



Annual School Health Services Report

2022-23 School Year

Tennessee Department of Education | October 2023



Cover Image Courtesy of Polk County Schools

Table of Contents

- Introduction 3
 - Summary 3
 - Role of the School Nurse..... 3
- 2022-2023 Results 5
 - School Nurse Profile 5
 - Public Schools 5
 - Nonpublic and Charter Schools 6
- Student Health..... 7
 - Chronic Health Conditions 7
 - Student Health Encounters and Return to Class 15
 - Health Screenings 16
 - Health Care Procedures 17
 - Medication Management 18
 - School Health Clinics..... 21
 - Immunization and Meningococcal Information to Parents 23
- Conclusion..... 23
- References 25

Introduction

Tennessee Coordinated School Health connects physical, emotional, and social health with education through eight interrelated components. This coordinated approach improves students' health and their capacity to learn through the support of families, communities, and schools working together. Health Services, one of the eight components, bridges healthcare and education through the provision of care coordination, advocacy for quality-student centered care, and collaboration. Access to school health services is associated with better health for students and is linked to academic success.

The Tennessee Department of Education surveys public and nonpublic accredited schools annually to monitor compliance with state school health laws and to assess the scope of school health services provided to Tennessee students as mandated in Tenn. Code Ann. § 49-50-1602.

The Annual School Health Services Report highlights the data submitted to the Tennessee Department of Education by **147** public school districts and **278** nonpublic and charter schools. This report summarizes the healthcare needs of Tennessee students and health services provided by school nursing staff during the 2022-23 school year.

Summary

Data was collected through the administration of the annual Health Services Survey. The data reveals school nurses perform a wide range of duties—health education, direct care, case management, program and policy development and oversight—supporting students whose health needs vary from routine to serious and complex. Additionally, some school nurses provide services to school faculty and staff.

Role of the School Nurse

Tennessee school nurses are assigned a varying case load dependent upon school district resources. School nurses aim to increase student time in the classroom and decrease the time out of school. School nurses serve as:

Clinicians: providing medical care and support for students who are ill, injured, or have chronic health conditions;

Leaders: providing support to parents, students, and staff to improve health programs and policies to support a healthy school environment;

Educators: providing health education to students and staff to prevent disease and injury and support school attendance; and

Advocates: providing coordination of health services policies and programs as the on-site health resource.

The National Association of School Nurse's *Framework for 21st Century School Nursing Practice* highlights the key principles and components of current day, evidence-based school nursing practice. Central to the Framework is student-centered nursing care. The key principles are Standards of Practice, Care Coordination, Leadership, Quality Improvement, and Community/Public Health. School nurses use the skills outlined in the components of each principle daily to help students be healthy, safe, and ready to learn (National Association of School Nurses, 2016).

Figure 1: Framework for 21st Century School Nursing Practice



The school nurse has the responsibility of collaborating with and/or referring students to community health care professionals by

- Providing assessment and referral, ensuring early intervention for identified physical and mental health needs;
- Providing health education and health counseling;
- Preventing and responding to communicable disease outbreaks;
- Developing and implementing plans for emergencies and providing emergency care for students and staff illness and injury;
- Planning and providing specialized clinical services and related health instruction;
- Providing medication and health care procedure oversight; and
- Assuring a safe and healthy school environment.

2022-23 Results

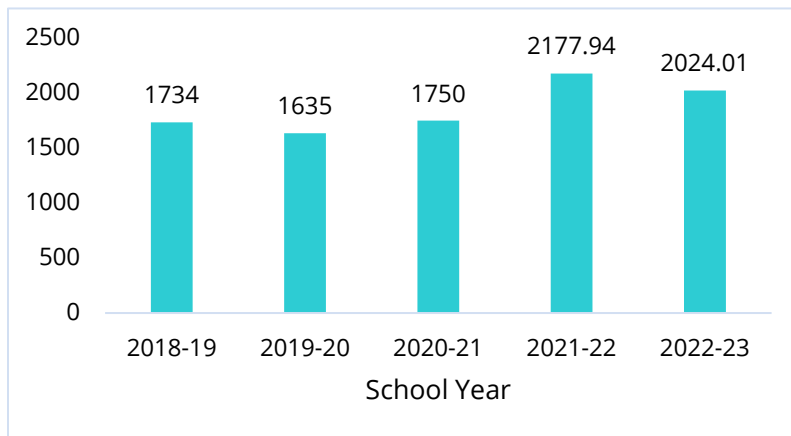
School Nurse Profile

It is the position of the National Association of School Nurses (NASN) that access to a registered professional nurse all day, every day, can improve students' health, safety, and educational achievement. Student acuity and school community indicators should be assessed to determine appropriate staffing levels. Access to a school nurse may mean that more than one school nurse is necessary to meet the needs of the school population. (National Association of School Nurses, 2020). The American Academy of Pediatrics (2016) recommends a minimum of one full-time professional school nurse in every school.

School nurses in Tennessee are Registered Nurses (RN) or Licensed Practical Nurses (LPN) with varied educational preparation, including Doctor of Nursing Practice (DNP), Bachelor of Science in Nursing (BSN),

Master of Science in Nursing (MSN), or Associate Degree of Nursing (ADN).

Figure 2: School Nurse FTEs in Public School Districts by School Year



Public School Districts

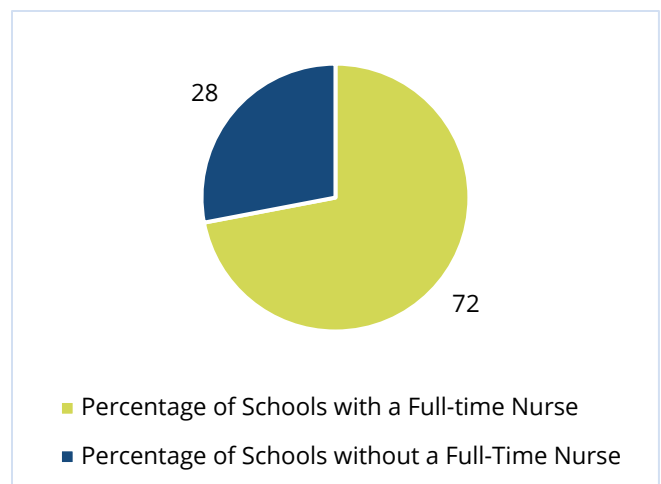
Tennessee public school districts hire nurses to serve the general and special education student populations. Funding for nurses is provided in the TISA base, which reflects funding to match the national recommendation for nurses (1 for every 750 students). Additionally, a licensed healthcare professional must

perform any health care procedure a student is not capable or competent to perform must be performed by a licensed health care professional in accordance with applicable guidelines of their respective regulatory boards. During the 2022-23 school year, **2,024.01** full-time school nurses (or full-time equivalents) provided health care services to students in Tennessee public school districts (Figure 2).

Thirteen percent of school nurses (full-time equivalents) provided care only to special education students.

During the 2022-23 school year, **35 percent** of public school districts reported not having a full-time nurse in at least one school, and **28 percent** of public

Figure 3. Percentage of Schools in Public School Districts with or without a Nurse, 2022-23

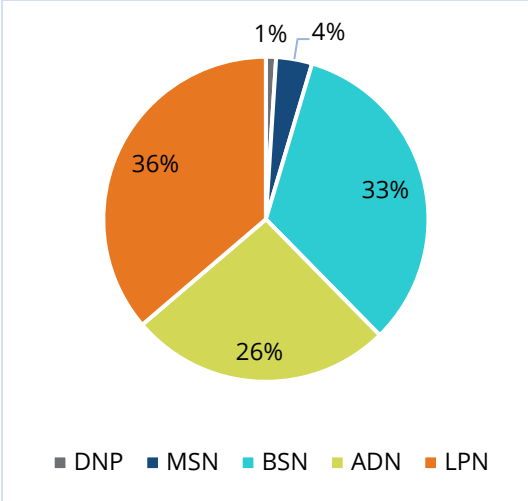


schools do not have a full-time nurse during the school day (Figure 3). Furthermore, **37 percent** of public school districts report having at least one school nurse assigned to multiple schools. Despite **65 percent** of public school districts having a full-time nurse in every school, nurses were still pulled from their assigned location(s) **6,418** times to take care of an immediate need at another school/location other than the nurses' assigned school(s)/location(s).

Health Office Composition

It is the position of the NASN that the RN collaborates to lead the school health services team in the identification of and intervention for health-related barriers to improve student learning. The school health team, led by the RN, provides support for positive student academic and health outcomes. Members of the team vary and may include LPNs, Unlicensed Assistive Personnel (UAP), district consulting physicians, and other unlicensed professionals (health aides, medication aides, etc.) who provide services to students to meet increasing numbers and acuties of healthcare needs. Being knowledgeable of the Rules and Regulations pertaining to the Tennessee Board of Nursing and Tennessee laws and rules that guide the delivery of school health services ensures team members work within their scope of practice. Together, team members' combined efforts aim to improve student outcomes (National Association of School Nurses, 2020).

Figure 4: Percentage of Public School Nurses by Degree, 2022-23



Fifty-nine percent of public school nurses have an associate (ADN) or bachelor's degree (BSN) in nursing. **Five percent** of Tennessee public school nurses have an advanced nursing degree, Doctor of Nursing Practice (DNP), or Master of Science in Nursing (MSN). **Thirty-six percent** of public school nurses are LPNs (Figure 4). LPNs practice under the direction and supervision of an RN, physician, or dentist and cannot practice independently in Tennessee.

Nonpublic and Charter Schools

While Tennessee public school districts are required to provide a licensed health care provider to serve the health care needs of students, nonpublic and charter schools are not. During the 2022-23 year, only **43 percent** of nonpublic and charter schools that submitted the survey reported having a school nurse (RN or LPN). There were **223.2** school nurses (or full-time equivalents) that provided care across **120** Tennessee nonpublic and charter schools.

Student Health

Responding public school districts and nonpublic and charter schools provided data on a variety of topics related to student health. The 2022-23 survey gathered information on the health care needs of students in public, nonpublic, and charter schools. The results are summarized below.

Chronic Health Conditions

Tennessee school nurses provide services to students with a wide range of mental and physical health needs. School nurses assess needs, complete health care plans, and provide instruction to meet the health needs of students with chronic health conditions. Children diagnosed with chronic illnesses have healthcare needs that require daily management in addition to addressing possible emergencies. Some students with chronic health conditions may miss school more often than others, and this may have an impact on academic performance (CDC, 2019). School nurses help students stay at school safely and ready to learn while providing services and accommodations for students with chronic health conditions.

During the 2022-23 school year, **155,480 (16 percent)** students in public school districts and **11,867** students in nonpublic and charter schools had a chronic illness or disability diagnosis. Figures 5 and 6 show the number of students in public school districts and nonpublic and charter schools diagnosed with each chronic condition or disability.¹

¹The process of data collection for chronic health conditions changed in 2020-21. These rates of chronic illness and disability are based on information provided to the school nurse by the student's primary care provider or parent/guardian. Conditions that have not been medically diagnosed or do not require special nursing care in the school setting are not included in this report.

Figure 6: Number of Nonpublic and Charter School Students with Chronic Illness or Disability Diagnosis, 2022-23

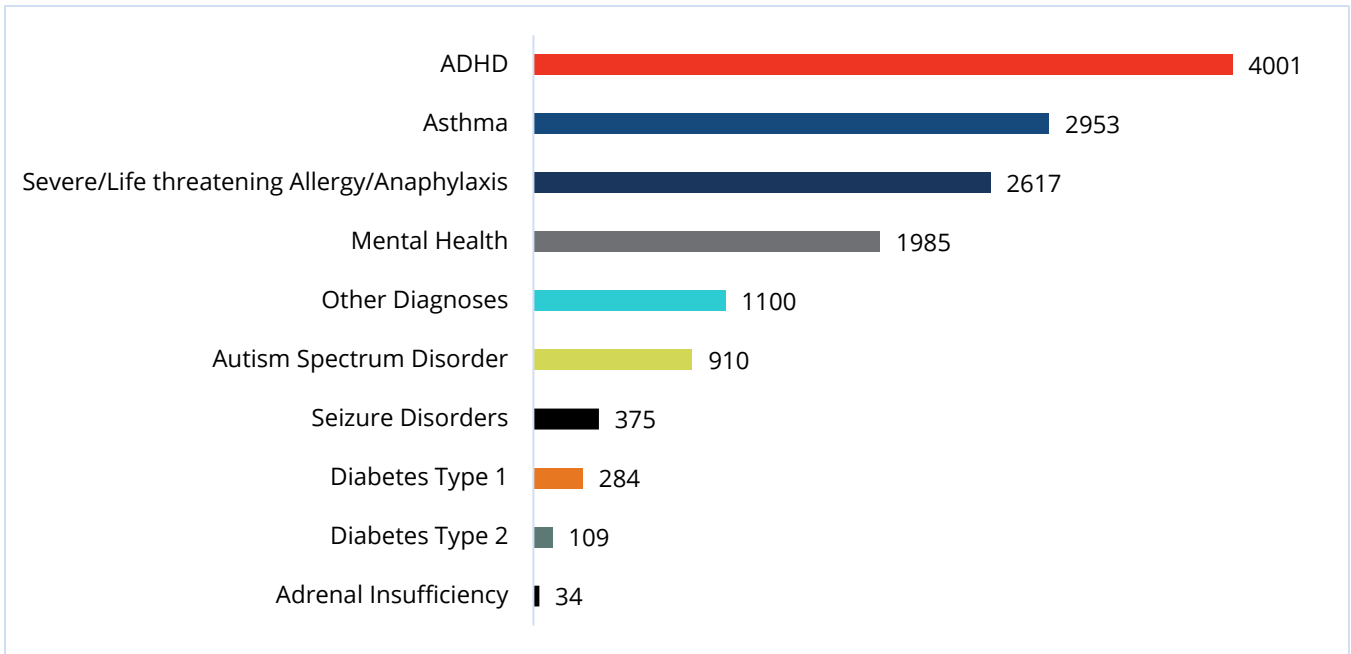
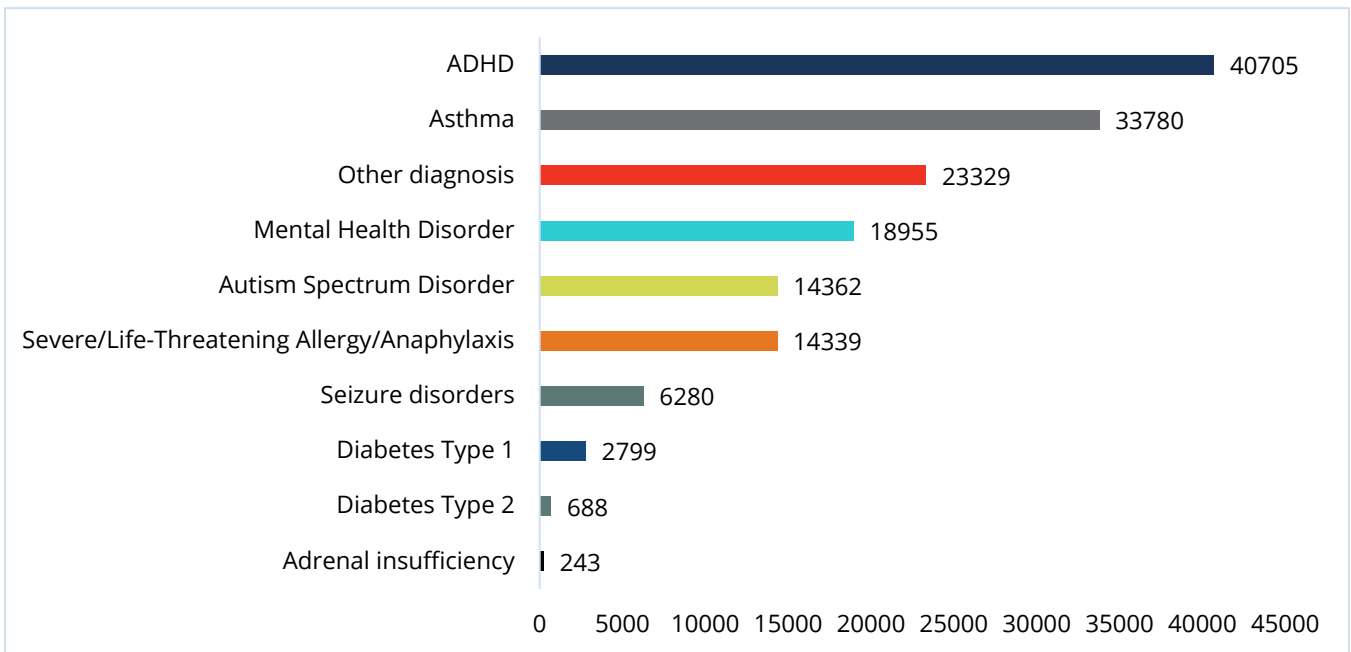


Figure 5: Number of Public School Students with Chronic Illness or Disability Diagnosis, 2022-23



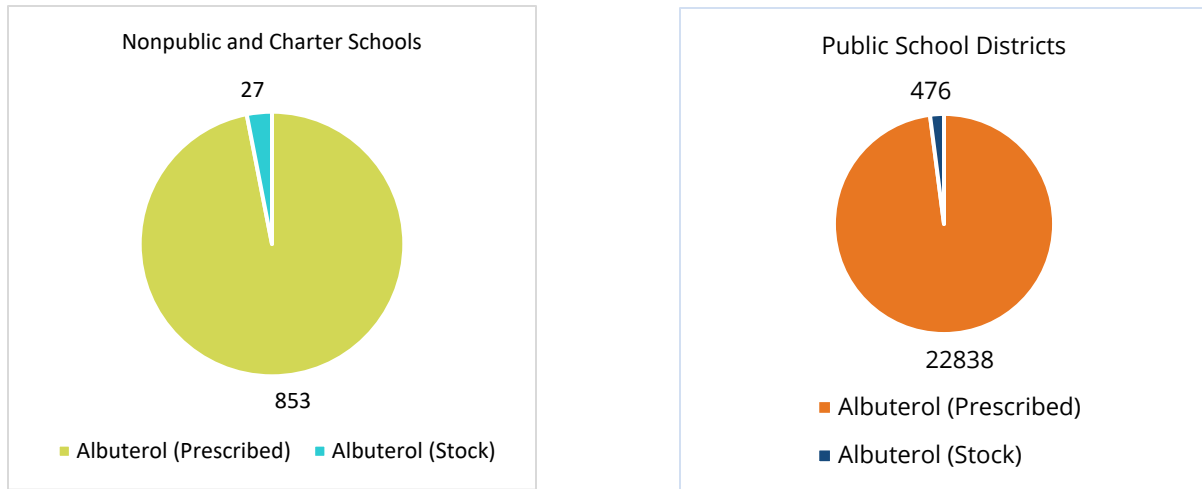
The conditions or disabilities highlighted below are the most prevalent chronic illnesses or disabilities in Tennessee schools and/or require daily care management and may require rescue medication due to the potential for a life-threatening emergency related to the condition.

Asthma

During the 2022-23 school year, **33,780** students were diagnosed with asthma in Tennessee public school districts, and **2,953** students were diagnosed with asthma in nonpublic and charter schools. Asthma is the leading chronic physical health condition among students in Tennessee and a leading cause of school absenteeism (CDC, 2019; Healthy Schools Campaign, 2015). Asthma is a serious disease that affects the lungs. It can result in wheezing, difficulty breathing, and coughing. Asthma attacks can lead to increased emergency room visits and, rarely, death. Ensuring students with asthma receive the support they need to effectively manage their medical condition is pivotal. In the school setting, the school nurse plays an important role in providing asthma management, enabling students to stay safe and attend school ready to learn. School nurses spend more time in contact with children in comparison to all other health care professionals, allowing them to develop a thorough knowledge of each child's condition and promote self-management strategies.

Albuterol is a life-saving medicine used to treat students who experience asthma attacks or severe allergic reactions. It is the most effective and most common rescue treatment for asthma attacks. During the 2022-23 school year, albuterol was administered at school or during a school-sponsored function **23,314** times in public school districts and **880** times in nonpublic and charter schools. Figure 7 indicates the number of times albuterol was administered using a student's prescription or using the school's supply (stock).

Figure 7: Number of Times Albuterol Was Administered to a Student During an Emergency, 2022-23



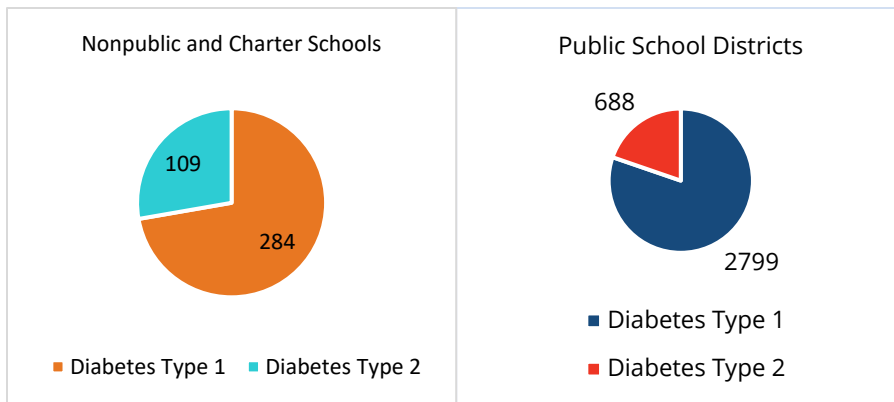
For additional information related to asthma management in the school setting, please view the [Healthcare Procedures Section](#).

Diabetes

Diabetes occurs when the body produces no, or insufficient quantities of insulin, so glucose, or sugar, builds up in the blood. High blood glucose, over time, can lead to health problems such as kidney failure, vision loss, heart disease, and stroke. Type 1 diabetes occurs when the body no longer produces insulin and blood glucose levels become very high. Type 2 diabetes occurs when the body stops producing enough insulin or when the body does not use insulin properly (American Diabetes Association, 2021). Diabetes can be managed effectively, and complications reduced with proper management and treatment.

The Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act, and the Americans with Disabilities Act (ADA) give students the right to receive the diabetes care they need to be safe and participate in school activities like any other child. Schools provide trained staff to monitor blood glucose levels and administer insulin and glucagon, provide diabetes care during field trips, extracurricular events, and all school-sponsored activities, and allow capable students permission to self-manage their diabetes anytime, anywhere. There were **91** public school nurses and **33** nonpublic and charter school nurses assigned to a school full-time due to a student with diabetes in the school.

Figure 8: Number of Students with Diabetes by Type, 2022-23



During the 2022-23 school year, there were **3,487** students with diabetes in public school districts and **393** students in nonpublic and charter schools with diabetes. Type 1 diabetes is most common among school-age children (Figure 9). School-age children with diabetes are at

greater risk for death from acute complications of diabetes, including hypoglycemia and diabetic ketoacidosis (CDC, 2019). Diabetic Ketoacidosis is a serious, life-threatening condition that can lead to a diabetic coma or even death. This can happen when a student with diabetes produces high levels of blood acids, called ketones. Hypoglycemia, also known as low blood glucose, can cause symptoms such as poor judgment or even loss of consciousness. During severe hypoglycemia, a student cannot swallow glucose-containing drinks on his own to increase blood sugar levels. Glucagon, a hormone that raises blood glucose levels, is used to treat severe hypoglycemia, a medical emergency.

During the 2022-23 school year, Glucagon was administered during school or at a school-sponsored function **46** times in public school districts and **55** times in nonpublic and charter schools. Effective management of diabetes can help prevent these acute complications.

For additional information related to diabetes management in the school setting, please view the [Healthcare Procedures Section](#).

Seizure Disorders

There were **6,280** students in public school districts and **375** students in nonpublic and charter schools with a seizure disorder, also known as epilepsy, during the 2022-23 school year. Seizures are sudden, temporary, bursts of electrical activity in the brain that cause temporary changes in physical movement, sensation, behavior, or consciousness (American Academy of Pediatrics, 2021). Epilepsy is a brain disorder where a

person has recurring seizures. Epilepsy is a spectrum disorder and there are many different types of seizures and types of epilepsy syndromes.

Most seizures end on their own and cause minimal concerns. For many students, seizure disorders can be controlled with daily seizure medication. Sometimes seizures occur in a different pattern that is more often or more severe. A seizure is considered an emergency when it lasts a long time or when seizures occur close together and the individual does not recover between seizures. Some students may require administration of seizure rescue medication, such as diazepam gel (Diastat), midazolam nasal spray (Nayzilam), or a diazepam nasal spray (Valtoco).

During the 2022-23 school year, seizure rescue medications were administered during school or at a school-sponsored function **181** times in public school districts and **67** times in nonpublic and charter schools (Figure 9). There were **126** public school nurses and **24** nonpublic and charter school nurses assigned to a school full-time due to a seizure rescue medication order. **Eighty-four percent (123)** public school districts and **120** nonpublic and charter schools permitted the administration of Diastat or other rescue seizure medications by trained volunteer school personnel. Of those, **99 percent** of public school districts and **98 percent** of nonpublic and charter schools call 911 if Diastat or other rescue seizure medication is administered by trained volunteer school personnel. Tenn. Code Ann. § 49-50-1602 requires that upon the decision of a trained volunteer to administer diazepam gel, school officials shall immediately summon local emergency medical services to the school to provide necessary monitoring or transport to safeguard the health and condition of the student.

Non-life Threatening and Severe/Life Threatening Allergies

An allergic reaction occurs when the immune system overacts to a substance known as an allergen. Food, Latex, and insect/bee sting allergies are common in the school setting. During the 2022-23 school year, there were **96,968** students in public school districts and **9,663** students in nonpublic and charter schools with non-life threatening or severe/life-threatening allergies.² Of those, **85 percent** of students in public school districts and **73 percent** of students in nonpublic and charters reported a non-life-threatening allergy. Figure 10 highlights the number of students with common non-life-threatening allergies by type.

Figure 9: Seizure Disorder Information, 2022-23

During the 2022-23 school year, **126** school nurses in public school districts were assigned to a specific school to serve as a full-time nurse due to an order for a seizure rescue medication.

During the 2022-23 school year, there were **24** school nurses in nonpublic and charter schools assigned to serve as a full-time nurse due to an order for a seizure rescue medication.

During the 2022-23 school year, seizure rescue medications were administered during school or at a school-sponsored function, **181** times in public school districts and **67** times in nonpublic schools.

² Parent/guardian reported diagnosis was acceptable for non-life-threatening allergies. All other chronic health conditions and disabilities require a confirmed diagnosis to be counted in the Health Services Survey.

Figure 10. Number of Students with Non-Life-Threatening Allergies by Type, 2022-23

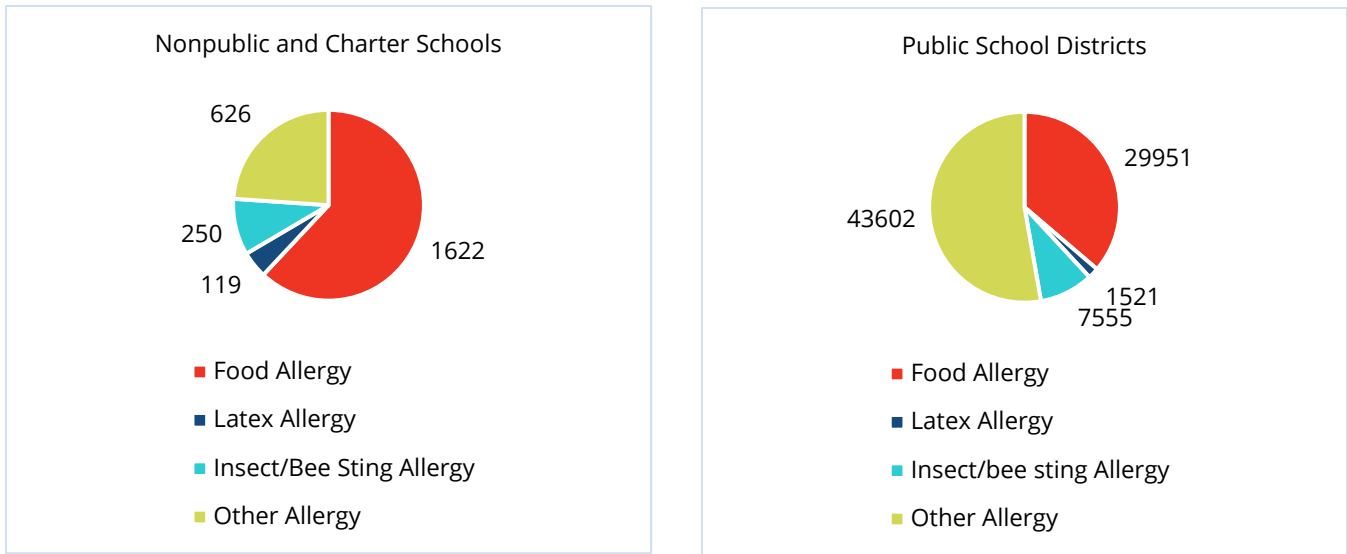
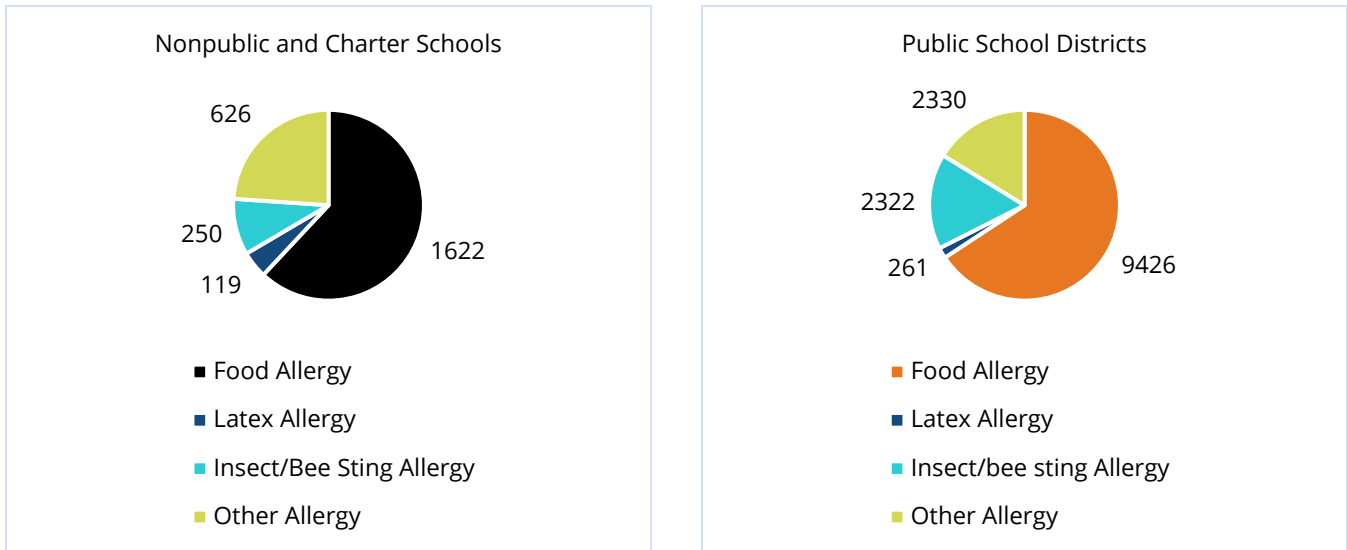


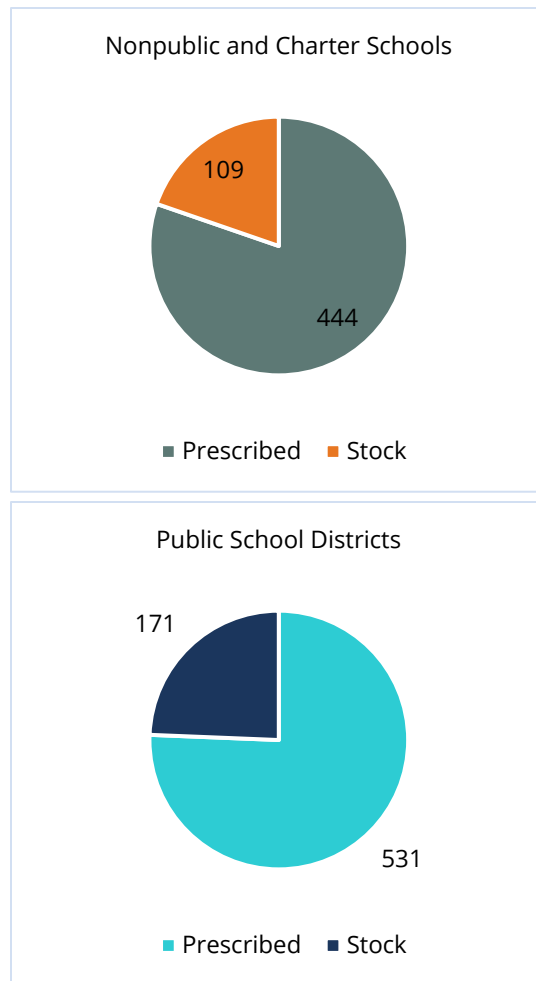
Figure 11. Number of Students with Severe/Life-Threatening Allergies by Type, 2022-23



There are a range of allergic reactions due to exposure to an allergen. Reactions can include fever, atopic dermatitis (a condition that causes inflamed, itchy skin), allergic asthma, and anaphylaxis. Anaphylaxis is a serious, life-threatening form of allergic reaction that occurs rapidly and may cause death. Anaphylaxis usually involves more than one part of the body, such as the skin or mouth, lungs, the heart, and the gut. Some symptoms of anaphylaxis may include swelling of the lips, tongue, or throat, shortness of breath or trouble breathing, wheezing (whistling sound during breathing), vomiting/diarrhea, or fainting. There were **14,339** students in public school districts and **2,617** students in nonpublic and charter schools diagnosed with severe/life-threatening allergies during the 2022-23 school year. Epinephrine is the first line of treatment for severe allergic reactions and is the only treatment that will stop a severe allergic reaction.

In accordance with Tenn. Code Ann. § 49-50-1602, each school in a public school district and nonpublic, and charter schools are authorized to maintain epinephrine auto-injectors to be administered to any student believed to be having a life-threatening anaphylactic reaction. (D) When a student does not have an epinephrine auto-injector or a prescription for an epinephrine auto-injector on file, the school nurse or other trained school personnel may utilize the public school or nonpublic and charter school supply of epinephrine auto-injectors to respond to an anaphylactic reaction, under a standing protocol from a physician licensed to practice medicine in all its branches. During the 2022-23 school year, **80** percent (118) of public school districts and **94** nonpublic and charter schools chose to maintain epinephrine auto-injectors for this purpose. **Seventy-one percent (1,436)** of schools in public school districts maintained a school supply of epinephrine (stock). During the 2022-23 school year, epinephrine was administered **702** times in Public school districts and **553** times in nonpublic and charter schools at school or during a school-sponsored function. Figure 12 shows the number of times epinephrine was administered using a student’s prescription or using the school’s supply (stock). School nurses play a critical role in the prevention and management of severe allergies and ensuring prompt emergency response should an exposure to a life-threatening allergen occur. School nurses prepare school staff in the awareness, prevention, and treatment of life-threatening allergic reactions.

Figure 12: Number of Times Epinephrine Administered to a Student During an Emergency, 2022-23



Attention Deficit/Hyperactivity Disorder (ADHD)

ADHD³ is a common mental disorder that affects children. ADHD symptoms include not being able to focus, impulsivity, and hyperactivity. ADHD is often identified in school-age children and adolescents when it leads to classroom disruption or problems with schoolwork. A combination of behavioral therapy and medication can improve symptoms of ADHD and works best for those with moderate to severe ADHD (American Psychiatric Association, 2021). In the 2022-23 school year, **40,705** students in public school districts and **4,001** students in nonpublic and charter schools were diagnosed with ADHD, making it the most prevalent

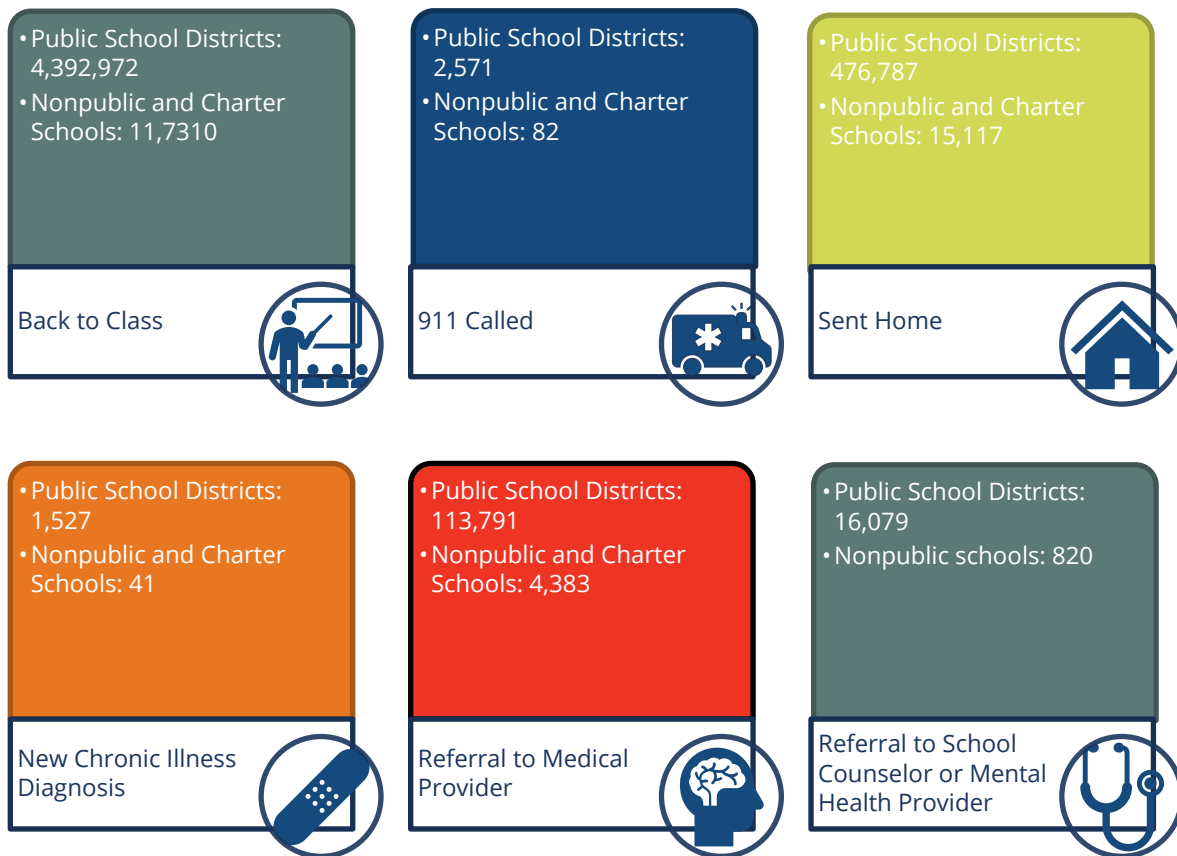
³ Attention Deficit Disorder (ADD) is no longer a medical diagnosis but is sometimes used to describe inattention-type ADHD.

behavioral disorder in Tennessee schools. Students with ADHD experience more obstacles than the average student. Students with ADHD may experience trouble following directions, sitting still, and completing tasks at school (CDC, 2020). School nurses play an important role in the early recognition and assessment of ADHD, administer medication to students with ADHD, and monitor for therapeutic response and side effects.

Student Health Encounters and Return to Class

An encounter is any documented student visit where the school nurse provided counseling, treatment, or aid of any kind.⁴ Encounters include visits to the school nurse for health maintenance, acute illnesses, and injuries. A student with a health concern who sees a school nurse is more likely to remain in school. During the 2022-23 school year, public school nurses reported **4,967,208** student encounters. Of those, **88 percent** of students seen by the public school nurse were returned to class. **3 percent** of student visits to the public school nurse resulted in the student being referred to a medical or mental health provider, and **1,527** student visits to the public school nurse resulted in a new diagnosis (Figure 13). There were **140,797** student encounters with a nonpublic or charter school nurse, and **83 percent** of students seen by a nonpublic or charter school nurse were returned to class.

Figure 13: Health Office Encounters



⁴ Health Screenings were tracked separately.

Health Screenings

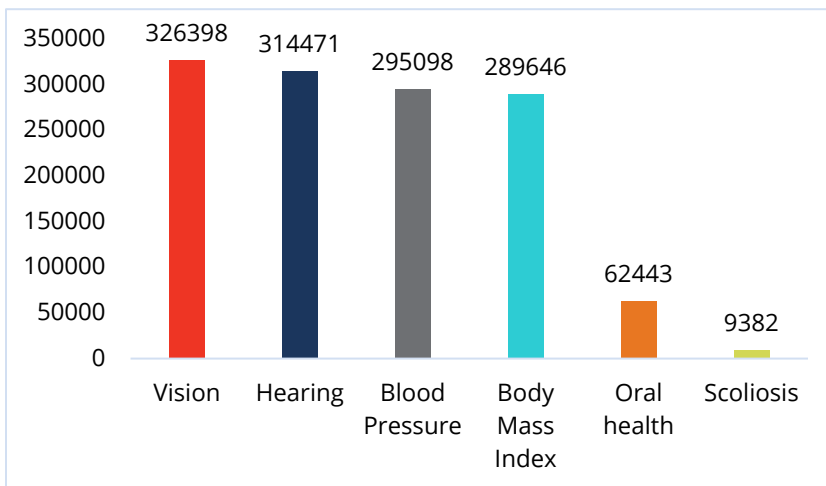
Health-related problems, if not detected and treated, can limit the ability of a child to learn. Healthy students are better learners. Often, the best way to identify these problems is through school health screenings. When health concerns are identified early, through regular school health screenings, schools and families can take steps to ensure students receive access to needed health care, which can improve education and health outcomes.



Images Courtesy of Tullahoma City Schools

School nurses assist with health by screening students and making referrals for follow-up care when

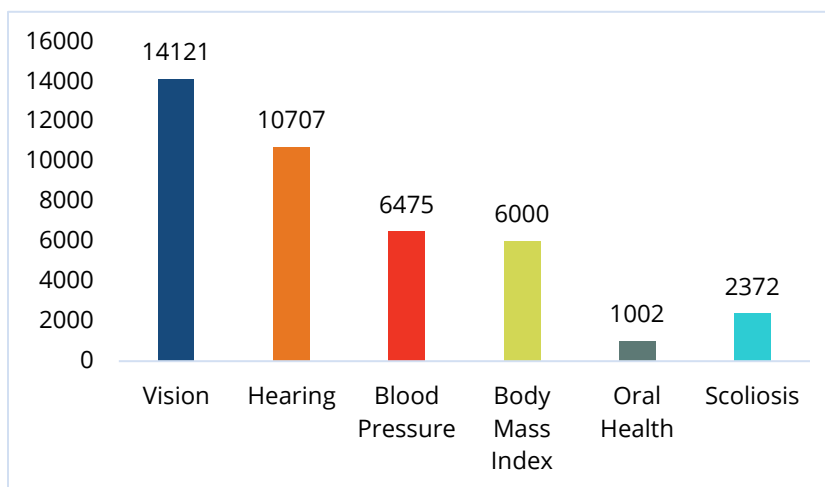
Figure 14: Student Health Screenings in Public School Districts, 2022-23



needed. Parents are responsible for making appointments for the follow-up care specified in the referral and for ensuring students keep the appointments. During the 2022-23 school year, **146** public school districts conducted **1,297,438** student health screenings (Figure 14) and **120** nonpublic and charter schools conducted **40,677** student health screenings (Figure 15)⁵.

⁵ These numbers represent initial screenings and do not include re-screenings or screenings not part of a mass school screening.

Figure 14: Student Health Screenings in Nonpublic and Charter Schools, 2022-23



Health Care Procedures

School enrollment of children assisted by medical technology, complex medical procedures, and special health care needs continues to increase. School nurses work with families and health care providers to provide health care procedures in the school setting or will train and supervise unlicensed assistive personnel (UAP) to provide care, if appropriate. The most common types of health services provided to students by a licensed health care provider in Tennessee public schools include:

Care of ill/injured students and staff	Skilled nursing services to students with health needs in general education	Skilled nursing services to students with special needs with an Individualized Education Plan (IEP)	Medication administration to students	Health screenings
--	---	---	---------------------------------------	-------------------

During the 2022-23 school year, **26,665** students received a complex procedure administered during the school day, at least once and **1,941** students in nonpublic and charter schools had a complex procedure performed at least once during the school year.

School nurses also provide care to school staff. During the 2022-23 school year, there were **69,115** staff visits to the public school nurse and **5,410** staff visits to the nonpublic and charter school nurse.

Unlicensed Assistive Personnel (UAP) are school personnel who do not hold a healthcare license. They often serve in the role of paraprofessionals, health aides, nursing assistants, health clerks, or teacher aides. The school nurse conducts and documents UAP trainings, provides ongoing supervision, performs performance evaluations, and is in control of the decision to assign healthcare tasks (National Association of School Nurses, 2020). As allowed by the Tennessee Board of Nursing and with proper training and oversight, tasks that may be performed by and delegated to UAP may include first aid, school health screenings, maintaining

student health records, non-complex procedures, assisting students in the self-administration of medications, and other health office duties. During the 2022-23 school year, there were **22,792** public school personnel trained by the RN in non-complex tasks.

Figure 15: Number of Students Receiving Complex Procedures Ordered by a Medical Provider, 2022-23

Complex Procedure	Nonpublic and Charter Schools	Public School Districts
Urinary Catheterization	10	246
Wound Care	281	249
Blood Glucose Monitoring	353	2876
Ketone testing	101	1717
Insulin Injection	113	1773
Insulin pump management	105	1338
Carbohydrate Counting	130	2503
Oxygen Saturation	633	13367
Nebulizer Treatment	123	961
Peak flow measurement	63	146
IV/Heparin flush	0	2
Tracheal Suctioning/Trach Care	5	74
Ventilator Care	3	11
NG/G-Tube Care/Feeding/Meds	16	786
Ostomy Care	2	72
Oxygen Delivery	3	47
Other Complex Procedures	0	497
Total	1941	26665

Medication Management

The purpose of administering medications in school is to help each child maintain an optimal state of health to enhance his or her education. School personnel should limit medication administration to only medications required during school hours and ones that are necessary to provide the student access to the educational program. Figure 16 highlights the number of students who received medication during the school year. Oral medication is the most common medication administered during the school day, with

Figure 16: Number of Students Administered Medication by Type, 2022-23

Medication	Nonpublic and Charter Schools	Public School Districts
Insulin Administration	132	3975
Medications/Other Injections	181	1590
Medication/Intravenous	0	8
Medications/Inhaler (or nebulizer)	678	12427
Medications/Oral (by mouth)	5177	83302
Medications/Nasal	45	898
Medications/Rectal	8	438
Medications/Topical	1118	23078
Medications/Ophthalmic	156	3329
Medications/Otic	76	283
Total	7571	129328

83,302 public school students⁶ and **5,177** nonpublic and charter school students receiving oral medication during the school year (Figure 16). Trained school staff can assist with medication administration in accordance with local policy and Tenn. Code Ann. § 49-50-1602. School nurses provide oversight for medication administration by administering medication to students, delegating and supervising staff trained to assist with medication administration and ensuring proper training and supervision of designated staff.

All medications, except those designated by an individual healthcare plan (IHP) or exempted by Tennessee law, should be maintained in a secure, locked location under the supervision of a school nurse and/or other school personnel who have been trained and assigned to manage medications and record-keeping.

Emergencies

Figure 17: Number of Emergency Treatments Administered to Students by Type, 2022-23

Emergency Treatment/Medication	Nonpublic and Charter Schools	Public School Districts
Albuterol (Prescribed)	853	22838
Albuterol (Stock)	27	476
Epinephrine (Prescribed)	444	531
Epinephrine (Stock)	109	171
Glucagon	55	46
Emergency Seizure Medications	67	181
Cardiopulmonary Resuscitation	0	20
Automatic External Defibrillator	5	31
Other Emergency treatment	91	5229
Total	1651	29523

A significant role of school nursing practice is to provide health services to students who are injured, sick, or experiencing a health emergency. Tenn. Code Ann. § 49-50-1602 and 49-50-1604 permit certain emergency medications and treatments to be performed by school personnel with appropriate training that includes, but is

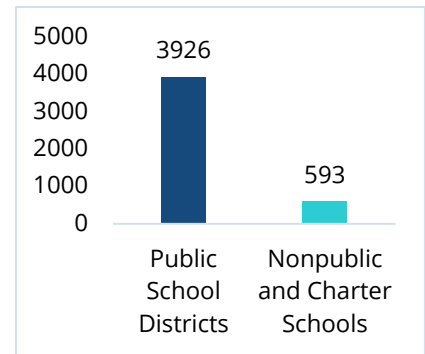
not limited to, administration of antiseizure medication, Epinephrine, Glucagon, and Naloxone. During the 2022-23 school year, **29,523** emergency treatments were administered to public school students and **1,651** emergency treatments were administered to nonpublic and charter school students at school or during a school-sponsored function. Figure 17 highlights the type of emergency medication or treatment and the number of times the medication or treatment was administered during the school year. Albuterol was administered **23,314** times in public school districts and **880** times in nonpublic and charter schools and was the most frequent emergency medication administered to students during the 2022-23 school year. During the 2022-23 school year, public school staff received emergency treatment **1,490** times, and nonpublic and charter school staff received emergency treatment **52** times.

⁶ Students can be counted once in each category.

Automated External Defibrillators (AEDs)

Sudden Cardiac Arrest (SCA) is a life-threatening emergency that occurs when the heart suddenly and unexpectedly stops beating and causes blood and oxygen to stop flowing to the rest of the body. It can happen without warning and can lead to death within minutes if the person does not receive immediate help. There is a greater chance of survival and recovery if Cardiopulmonary Resuscitation (CPR) is given and an AED is administered early. An AED is a portable device used to restore normal heart rhythm to individuals in cardiac arrest. AEDs are used for an immediate response to an emergency when a student or adult appears to not have a heartbeat. Tenn. Code Ann. § 49-2-122 requires public school districts to have at least one AED placed within every school. Nonpublic schools are encouraged to place AEDs in schools, but it is not required by law.

Figure 18: Total Number of AEDs, 2022-23



There were **3,926** AEDs in **1,759** public schools (**147** public school districts) and **593** AEDs in **212** nonpublic and charter schools during the 2022-23 school year (Figure 18). AEDs located in public school districts were used **23** times and were used **five** times in nonpublic and charter schools during the 2022-23 school year.

Cardiopulmonary Resuscitation (CPR)

CPR is an emergency lifesaving procedure performed when the heart stops beating. Immediate CPR can double or triple the chances of survival after cardiac arrest (American Heart Association, 2021). School nurses in public schools are required to maintain certification in CPR. Additionally, public schools are encouraged to have at least one employee or volunteer qualified to administer emergency first aid and CPR.

During the 2022-23 school year, **24,196** full-time public school employees had CPR certification, and **494** schools provided CPR training to **69,304** students. There were **4,766** nonpublic and charter school full-time employees who had a CPR certification, and **24** nonpublic and charter schools provided CPR training to **1,151** students.

During the 2022-23 school year, **89 percent** of public school districts and **59 percent (165)** of nonpublic and charter schools that submitted the survey reported that they annually conduct CPR/AED drills with all school staff.

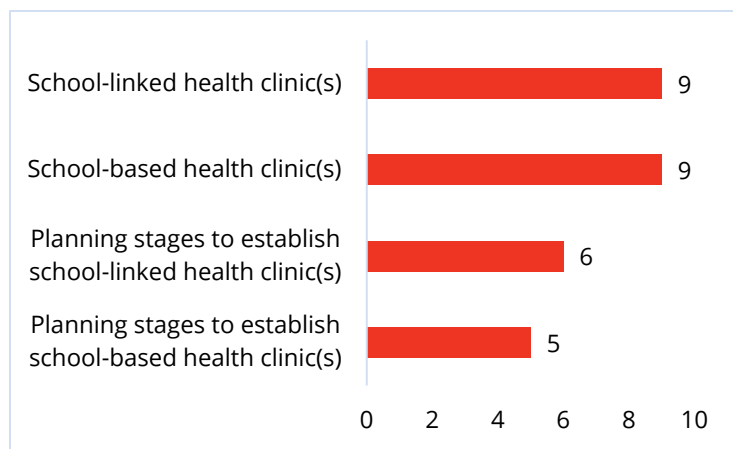
Head Injuries/Concussions

A concussion is defined as a traumatic brain injury caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move rapidly back and forth. Concussions are not usually life-threatening. However, all head injuries should be taken seriously. Children and adolescents are among those at the greatest risk for concussion (Tennessee Department of Health, 2020).

Ninety-eight percent of public school districts and **78 percent** of nonpublic and charter schools have adopted guidelines and policies concerning the nature, risk, and symptoms of concussion and head injury. The school nurse coordinates concussion care by serving as the liaison between medical and educational teams. Based on the severity and symptoms the student is experiencing, the school nurse, in consultation with the concussion management team, creates an IHP. The school nurse, individually or as a member of the concussion management team, identifies students with possible concussion, makes appropriate referrals, and by way of care coordination, leads students and families through the return to academics and

learning and eventually a gradual return to physical activity, including sports. (National Association of School Nurses, 2021).

Figure 19: Number of Nonpublic and Charter Schools with School-Based and School-Linked Health Clinics, 2022-23



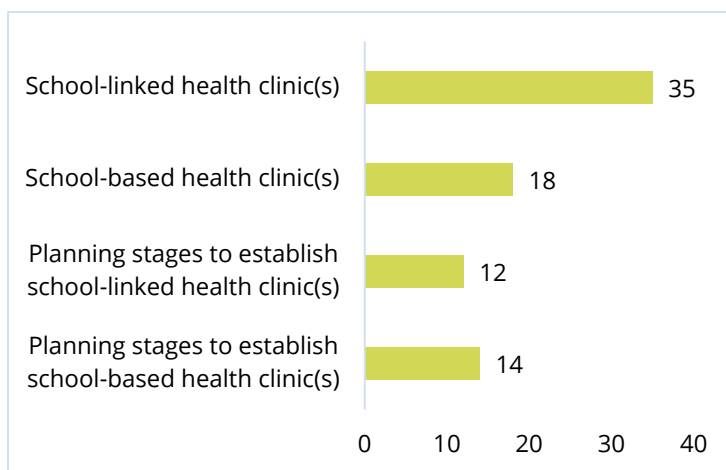
School Health Clinics

School health clinics provide a variety of services, including sick visits, primary care, and immunizations. School-based health clinics provide health services to meet students' health care needs on a school campus. School-linked health clinics provide health services to students through a variety of linkages, such as an external agency providing telehealth. School

health clinics supplement the school nurse's role by providing an easily accessible site for student referrals for students without a provider home or a student who may need more comprehensive services.

During the 2022-23 school year, there were **35** public school districts with school-linked health clinics and **18** public school districts with school-based health clinics. There were **nine** nonpublic and charter schools with a school-linked health clinic and **nine** nonpublic and charter schools with a school-based health clinic. There were **11** public school districts and **six** nonpublic and charter schools in the planning stages to establish school-linked and/or school-based health clinic(s) (Figure 19, 20).

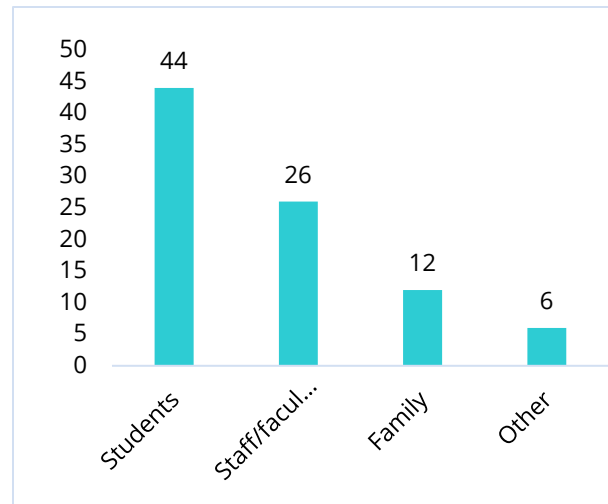
Figure 20: Number of Public School Districts with School-Based and School-Linked Health Clinics, 2022-23



Services provided in school-based and school-linked clinic(s) services are provided to students, school staff, families, community members, and others. Figure 21 displays who services are most provided to, with **44** public school districts that have school-based and/or school-linked clinic(s) providing services to students.

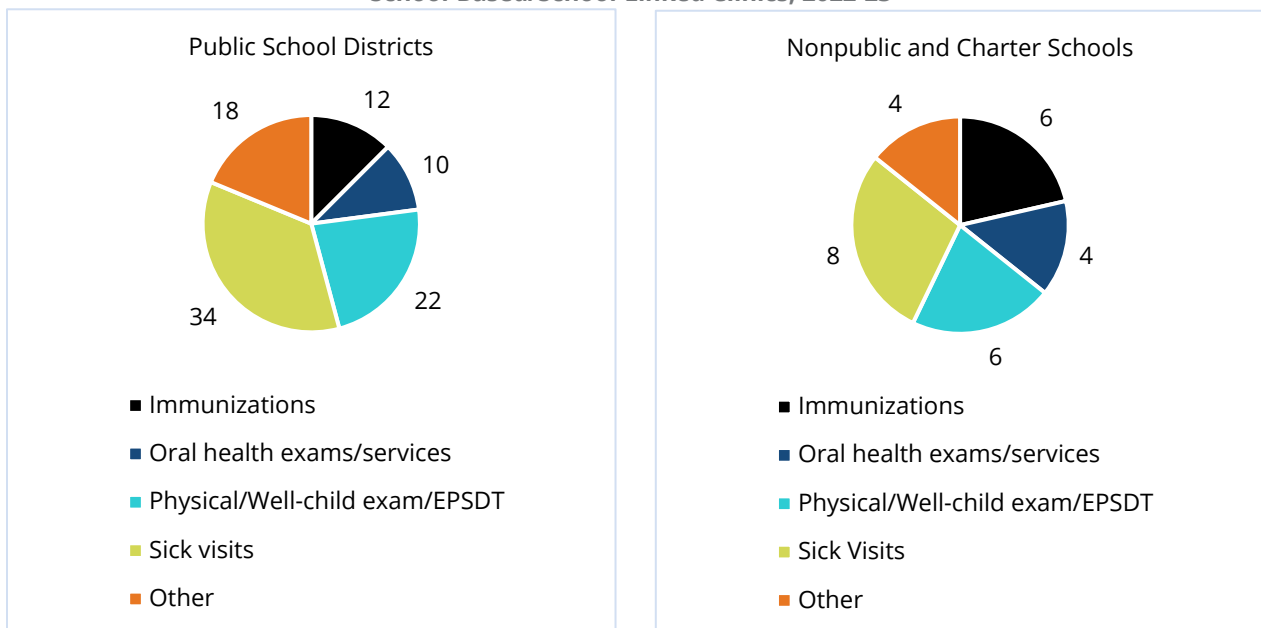
There were **45,315** students in public school districts and **1,494** nonpublic and charter school students who received services in school based/school-linked clinic(s) during the 2022-23 school year. There were **2,261** student referrals made by school-based/school-linked clinic(s) in public school districts to an external mental health provider, and **81** referrals were made by school-based/school-linked clinic(s) in nonpublic and charter schools to an external health care provider or mental health provider.

Figure 21: Demographic of Public School Districts School-Based and School-Linked Clinics, 2022-23



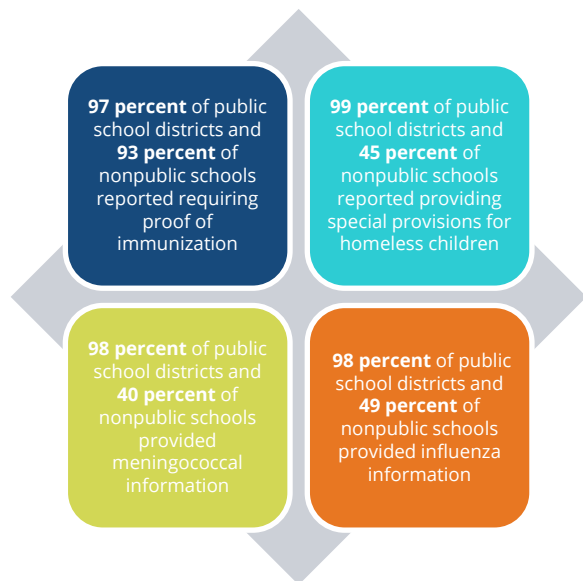
Thirty-two public school districts and **six** nonpublic and charter schools with school-based/school-linked health clinic(s) provided immunizations, **19** public school districts and **six** nonpublic and charter schools provided physicals/well-child exams, and **34** public school districts and **eight** nonpublic and charter schools provided sick visits, making immunizations, physical examinations, and sick visits the most common services provided in school based and school linked clinic(s) during the 2022-23 school year (Figure 23).

Figure 23: Number of Public School Districts or Nonpublic and Charter Schools Providing Listed Services in School-Based/School-Linked Clinics, 2022-23



Immunization and Meningococcal Information to Parents

Figure 24: Immunization and Meningococcal Information



Pursuant to Tenn. Code Ann. § 49-6-5001, no children shall be permitted to attend any public school, nursery school, kindergarten, preschool, or child care facility until proof of immunization is given to the admissions officer of the school, nursery school, kindergarten, preschool, or child care facility and no child or youth determined to be homeless shall be denied admission to any school or school facility if the child or youth has not yet been immunized or is unable to produce immunization records due to being homeless. **Ninety-seven percent** of public school districts reported requiring proof of immunization prior to permitting a child to attend any public school, nursery school,

kindergarten, preschool, or daycare, and **100 percent** of public school districts reported providing special provisions for homeless children. **Ninety-three percent** of nonpublic and charter schools reported requiring proof of immunization prior to permitting a child to attend any public school, nursery school, kindergarten, preschool, or daycare, but only **45 percent** of nonpublic and charter schools reported providing special provisions for homeless children (Figure 24).

Conclusion

The delivery of school health services advances the educational success, lifelong achievement, and health of school-aged children and adolescents. These services include assessment, planning, coordination of services, and direct care for all children, including those with special health care needs and those requiring complex medical procedures. School nurses, through the delivery and supervision of health services, play an essential role in keeping children healthy, safe, and ready to learn.

School health services are designed to ensure early intervention, access, and referral to primary health care services, to prevent and control communicable diseases and other health problems, and to provide emergency care for student illness and injury. The role of the school nurse continues to expand, including critical components of disease surveillance, management of chronic diseases, emergency preparedness, health assessments, health education, and much more. Overall, health is fundamental to a student's growth and development. Students with unmet health-related needs have difficulty engaging in the educational

process. As the number of children with special health care needs attending school increases, so does the need for school nurses. Healthcare access by all students is an essential factor that can improve the overall health and wellness of society. School nurses remove barriers to healthcare access and provide direct care, care coordination, and case management to students in need. Continued collaboration among school nurses, health care providers, families, and school staff are increasingly critical to benefiting student health and educational outcomes.

Public school districts and nonpublic schools are encouraged to have a school nurse in every school to support the overall well-being and academic success of students. Having a nurse in every school ensures access to healthcare expertise and enables prompt assessment and treatment of acute and chronic illnesses, injuries, and emergencies. Having a full-time nurse at school enhances safety and emergency preparedness.

Schools are encouraged to assess the acuity of the student population and schools with a higher acuity level among students, such as those with a substantial number of students with chronic health conditions or disabilities, may need additional nurses on staff to provide specialized care, administer medications, and closely monitor the well-being of students with complex health needs.

Public school districts and nonpublic schools are encouraged to have supportive policies and practices that include providing adequate staffing, training, and support for school nurses.

References

American Academy of Pediatrics. (2016). Role of the School Nurse in Providing School Health Services. *Pediatrics*.

American Academy of Pediatrics. (2021). *Epilepsy: National Coordinating Center for Epilepsy*. Retrieved from <https://www.aap.org/en/patient-care/epilepsy/>

American Diabetes Association. (2021). Retrieved from Diabetes: <https://ada.com/conditions/diabetes/>

American Heart Association. (2021). *What is CPR?* Retrieved from <https://cpr.heart.org/en/resources/what-is-cpr>

American Psychiatric Association. (2021). Retrieved from What is ADHD?: <https://www.psychiatry.org/patients-families/adhd/what-is-adhd>

CDC. (2019). *Asthma*. Retrieved from CDC Healthy Schools: <https://www.cdc.gov/healthyschools/asthma/index.htm#:~:text=Asthma%20is%20a%20leading%20chronic,are%20likely%20to%20have%20asthma>

CDC. (2019). *Chronic Disease Management*. Retrieved from CDC Healthy Schools: https://www.cdc.gov/healthyschools/shs/chronic_disease_management.htm

CDC. (2019). *Morbidity and Mortality Weekly*. Retrieved from Disparities in Diabetes Deaths Among Children and Adolescents: United States, 2000-2014: <https://www.cdc.gov/mmwr/volumes/66/wr/mm6619a4.htm>

Healthy Schools Campaign. (2015). *Healthy Schools C*. Retrieved from An Action Plan for Reducing Absences Due to Asthma: <https://healthyschoolscampaign.org/blog/an-action-plan-for-reducing-absences-due-to-asthma/>

National Association of School Nurses. (2016). *Framework for 21st century School Nursing Practice*. Retrieved from <https://higherlogicdownload.s3.amazonaws.com/NASN/3870c72d-fff9-4ed7-833f-215de278d256/UploadedImages/PDFs/Framework%20for%2021st%20Century%20School%20Nursing%20Practice/21s>

National Association of School Nurses. (2020, June). Retrieved from School Nurse Workload: Staffing for Safe Care: <https://www.nasn.org/nasn-resources/professional-practice-documents/position-statements/ps-workload>

National Association of School Nurses. (2020). *School Nurse Workload: Staffing for Safe Care*. Retrieved from <https://www.nasn.org/nasn/advocacy/professional-practice-documents/position-statements/ps-workload#:~:text=The%20school%20nurse%20provides%20the%20critical%20link%20to,needs%3B%20and%20work%20as%20advocates%20and%20change%20agents.>

National Association of School Nurses. (2020, January). *The School Health Services Team: Supporting Student Outcomes*. Retrieved from <https://www.nasn.org/nasn-resources/professional-practice-documents/position-statements/ps-team>

National Association of School Nurses. (2021, January). *Concussions: School Based Management*. Retrieved from National Association of School Nurses: <https://www.nasn.org/nasn/advocacy/professional-practice-documents/position-statements/ps-concussions>

Tennessee Department of Health. (2020). *Return to Learn/Return to Play: Concussion Management Guidelines*. Retrieved from <https://www.tn.gov/content/dam/tn/health/program-areas/tbi/2020%20Tennessee%20Department%20of%20Health%20Return%20to%20Learn.Return%20t>