School nurse care management of selected students with complex health needs involves use of a plan of care that includes specific interventions with achievable goals, measurable outcomes and regular evaluations. Students may have one or more planned outcomes based on identified needs. School nurses may care manage students with a variety of diagnoses. Not all chronic condition diagnosed students are in need of care management services. Care management outcomes for the following diagnosis are reported each school year:

**Asthma Outcomes**
- Consistently verbalized accurate knowledge of the pathophysiology of their condition: 83%
- Consistently demonstrated correct use of asthma inhaler and/or spacer: 88%
- Accurately listed his/her asthma triggers: 84%
- Remained within peak flow/pulse oximeter plan goals: 80%
- Improved amount and/or quality of regular physical activity: 85%
- Improved grades: 81%
- Decreased number of absences: 84%

**Diabetes Outcomes**
- Consistently verbalized an accurate knowledge of the pathophysiology of their condition: 87%
- Demonstrated improvement in the ability to correctly count carbohydrates: 84%
- Improved skill in testing own blood sugar: 83%
- Showed improvement in HgA1C (if measured and available): 75%
- Consistently (90% of time) calculated accurate insulin dose: 77%
- Improved ability to deliver insulin dose: 86%
- Improved grades: 73%
- Decreased number of absences: 78%

**Seizure Disorder Outcomes**
- Consistently verbalized accurate knowledge of the pathophysiology of his/her condition: 83%
- Consistently recognized seizure triggers: 74%
- Reduced side effects of seizure medications: 81%
- Avoided complications from seizure activity: 87%
- Reduced number of seizures: 84%
- Improved grades: 74%
- Decreased number of absences: 80%

**Severe Allergy Outcomes**
- Consistently verbalized accurate knowledge of the pathophysiology of his/her condition: 89%
- Consistently avoided allergy triggers: 92%

**WEIGHT MANAGEMENT OUTCOMES**
- Consistently verbalized accurate knowledge of relationship of food and activity to weight: 87%
- Kept a daily food diary as planned: 76%
- Increased physical activity (PE or after school): 86%
- Improved frequency of healthy food choices: 90%
- Consistently able to identify appropriate portion sizes: 84%
- Improved BMI: 60%
- Improved grades: 69%
- Decreased number of absences: 72%

**Summary**

School nursing services are one component of a local School Health Program. By working with multiple partners in health and education, including the North Carolina Division of Public Health, North Carolina Division of Medical Assistance, North Carolina Department of Public Instruction, North Carolina Pediatric Society, North Carolina Academy of Family Physicians, North Carolina Dental Society, Prevent Blindness North Carolina, North Carolina School and Community Health Alliance, local health departments, and more, school nurses are working to help students achieve at levels they might not otherwise reach. In many school health areas North Carolina can serve as a model for school health programs. In others, services are limited as a result of relatively slow growth in the number of school nurse positions in relation to student population growth and complexity of health care needs. Working towards an increase in the number of school nurses in North Carolina could positively impact overall student health and well-being, resulting in improved student attendance and successful academic outcomes.

This data represents key information shared by North Carolina School Nurses via the Annual School Health Report Surveys. The information is based on students known to school nurses who received health related services in North Carolina public schools. It is not intended as surveillance data. Except where indicated the data does not include students in North Carolina Charter public charter schools. Additional data is collected and is available upon request.

**Contact for Additional Information & Data Requests:**
Ann.Nichols@dhhs.nc.gov • Carol.Tyson@dhhs.nc.gov

This and reports from previous school years are available for download at: https://www2.ncdhhs.gov/dph/wch/stats/
School Nurse Staffing and Nurse-to-Students Ratios

School Nurse Educational Preparation
School nurses are Registered Nurses (RN) with varied educational preparation. In addition to being an RN, national certification in school nursing is the standard by which North Carolina school nurses are assured to have the advanced knowledge and skills required in this independent specialty practice. A baccalaureate is the minimum degree required for certification eligibility. At the close of the 2013-2014 school year, 50% of the total number of school nurses were nationally certified. NC school nurse degree status is illustrated in the following graph.

NC Public Charter Schools that Employ a School Nurse
While NC LEA public schools are required to provide the services of a Registered Nurse to plan for the health needs of students, public charter schools are not. During the 2013-14 year, 13.8% of public charter schools reported employing a school nurse, full or part-time.

Common School Nurse Activities:
North Carolina school nurses are assigned a varying case load dependent upon school district resources and serve between one and six schools per nurse. Common school nurse activities include:
- Preventing and responding to communicable disease outbreaks
- Developing and implementing plans for emergency health-related assistance
- Planning and providing specialized clinical services and related health instruction
- Medication and health care procedure oversight
- Assessment, referral, and assuring care for identified health needs
- Assuring that mandated health-related activities are completed
- Provision of health education and health counseling
- Helping to assure a safe and healthy school environment

NC Students

Chronic Disease
School nurses assess needs, complete health care plans, and provide instruction to meet the health needs of students with chronic conditions.

<table>
<thead>
<tr>
<th>2013-2014 Most Common Chronic Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
</tr>
<tr>
<td>ADD/ADHD</td>
</tr>
<tr>
<td>Severe Allergies</td>
</tr>
<tr>
<td>Nonspecific Emotional/Behavioral/Psychiatric</td>
</tr>
</tbody>
</table>

Procedures
School nurses completed or supervised completion of 36,499 individual student health care procedures that were needed many times over the course of the school year. These included things such as catheterizations, tube feedings, dressings, glucose monitoring, etc.

Students and Suicide

<table>
<thead>
<tr>
<th></th>
<th>Elementary School</th>
<th>Middle School</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide attempt</td>
<td>45</td>
<td>185</td>
<td>337</td>
</tr>
<tr>
<td>Death from suicide</td>
<td>1</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Suicide occurred at school</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Selected Services Provided

Medication Delivery and Oversight
School nurses provide oversight for medication administration in schools through training, administration, auditing for medication variances and assuring compliance with requirements.

<table>
<thead>
<tr>
<th>2013-2014 Student Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students on long term medications (more than 3 weeks)</td>
</tr>
<tr>
<td>Number of students on short term medications (less than 3 weeks)</td>
</tr>
<tr>
<td>Number of students on PRN (non-emergency) medications</td>
</tr>
<tr>
<td>Number of students on emergency medications (included 17,786 orders for epinephrine auto-injectors)</td>
</tr>
</tbody>
</table>

Screening Data
School nurses manage screening programs to identify health conditions that may impact education. The most common screening program is for visual issues.

<table>
<thead>
<tr>
<th>2013-2014 School Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Target Population Screened</td>
</tr>
<tr>
<td>% Referred for vision care</td>
</tr>
<tr>
<td>% Referred who secured vision care</td>
</tr>
</tbody>
</table>

Counseling
School nurses provide health counseling which is defined as any encounter with a student where direct service, instruction and advice for health promotion, health improvement and health maintenance were discussed.

<table>
<thead>
<tr>
<th>2013-2014 Mental Health Issue Counseling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Counseling Sessions</td>
</tr>
<tr>
<td>Other Mental Health Issues</td>
</tr>
<tr>
<td>Depression</td>
</tr>
<tr>
<td>Suicide Ideation</td>
</tr>
</tbody>
</table>