

SUMMARY

It is the position of the National Association of School Nurses (NASN) that data on children's deaths in school should be recorded, analyzed and reported at the local, state and national levels. The systematic review of data on child mortality is necessary to drive interventions and policies that will decrease mortality from injuries, violence, acute illness and chronic disease in the school setting (Bergren, 2010; Christian & Sege, 2010).

BACKGROUND

Schools are not immune from the threat of fatal injury or death of school-age children. Schools today provide care for an increasing number of chronically and acutely ill children. Medically fragile children in schools require ventilators, tube feedings, medication, and other complex nursing care procedures (Allen, Henselman, Laird, Quinones, & Reutzel, 2012; Bergren, 2011; Centers for Disease Control and Prevention [CDC], 2015; National Association of State Chronic Disease Directors [NACDD], 2016; Perrin, Anderson, & VanCleave, 2014). Chronic conditions may put students at higher risk for unexpected death. In 2015, 8.4% of children were identified as having had asthma (CDC, 2016a). Diabetes is one of the most common chronic diseases in children and adolescents, affecting 167,000 children in 2009 (CDC, 2016b). Ten percent of children over 6 years of age are allergic to peanuts, potentially at risk for life threatening anaphylaxis (Liu et al., 2010). Epilepsy primarily affects children who also bear the burden of its most catastrophic forms (Institute of Medicine [IOM], 2012). Overall, 15% to 18% of children and adolescents have a chronic health condition (Perrin, Bloom, & Gortmaker, 2007). School children are at risk of injuries in classrooms, gyms, playgrounds and playing fields. Drug and alcohol overdoses, suicide, violence and homicide can also occur at school (American Academy of Child and Adolescent Psychology [AACAP], 2013).

There is a dearth of data surrounding the health of the 50.4 million students who attend school every day (Kena et al., 2016). While voluminous amounts of data on children are reported in various national health data bases in hospitals, clinics and primary care offices, data is not collected or analyzed on a national level about the intensity or quality of health care that is delivered in school every day (Patrick et al., 2014).

The lack of data on students' health also extends to a corresponding lack of data on students' deaths. In the United States, deaths of employees that occur at work are monitored and investigated by the Occupational Health and Safety Administration (OSHA). OSHA can specify that exactly 4,836 United States workers died on the job in 2015 (Bureau of Labor Statistics, 2016). However, the number of children who die at school or who die following an adverse event at school is often known only from anecdotal or newspaper accounts limiting the ability to understand causes or identify preventative measures (Malone & Bergren, 2010). Only half of all states review child death from all causes (Christian & Sege, 2010). Forty-three states participate in the National Center for Fatality Data Review and Prevention (NCFRP, 2016); but, despite asking if school was the location of the death, not all data elements are submitted by all states. A few states, including North Carolina and Massachusetts, collect and publish public data on chronic and acute health conditions of students in public schools (Massachusetts Department of Public Health, 2013; North Carolina Healthy Schools, 2016; Selekman, Wolfe, & Cole,

2016). However, many states do not collect that data, and no national repository exists on child deaths at school nor on whether they are accidental or due to disease or violence.

RATIONALE

Preventable child mortality is classified as a “never event” (Agency for Health Research and Quality [AHRQ], 2013). A never event is a rare, devastating, preventable adverse event (National Quality Forum [NQF], 2011). While there are widespread initiatives to eliminate devastating “never events” in healthcare settings, there is not a similar broad effort to address dire outcomes in the school setting. The systematic review of child mortality in schools would drive population level data analysis and interventions for a safer school environment for all children. The increasing number and complexity of students with serious health conditions require vigilance to prevent those conditions from exacerbating and to reduce preventable child fatalities. Registered professional school nurses need to advocate for the collection and analysis of student health data at the local level and for the reporting and aggregation of student health data at the state and national level in order to inform and advise health and education policy makers (Bergren et al., 2016; Christian & Sege, 2010; Johnson, Bergren, & Westbrook, 2012).

CONCLUSION

Just as there are federal laws to monitor deaths in the workplace, there needs to be a parallel federal system for child deaths at school. Registered professional school nurses should accept opportunities to serve on state and national child fatality review committees to provide input into policies that protect children at school and in the community.

REFERENCES

- Agency for Health Research and Quality. (2016). *Patient safety primers: Never events*. Rockville, MD: AHRQ Patient Safety Network. Retrieved from <https://psnet.ahrq.gov/primers/primer/3/never-events>
- Allen, K., Henselman, K., Laird, B., Quinones, A., & Reutzler, T. (2012). Potential life-threatening events in schools involving rescue inhalers, epinephrine auto-injectors, and glucagon delivery devices: Reports from school nurses. *The Journal of School Nursing, 28*, 47-55. doi: 10.1177/1059840511420726
- American Academy of Child and Adolescent Psychology. (2013). *Teens: Alcohol and other drugs*. Washington, D.C.: AACAP. Retrieved from https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Teens-Alcohol-And-Other-Drugs-003.aspx
- Bergren, M.D., Maughan, E.D., Wolfe, L.C., Johnson, K.H., Cole, M. & Watts, H.E.S. (2016). Step Up and Be Counted! update: The national uniform school nurse data set. *NASN School Nurse, 31*, 301-304. doi: 10.1177/1942602X16662986
- Bergren, M. D. (2010, September 19). Reducing preventable child mortality at school. [eLetter] *Pediatrics*. doi:10.1542/peds.2010-2006. Retrieved from <http://pediatrics.aappublications.org/content/126/3/592.abstract/reply>
- Bergren, M. D. (2011, May 24). Health care utilization for children dependent on long-term mechanical ventilation: Impact on US schools [eLetter]. *Pediatrics*. Retrieved from http://pediatrics.aappublications.org/content/early/2011/05/11/peds.2010-2026/reply#pediatrics_el_51360
- Bureau of Labor Statistics. (2016). *2015 Census of fatal occupational injuries*. Washington, D.C.: United States Department of Labor. Retrieved from <http://www.bls.gov/iif/oshcfoi1.htm#charts>

- Centers for Disease Control and Prevention. (2015). *Diabetes report card 2014*. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Retrieved from <https://www.cdc.gov/diabetes/pdfs/library/DiabetesReportCard2014.pdf>
- Centers for Disease Control and Prevention. (2016a). *Data, statistics, surveillance: Asthma surveillance data*. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Retrieved from <https://www.cdc.gov/asthma/asthmadata.htm>
- Centers for Disease Control and Prevention. (2016b). *Chronic diseases: Leading cause of death and disability in the United States*. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Retrieved from <https://www.cdc.gov/chronicdisease/overview/>
- Christian, C. W. & Sege, R. D. (2010). Child mortality review. *Pediatrics*, 126, 592 – 596. doi: 10.1542/peds.2010-2006.
- Institute of Medicine. (2012). *Epilepsy across the spectrum: Promoting health and understanding*. Washington, D.C.: National Academies Press.
- Johnson, K. H., Bergren, M. D. & Westbrook, L.O. (2012). The promise of standardized data collection: School health variables identified by states. *The Journal of School Nursing*, 28, 95-107. doi: 10.1177/1059840511426434
- Kena, G., Hussar, W., McFarland, J., de Brey, C., Musu-Gillette, L., Wang, X.,...Dunlop Velez, E. (2016). *The condition of education 2016* (NCES 2016-144). Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved from <http://nces.ed.gov/programs/coe/>
- Liu, A.H., Jaramillo, R., Sicherer, S.H., Wood, R.A., Bock, S.A., Burks, A.W., ... Zeldon, D.C. (2010). National prevalence and risk factors for food allergy and relationship to asthma: Results from the National Health and Nutrition Examination Survey 2005-2006. *Journal of Allergy and Clinical Immunology*, 126, 798-806. doi: 10.1016/j.jaci.2010.07.026
- Malone, S. K., & Bergren, M. D. (2010). School nurses save lives: Can we provide the data? *The Journal of School Nursing*, 26(5), 344-351. <http://dx.doi.org/10.1177/105984051376384>
- Massachusetts Department of Public Health. (2013). *2012 Program update: Essential school health services*. Boston, MA: Massachusetts Department of Public Health. Retrieved from <http://www.mass.gov/eohhs/docs/dph/com-health/school/eshs-report-11-12.pdf>
- National Association of Chronic Disease Directors (NACDD). (2016). *Opportunities for school and hospital partnership in the management of chronic health conditions*. Atlanta, GA: NACDD. Retrieved from: https://c.ymcdn.com/sites/chronicdisease.site-ym.com/resource/resmgr/school_health/NACDD_School_and_Hospital_Pa.pdf
- National Center for Fatality Data Review and Prevention (NCFRP). (n.d). *Data dissemination*. Washington, DC: Michigan Public Health Institute. Retrieved from <https://www.ncfrp.org/resources/data-dissemination/>
- National Center for Fatality Data Review and Prevention (NCDRP). (2016). *Child death review case reporting system: Case report: Version 4.1*. Washington, DC: Michigan Public Health Institute. Retrieved from https://www.ncfrp.org/wp-content/uploads/NCRPCD-Docs/CDRPrintCase_v4-1.pdf
- National Quality Forum. (2011). *Serious reportable events in healthcare – 2011 update*. Washington DC: National Quality Forum. Retrieved from <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=69573>

North Carolina Healthy Schools. (2016). *North Carolina Annual School Health Services Report 2014-2015*. Raleigh, NC: North Carolina Department of Public Instruction and the North Carolina Department of Health and Human Services. Retrieved from <https://www2.ncdhhs.gov/dph/wch/stats/>

Patrick, K., Mendonca, L.L., Maughan, E.D., Wolfe, L.C., Bergren, M.D., Johnson, K.H., ... Cole, M. (2014). Standardized dataset for school health services: *Step Up and Be Counted! NASN School Nurse*, 29, 236-240. doi: 11771942602X14544448

Perrin, J.M., Anderson, L. E. & VanCleave, J. (2014). The rise in chronic conditions among infants, children, and youth can be met with continued health system innovations. *Health Affairs*, 33, 2099-2105. doi: 10.1377/hlthaff.2014

Perrin, J.M., Bloom, S.R., & Gortmaker, S.L. (2007). The increase of childhood chronic conditions in the United States, *Journal of the American Medical Association*, 297, 2755-2759. doi:10.1001/jama.297.24.2755

Selekman, J., Wolfe, L. C., & Cole, M. (2016). What data do states collect related to school nurses, school health and health care provided? *The Journal of School Nursing*, 32, 209-220. doi:10.1177/1059840515606786

Acknowledgement of Author:

Martha Dewey Bergren, DNS, RN, NCSN, APHN-BC, FNASN, FASHA, FAAN

Adopted: June 2012

Revised: June 2017

Suggested citation: National Association of School Nurses. (2017). *Child mortality in the school setting* (Position Statement). Silver Spring, MD: Author.

All position statements from the National Association of School Nurses will automatically expire five years after publication unless reaffirmed, revised, or retired at or before that time.

www.nasn.org

National Association of School Nurses

1100 Wayne Avenue, Suite 925

Silver Spring, MD 20910

1-240-821-1130