

## EDITORIAL

# School Nursing Beyond Medications and Procedures

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**Children spend 6 to 7 hours** per day, 180 days per year in school in the United States. While education is the chief purpose, consideration for children's health is a significant role of schools. Like math and reading, students need to be taught how to have an optimally healthy life. We want each student to return home



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at the end of the day at least as healthy as when he or she arrived. School-age children, especially adolescents, young students, and those developmentally immature, are more apt than are adults to share pathogens through close contact and shared body fluids. Children with special health care needs are integrated into regular school and classroom settings where medications and medical procedures are delivered. Numerous health conditions manifest first as behavioral and educational problems. Many students have suboptimal access to primary and secondary health care, making schools the first place where their underlying physical and mental illnesses become apparent.

The staffing of school health-related services is the subject of a study by Wang and colleagues<sup>1</sup> in this issue of *JAMA Pediatrics*. In any economic evaluation of health interventions or resources, the specific outcomes that are measured are critical.<sup>2</sup> The effects of improved school attendance on parents' and schools' budgets were measured in this article. Additional beneficial outcomes of school nursing services need to be assessed. These plausibly include the cost-benefit of higher graduation rates, improved grades and standardized test scores, reduced use of community emergency services, better compliance with prescribed medical management, reduced transmission of infectious diseases, and earlier diagnoses and treatment. The authors recognize that they omitted school nursing roles that require the most training and creativity. These omitted roles may turn out to be the most cost-beneficial to society.

Great variation exists among and within states for how school districts staff their health-related services. In some counties, school health staffing and resources are responsibilities of public health departments. In most locales, school health programs are organized entirely from within the educational sector, where they compete for the same dollars that can be used for instruction and educational infrastructure. During the past decade and longer, fluctuations in school budgets have necessitated that districts modify their models of health service provision, a circumstance that is disruptive to health program planning. For example, many schools that once may have been staffed by full-time, certified, registered school nurses may now be staffed by unlicensed assistive personnel (UAP) operating under the indirect supervision of a nurse. If

there is any good news from this, it is that school health is a field that is naturally prepared for comparative research.

Wang et al<sup>1</sup> address the administration of medications, the triage of symptomatic students, and school-based health screens as the tasks of school nurses to determine the cost-benefit of school nursing. Having a registered school nurse administer medications, perform medical procedures, and conduct health screens in school was compared with a scenario where no one performs these functions in school. However, even though in some states, school nurses are prohibited from delegation, in thousands of schools across the United States, these tasks are effectively covered by licensed vocational nurses, licensed practical nurses, or UAP.<sup>3</sup>

The strength of the cost analysis by Wang et al<sup>1</sup> is that they compared school nurses with UAP for the tasks of dismissing students early from school for injury or illness. They also estimated differences in costs for schools with and without a school nurse, based on how much time teachers spent on health issues. A weakness in this cost analysis is the assumption that without a school nurse, medications would not be administered and procedures would not be performed. The authors describe this comparative scenario as "hypothetical" because, in fact, schools without a registered school nurse are mandated by law to have other personnel provide these services. Caution must be taken with cost analyses of hypothetical situations. An analogous situation would be to assume that if no plastic surgeon were available in an emergency department to suture lacerations, then patients would go home unsutured. For emergency department lacerations, as for school-age students requiring medications and procedures, many other professionals with less training can and do perform these functions adeptly.

It is unfortunate when educators, health professionals, public health officials, and parents regard school nurses' ability to safely administer medications and provide health-related procedures as this profession's unique value to schools. On occasion, some nursing organizations have argued that the administration of medications (eg, oral and inhaled medications, insulin, and rectal diazepam) should be performed solely by school nurses, not other personnel, and that only school nurses can truly assess when a student is qualified to receive an "as-needed" medication.<sup>4,5</sup> These arguments are not disingenuous. Yet, many school nurses who train unlicensed school staff can attest to the reliability of trained UAP to correctly identify a seizure, recognize respiratory distress, interpret high glucometer and peak flow meter readings, and distinguish between distressed-looking students with headaches and those who claim to have headaches but skip merrily into the health office conveniently during a math test.

Although they administer medications and conduct health care procedures, UAP, licensed vocational nurses, and licensed practical nurses cannot reliably assume numerous important functions in the field of school health. By virtue of their training in the medical and educational sectors, school nurses are the best bridges between these sectors. With their feet in both worlds, school nurses understand the occupational culture and jargon of educators as well as the culture and language of the health sector.<sup>6</sup> This places school nurses in a unique position as interpreters between two occupational cultures, an important function for nurses who operate as child advocates and as parent advisers. School nurses regularly educate other members of school staff on diseases affecting students' school functioning and safety: eating disorders, mental and emotional problems, asthma, type 1 and type 2 diabetes mellitus, epilepsy, tic disorders, encopresis, food intolerances, allergies, irritable bowel syndrome, myopia, and just about any condition that perplexes non-health professionals confronted with a student who demonstrates the signs and symptoms of these maladies.<sup>7-10</sup> Similarly, school nurses, unlike licensed vocational nurses, licensed practical nurses, or school administrators, are comfortable communicating with students' physicians to better understand a medical condition and its management and prognosis. School nurses explain to physicians the vast range of resources and accommodations that schools can offer, as well as those educational laws that protect students' health rights in school.

School nurses are in the best position to assess children with special health care needs and plan for their safe integration into the school setting. They investigate health factors that underlie recurrent absenteeism, contribute to educational underachievement, and manifest as social or behavior problems in the school setting.<sup>11,12</sup> Few, if any, other professions can provide both educational and health case management. School nurses, more than any other professional in the school setting, are adept at conducting one-on-one counseling and handling school policies related to student sexuality (eg, puberty, sexual identity, safe sexual practices, and pregnancy).<sup>13,14</sup> Through their associations with their professional organizations and their own journals, school nurses are ideally poised to evaluate whether and how to implement schoolwide programs, such as automated external defibrillator placement, health screening, immunization clinics, or emergency health planning for disasters.<sup>15</sup> In summary, the true cost-benefit of school nurses are their analytical brains, not their brawn, for procedures.

Some sparse published literature on the economics of school health exists for schools in the United States, United Kingdom, and Canada.<sup>16-19</sup> School health is a field that still begs the input of health economists. Nursing and other professional organizations publish guidelines describing the role of a school nurse and recommend student-to-nurse ratios,<sup>20</sup> but these ratios lack a solid evidence base. Wang et al<sup>1</sup> reopen this vital discussion and leave room for much more.

#### ARTICLE INFORMATION

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