

Impact of School Nurse Presence on Early Releases Due to Illness and Teacher Time Devoted to Health Issues: Years 1 & 2 Data

The primary purpose of the research was to study the impact of school nurse presence on early releases due to illness and teacher time devoted to health issues. The study is a collaborative partnership among Western Carolina University, Community Foundation of Henderson County, Henderson County Public Schools Office, and the Henderson County Department of Public Department. This is a cumulative report of years one and two of a three year project with elementary schools in Henderson County, North Carolina. Survey response rates were similar both years (66.7% year two and 62.5% year 1). Year two data reflects a slightly higher percentage of regular education (96.3% vs. 91.5%) and lower exceptional class (3.7% vs. 8.0%) responses. The average class size remained stable at approximately 20 students; as did the percentage (68%) having teaching assistants (TA) with them working an average of 3-4 hours per day.

Teacher perceptions of the impact of having a school nurse present on-site indicate more than 80% each year strongly agree or agree that when the school nurse is present there are fewer early releases, less time spent on health issues, more time spent teaching, and an increased confidence that students with chronic illnesses are safer. These perceptions were also supported by teacher anecdotal notes both years. The anecdotal comments continue to focus on the need for a full time nurse and the difficulty teachers have knowing when the assigned nurse is on-site. One example of the need was summarized by this teacher as

[t]he unpredictability of diabetic children may sometimes take 1-2 hours of assistant time to monitor and support. We have grave concerns about the responsibility this involves for the best health of our children in addition to time not available for instructional support. When there is an absence of either the T or TA, the concerns are multiplied. Just the record keeping and dietary management easily occupy 30 minutes per day. Often we have to track down the nurse at another site (school) and spend time with calls back and forth over diabetes issues."

Adjustments were made to the survey tool following evaluation of year one data analyses. The researchers, in collaboration with the partners, determined that certain health issues needed clarification. The revised survey included adding, qualifiers or examples to the terms, allergies, bathroom, calling parents, general aches and pains, mental health, other and sleepy. For example mental health was changed to "diagnosed mental health issues" and general aches and pains specified it should be those minutes not counted elsewhere. Year one data did not discriminate between time spent on health issues by the teacher or TA; therefore, the last improvement to the survey was to differentiate the time spent on health issues by the teachers versus the TA.

The time spent on health issues in year one, in rank order, was "other, bathroom, mental health issues, calling parents and general aches and pains;" whereas in year two the top five health issues by teachers were "fever, bathroom, calling parents, stomach ache, and general aches and pains;" whereas the TAs ranked the order as "bathroom, calling parents, stomach ache, cuts & sores, general aches and pains." Of note is the teacher's high ranking of fever and the TA ranking of cuts and sores in their top five. Ranked number one with teachers, fever would represent a potentially higher acuity health issue; while cuts & sores could appropriately be handled by a TA or other surrogate in the classroom.

As an aggregate, teachers in year one spent an average of 80 minutes managing health issues the day of the survey compared to 46 minutes year two. The decrease in year two compared to year one may be due to a flu outbreak during the survey time period year one and the addition of specific definitions and examples of health issues (e.g., bathroom, mental health and other) year two may have impacted the significantly reduced minutes for "other" and "bathroom". These data do not reflect the time saved by the teacher referring the student to the nurse nor does it reflect time saved due to nurse follow up of students with chronic health issues. The data reflect only the minutes the teacher spent managing the issue in the classroom only on the survey day. The fact this particular day was a "good" day was expressed by several

teachers in the anecdotal notes. One teacher explained, “[my] seizure child was absent today. I keep my cell phone on at all times and am in constant contact to see if small seizures are occurring (looks like she is day dreaming). All specialists and TA monitor class;” Another teacher wrote “[we] have diabetic students, students with kidney failure, severe allergies. Students with seizure disorders, autoimmune disorders with no full time nurse;” and “this was a calm day! Usually address more issues on a daily basis and need a nurses advice/input!”

The number of hours the school nurse was on-site per week ranged from 7 to 15 hours year two compared to 4 to 30 hours year one. Eighty-nine percent of the school nurses who were on-site were present two hours or less ($x = 1.98$) both years. During the hours spent in the assigned school the day of the survey, the school nurses reported assessing children with lacerations, ankle pain, knee pain, vomiting, stomach ache, sore throat, hand injury, and diabetes and, in addition, doing (1) medication management, (2) immunization record reviews, (3) communications with physicians, (4) checking records, and (5) developing or updating care plans and immunization records.

Data for early releases were collected by the school nurse the day of the survey. A strong positive correlation in year one highlighted data related to the unknown reasons students were released from school. Students were more likely released early on the day of the survey in year two for illness rather than unknown reasons and there was a strong positive correlation between the number of students seen by the nurse prior to release when the nurse was on-site (92.5%, up from 46% in year one). The strong negative correlation between nurse presence and the hours worked in year one accounted for 60% of the variance between the two. This interpretation was consistent with year one data that 58% of the schools with a nurse present on-site had fewer early releases.

Data related to teacher referrals when the nurse was not on-site were based on the teacher’s recall of the average number of referrals per week and to whom they referred students. Of the total responses both years, an average of 20 referrals was made per week. Year two data specified to whom these referrals were made. In rank order, the referrals were made to office staff, including principal or TA with special training; another teacher; or a counselor.

Medical home status data categorized as (1) health department, (2) private physician, (3) emergency department or (4) other medical home situation, were sought for both years. Medical home data were unattainable years one or two due to the variation among schools of student record keeping.

In summary, teacher concerns both years ranged from insecurity about their knowledge, skill and ability to manage health issues of children in the absence of a readily available school nurse to frustration about the instructional time forfeited when dealing with health issues. Anecdotal notes continued to provide powerful statements and insights into the teacher’s day. Frustrations of trying to teach and to be a “nurse”, as well as concerns for the welfare of the children, are apparent. The statements reflect their belief that if a nurse were present on a daily basis students with health issues would be given the care they need, the teacher could focus on the student learning, it would decrease their concerns about possible liability issues due to making health issue decisions, and there would be fewer early releases from school.

Based on the analyses of years one and two data the researchers, rather than repeat the same survey year three, recommend changing from a written survey sent to all teachers in Henderson County elementary schools to focus group interviews with five focus groups representing elementary teachers from the four county school districts and a group with the nurses serving those four schools. Open-ended questions for the teachers will focus on when a health issue “rises” to the level of needing a school nurse, health issues they will always handle themselves, and would the types of health issues referred change if a nurse were on-site full time. The open-ended questions for the school nurse would include similar questions but from the nurse’s point of view, e.g. health issues the teacher should always handle versus referring to the nurse?