing practice.

The World Health Organization estimates that 24% of all global deaths and 26% of all deaths among children are linked to the environment (WHO, 2019). While most of the deaths occur in low- and middle-income countries, the United States has the highest environmental burden of disease compared to other high-income countries (Peterson-Kaiser Health System Tracker, 2017). Children are more highly exposed and vulnerable to environmental health hazards compared to other age groups due to a variety of physiological and behavioral factors (APHA, 2019; APHA, 2020b; Firestone et al., 2016; WHO, 2020b). While all children are disproportionately affected by environmental exposures, children living in under-resourced, minority communities are at even higher risk (Mohai & Saha, 2015; Bagby, Martin, Chung, & Rajapakse, 2019). In addition, rates of developmental disorders and other non-communicable diseases in children are rising, leading to additional concerns about the effects of the environment on child health (Koehler et al., 2018; Kranjac et al., 2018, Moffett, & Lopez, 2018; Landrigan, Sly, Ruchirawat, Silva, Huo, Diaz-Barriga et al., 2016; Naviaux, 2020). As cited in Galvez et al. (2019), associations have been identified between environmental exposures and increasing rates in the incidence and prevalence of pediatric asthma, birth defects, dyslexia, mental retardation, attention-deficit/hyperactivity disorder, autism, childhood leukemia, brain cancer, preterm birth, and obesity.

Key assessment areas to consider in order to identify potential environmental risks within the school, home, and community environment include

- Indoor and outdoor air quality (Jones, Anderko & Davies-Cole, 2020; Payne-Sturges et al., 2019; Everett-Jones, Foster & Berens, 2019),
- Water quality (Schaidler, Swetschinski, Campbell, & Rudel, 2019),
- Building materials, cleaning products (Abrams, 2020),
- Chemical exposures (e.g. agricultural products, pesticides, radon, lead, mercury, arsenic) (Anderko, 2018; Anderson, Eure, Orr, Kolbe & Woolf, 2017; Hanna-Attisha, M., 2017; Tinney, Denton, Sciallo-Tyler, Paulson, 2016),
- Mold (Polyzoi, Polyzois, Koulis, 2017),
- Waste exposure, anthropogenic climate change (Chalupka & Anderko, 2019), and
- Environmental disasters, and energy use (U.S. Environmental Protection Agency [EPA], 2020a).

In the nursing profession, recognition that human health is inextricably dependent on the health of the environment is foundational (American Nurses Association [ANA], 2007). In a call to action, ANA (2007) set out principles and implementation strategies for all nurses to assess and address environmental issues in their practice. Nationally, the 1993 publication of the National Academy of Sciences Report, *Pesticides in the Diets of Infants and Children*, was a seminal event in the recognition of the unique vulnerabilities of children to environmental hazards (Galvez et al, 2019). Firestone et al., (2016) cites this report leading to the EPA's increased consideration of environmental health risks to children. Despite this recognition, currently no federal, state, or local agency is authorized, funded, or staffed to protect children in the school setting from environmental health hazards (Paulson & Barnett, 2016). Voluntary guidelines do exist, notably the EPA State School Guidelines developed to assist states in establishing and implementing environmental health programs for schools (EPA, 2019).

A report from APHA (2019) recognized that there is no federal agency that guarantees the safety of school environments to protect school-age children from environmental hazards and risks. To address this deficiency, funding should be provided to federal agencies, including the Centers for Disease Control and Prevention and the EPA, to develop a coordinated strategy to address healthy school environments for all children. In addition, NASN supports

- Inclusion of EPA's Healthy Schools Grant Program (EPA, 2019b), in yearly federal budgets.
- Passage of the Rebuild American Schools Act (GovTrack.us, 2021).
- Adequate funding of the EPA's Green and Healthy Schools Initiative, Indoor Air Quality Tools (IAQ) for Schools, Integrated Pest Management (IPM), School Chemical Cleanout, Air Now/EPA Air Quality Flag, and Reducing Lead in Drinking Water programs.
- Robust environmental health protections in schools, for example, mandatory IAQ monitoring, use of green cleaning products, and annual drinking water testing.
- Timely data from the Government Accounting Office for use in America's schools through the Condition of America's Public School Facilities Report.
- Protection of the Clean Air Act and Safe Drinking Water Act to ensure that these safeguards remain in place and are enforced.
- Disaster preparedness plans that include climate change-related extreme weather events.

The health and welfare of our nation's children and youth are dependent upon the quality of the environment in which they live, learn, play, and work. NASN recognizes that increasing numbers of environmental hazards are contributing to a rise in the incidence of developmental disorders and non-communicable diseases. While all children are uniquely vulnerable to the negative effects of an unhealthy environment and require special protection, low income minority children are more likely to experience adverse effects from disparities in exposures, including unhealthy air, water, and toxic hazards (EPA, 2020a). To enable equitable environmental protections and support for the healthy development of all children, funding must be adequate and federal, state, and local agencies must coordinate efforts in data collection, communication, and enforcement of existing laws, rules, and regulations.

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“To optimize student health, safety and learning, it is the position of the National Association of School Nurses that a professional registered school nurse is present in every school all day, every day”

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