



# Annual School Health Services Report

2021-22 School Year

Tennessee Department of Education | October 2022



Cover Image Courtesy of Humboldt City Schools

# Table of Contents

- Introduction ..... 3
  - Summary ..... 3
    - Role of the School Nurse ..... 3
  - Impact of COVID-19..... 5
- 2021-2022 Results..... 5
  - School Nurse Profile ..... 5
    - Public Schools ..... 5
    - Nonpublic Schools..... 7
- Student Health..... 7
  - Chronic Health Conditions ..... 7
  - Student Health Encounters and Return to Class ..... 14
  - Health Screenings..... 14
  - Health Care Procedures..... 15
  - Medication Management* ..... 17
  - School Health Clinics ..... 19
  - Immunization and Meningococcal Information to Parents ..... 21
- Conclusion ..... 22
- References ..... 23

# 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 **271** nonpublic schools. This report summarizes the healthcare needs of Tennessee students and health services provided by school nursing staff during the 2021-22 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;

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

The National Association of School Nurses' *Framework for 21<sup>st</sup> 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 21<sup>st</sup> Century School Nursing Practice



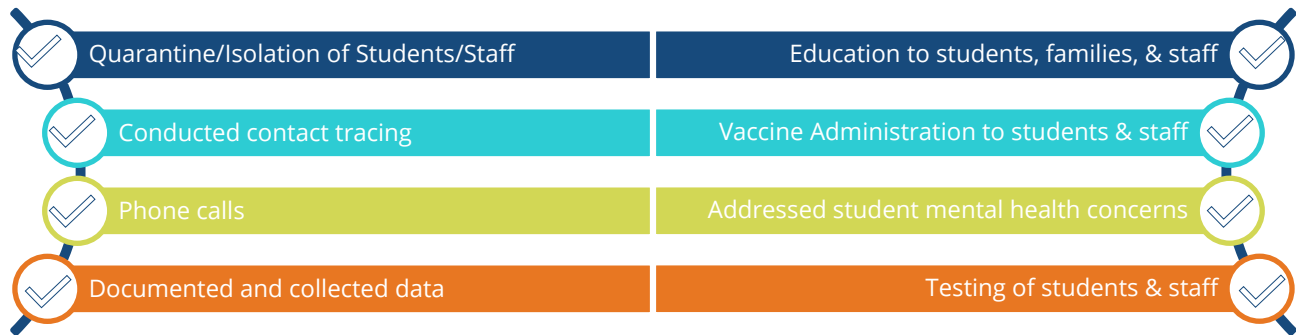
The school nurse has the responsibility of collaborating with and/or referring students to community health care professionals by

- 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.

## Impact of COVID-19

School nurses are critical members of the school support team every year, helping students manage their chronic conditions, identifying and addressing students at risk for social or mental health concerns, and working to keep the entire school community healthy. Since the beginning of the COVID-19 pandemic, the school nurse's role has been even more essential. Figure 2 highlights key responsibilities that were performed by LEA and nonpublic school nurses during the 2021-22 school year.

Figure 2: School Nurse Key Responsibilities During COVID-19, 2021-22



## 2021-2022 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 1 full-time professional school nurse in every school.

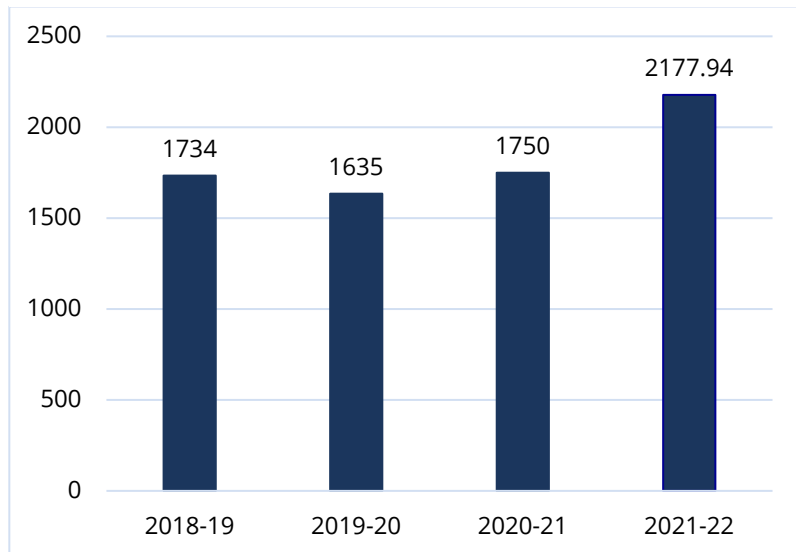
School nurses in Tennessee are Registered Nurses (RN) or Licensed Practical Nurses (LPN) with varied educational preparation including Doctor of Nursing Practice (DNP), Bachelor of Science in Nursing (BSN), Master of Science in Nursing (MSN), or Associate Degree of Nursing (ADN).

### Public Schools

Tennessee local education agencies (LEAs) hire nurses to serve the general and special education student populations. There is included in the current BEP funding formula an amount of money

sufficient to fund (1) full-time public school nurse position for each three thousand students or one full-time position for each LEA, whichever is greater. Additionally, any health care procedure a student is not capable or competent to perform must be performed by a licensed health care professional in

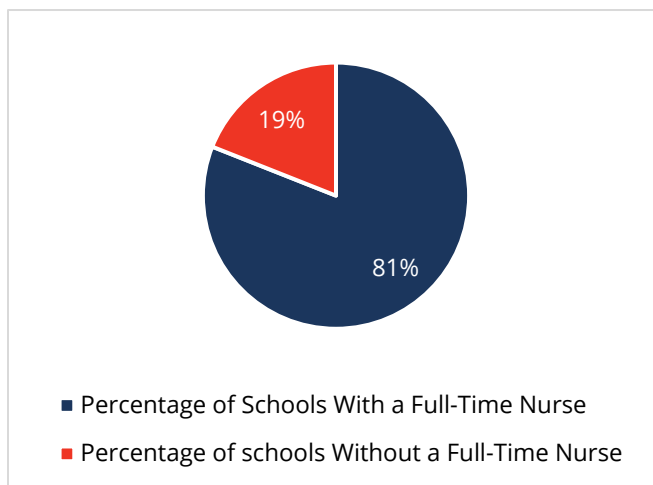
**Figure 3: School Nurse FTEs in LEAs by School Year**



accordance with applicable guidelines of their respective regulatory boards. During the 2021-22 school year, **2,177.94** full-time school nurses (or full-time equivalents) provided health care services to students in Tennessee public school districts (Figure 3). **Seventeen percent** of school nurses (full-time equivalents) provided care only to special education students. During the 2021-22 school year, **35 percent** of LEAs reported not having a full-time nurse in at least one school

and **19 percent** of public schools do not have a full-time nurse during the school day (Figure 4). Furthermore, **41 percent** of LEAs report having at least one school nurse assigned to multiple schools. Despite the **24 percent** increase in number of LEA school nurse FTEs from 2020-21 to 2021-22 school year, the number of times LEA school nurses assigned to a single school were pulled to assist with an immediate need at another school increased **75 percent** from the prior school year.

**Figure 4. Percentage of Schools in LEAs with or without a Nurse, 2021-22**



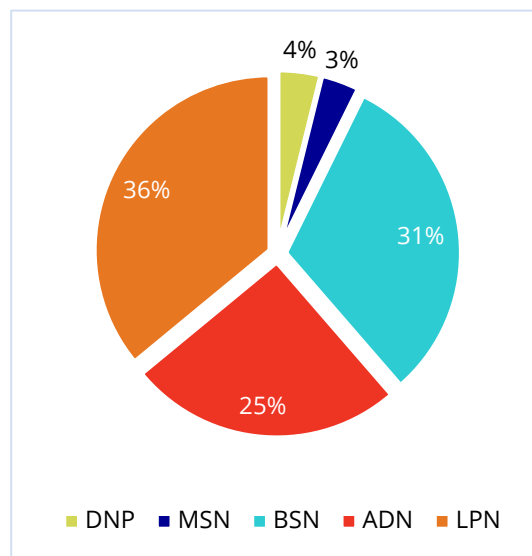
### Health Office Composition

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 physician, 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).

**Forty-six percent** of LEA school nurses have an associate (ADN) or bachelor's degree (BSN) in nursing. **Seven percent** of Tennessee LEA school nurses have an advanced nursing degree, Doctor of Nursing Practice (DNP) or Master of Science in Nursing (MSN). **Thirty-six percent** of LEA school nurses are LPNs (Figure 5). LPNs practice under the direction and supervision of an RN, or physician, or dentist, and cannot practice independently in Tennessee.

Figure 5: Percentage of LEA School Nurses by Degree, 2021-22



### Nonpublic Schools

While Tennessee LEAs are required to provide a licensed health care provider to serve the health care needs of students, nonpublic schools are not. During the 2021-22 year, only **45 percent** of nonpublic schools reported having a school nurse. There were **329.31** school nurses (or full-time equivalents) that provided care across **271** of Tennessee nonpublic schools.

### Student Health

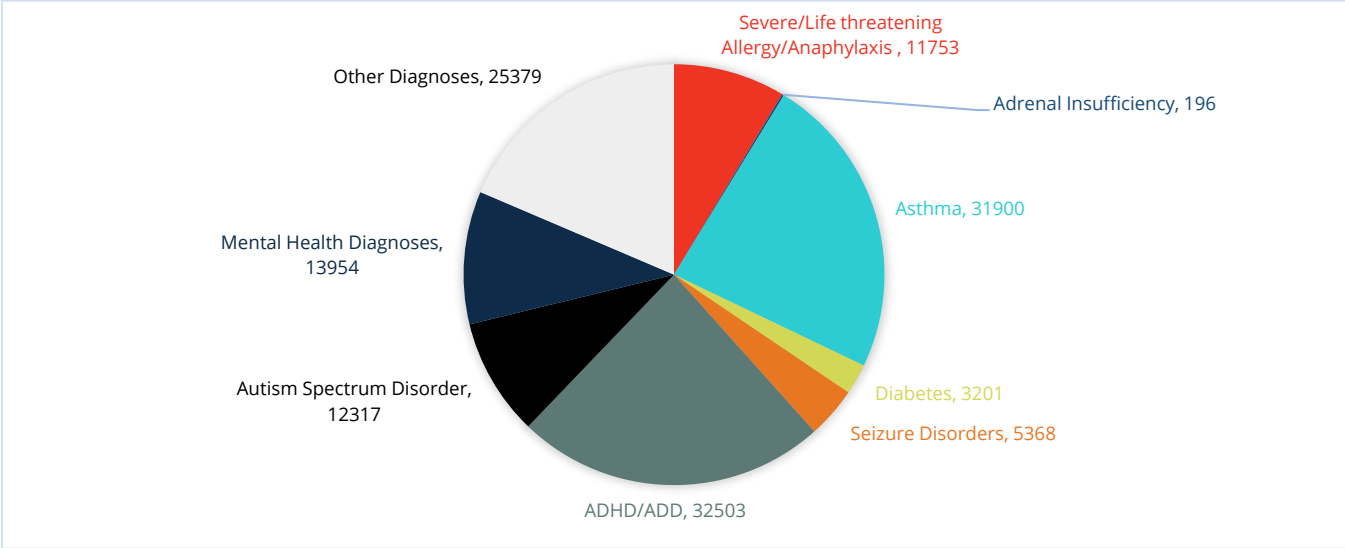
Responding LEAs and nonpublic schools provided data on a variety of topics related to student health. The 2021-22 survey gathered information on the health care needs of students in public and nonpublic schools. Results are summarized below.

### Chronic Health Conditions

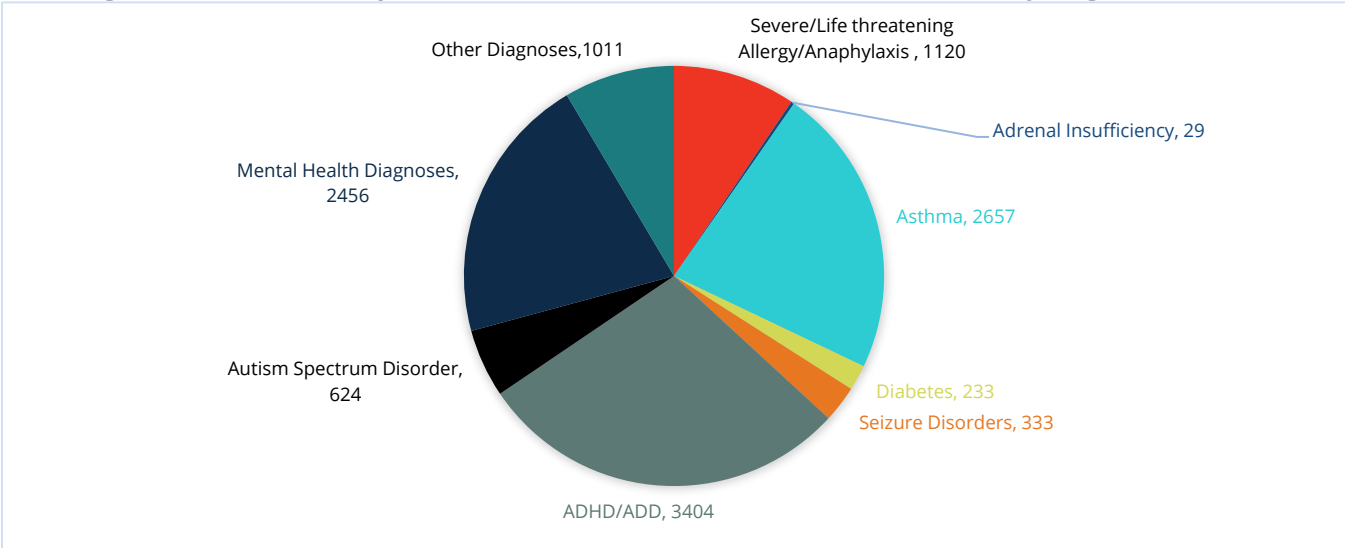
Tennessee school nurses provide services to students with a wide range of mental and physical health needs. School nurses assess needs, complete health care plans, and provide instruction to meet the health needs of students with chronic health conditions. Children diagnosed with chronic illnesses have 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 2021-22 school year, **136,571 (14 percent)** students in LEAs and **11,867** students in nonpublic schools had a chronic illness or disability diagnosis. Figure 6 shows the number of students in LEAs and nonpublic schools diagnosed with each chronic condition or disability.<sup>1</sup>

**Figure 6: Number of LEA Students with Chronic Illness or Disability Diagnosis, 2021-22**



**Figure 7: Number of Nonpublic School Students with Chronic Illness or Disability Diagnosis, 2021-22**



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.

<sup>1</sup> The 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.

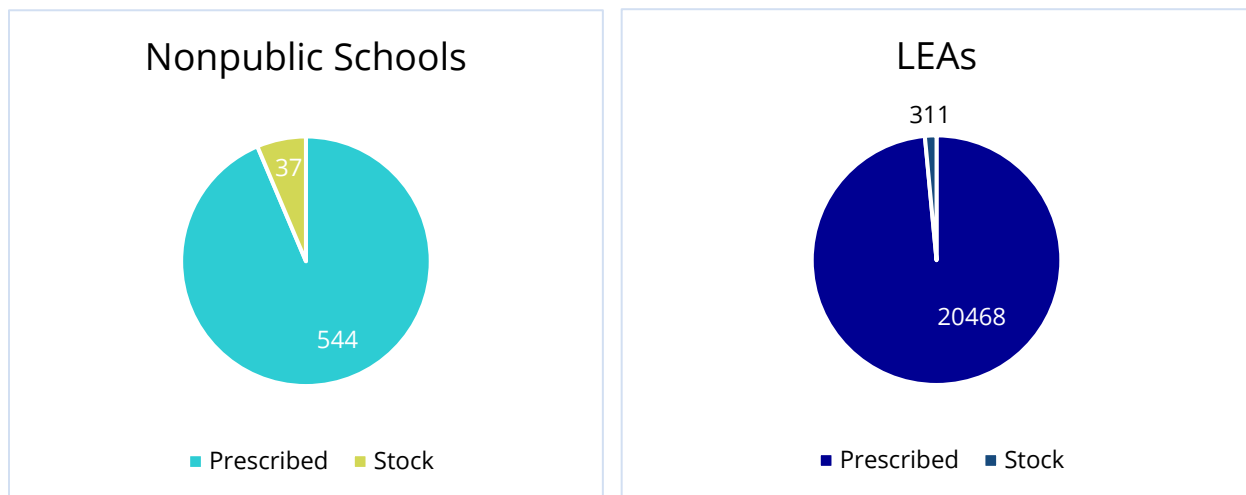


## Asthma

During the 2021-22 school year, **31,900** students were diagnosed with asthma in Tennessee LEAs and **2,656** students were diagnosed with asthma in nonpublic 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 2021-22 school year, albuterol was administered at school or during a school-sponsored function **20,779** times in LEAs and **581** times in nonpublic schools. Figure 8 indicates the number of times albuterol was administered using a student's prescription or using the school's supply (stock).

Figure 8: Number of Times Albuterol Was Administered to a Student During an Emergency, 2021-22



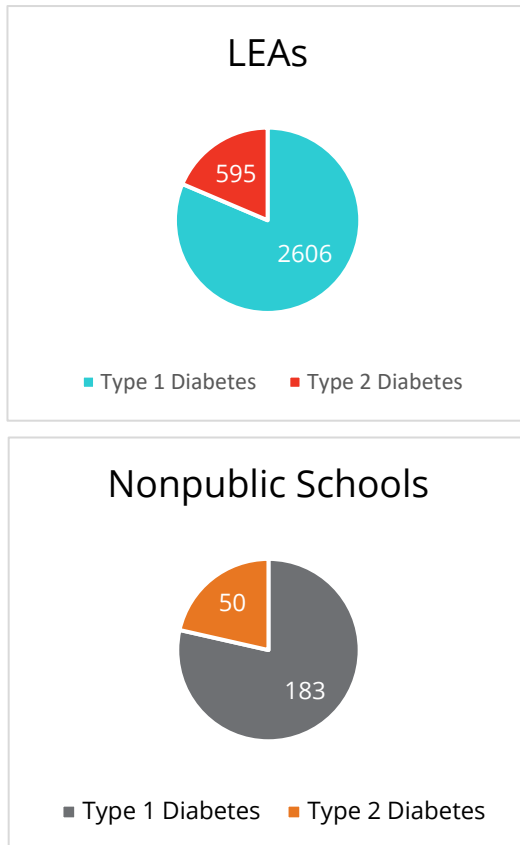
For additional information related to asthma management in the school setting, please view the [Healthcare Procedures Section](#).

## 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 sufficient amounts of insulin or when the body does not use insulin properly (American Diabetes Association, 2021). Diabetes can be managed effectively, and complications can be reduced by 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 just 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 **364** LEA school nurses and **26** nonpublic school nurses assigned to a school full-time due to a student with diabetes in the school.

Figure 9: Number of Students with Diabetes by Type, 2021-22



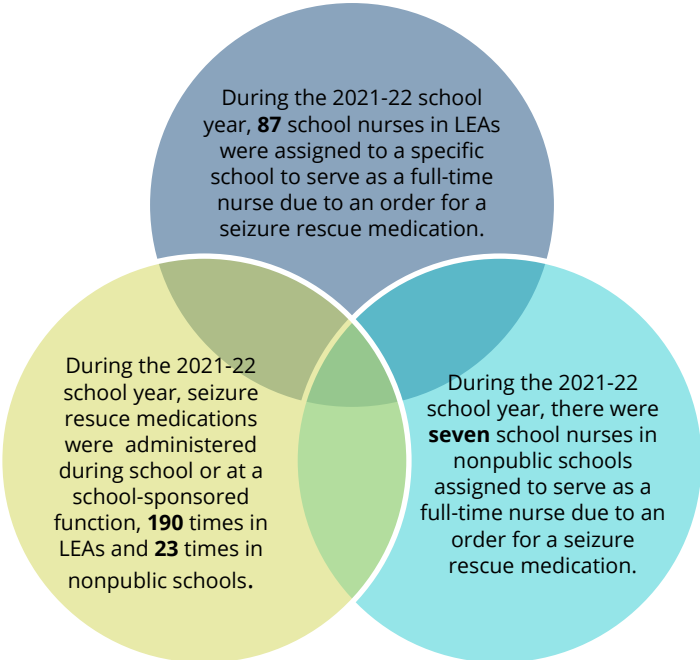
During the 2021-22 school year, there were **3,201** students with diabetes in LEAs and **233** students in nonpublic schools with diabetes. Type 1 diabetes is most common among school-age children (Figure 9). School-age children with diabetes are at greater risk for death from acute complications of 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 judgement or even cause 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 2021-22 school year, Glucagon was administered, during school or at a school-sponsored function, **67** times in LEAs and **two** times in nonpublic 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*

**Figure 10: Seizure Disorder Information, 2021-22**



There were **5,368** students in LEAs and **333** students in nonpublic schools with a seizure disorder, also known as epilepsy, during the 2021-22 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 and, 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 doesn't 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).

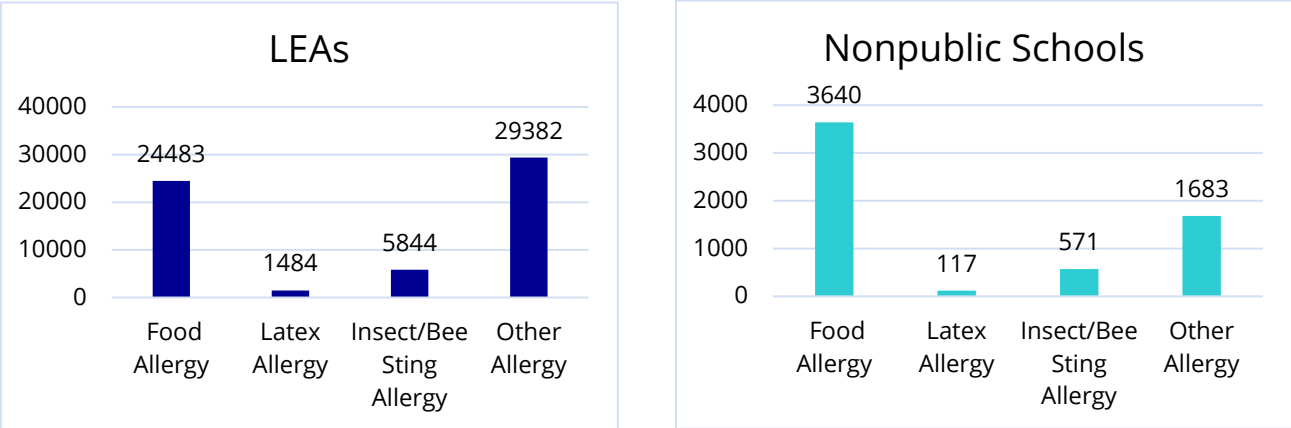
During the 2021-22 school year, seizure rescue medications were administered during school or at a school-sponsored function, **190** times in LEAs and **23** times in nonpublic schools (Figure 10). There were **122** LEA school nurses and **seven** nonpublic school nurses assigned to a school full-time due to seizure rescue medication order. **One-hundred-fifteen** LEAs and **72** nonpublic schools permitted the

administration of Diastat by trained volunteer school personnel. Of those, **100 percent** of LEAs and nonpublic schools call 911 if Diastat is administered by trained volunteer school personnel.

*Severe/Life Threatening Allergies*

An allergic reaction occurs when the immune system overacts to a substance known as an allergen. During the 2021-22 school year, there were **61,193** students in LEAs and **6,011** students in nonpublic schools with non-life threatening and severe/life threatening allergies.<sup>2</sup> Figure 11 highlights the number of students with common allergies by type. Food, Latex, and insect/bee sting allergies are common in the school setting.

**Figure 11. Number of Students with Non-Life Threatening and Severe Life-Threatening Allergies by Type, 2021-22**



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 **11,753** students in LEAs and **1,120** students in nonpublic schools diagnosed with severe/life threatening allergies during the 2021-22 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.

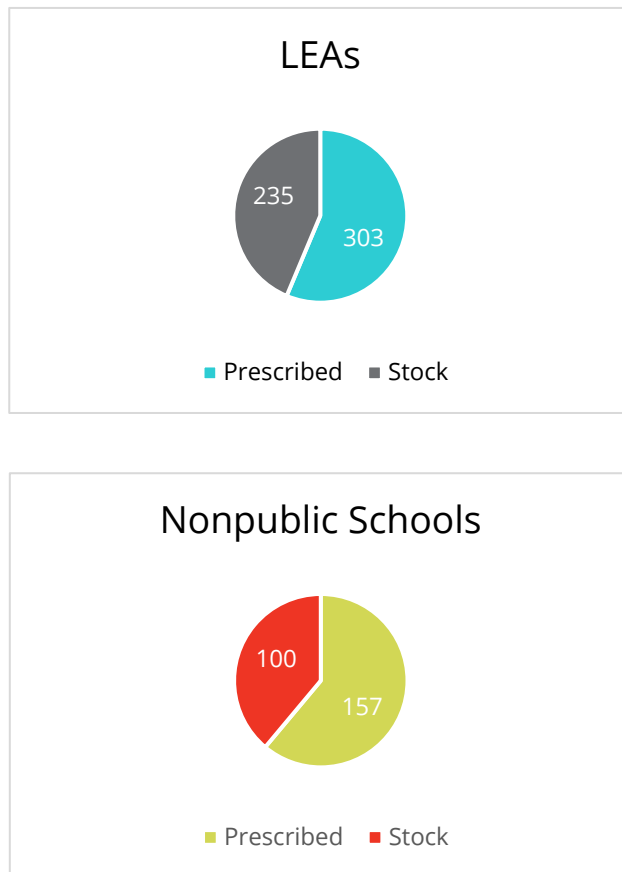
<sup>2</sup> Parent/guardian reported diagnosis of asthma was acceptable for non-life-threatening allergies. All other chronic health conditions and disabilities require a confirmed diagnosis to be counted in the Health Services Survey.

LEAs and nonpublic schools are authorized to maintain epinephrine auto-injectors to be administered to any student believed to be having a life-threatening anaphylactic reaction. During the 2021-22 school year, **78 percent** of LEAs and **36 percent** of nonpublic schools chose to maintain epinephrine auto-injectors for this purpose. There were **1,292** schools in LEAs (**71 percent**) that maintained a school supply of epinephrine (stock).

During the 2021-22 school year, Epinephrine was administered **538** times in LEAs and **157** times in nonpublic 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, 2021-22**



**Attention Deficit/Hyperactivity Disorder (ADHD)**

ADHD<sup>3</sup> 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 2021-22 school year, **32,503** students in LEAs and **3,404** students in nonpublic schools were diagnosed with ADHD, making it the most prevalent 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 early recognition

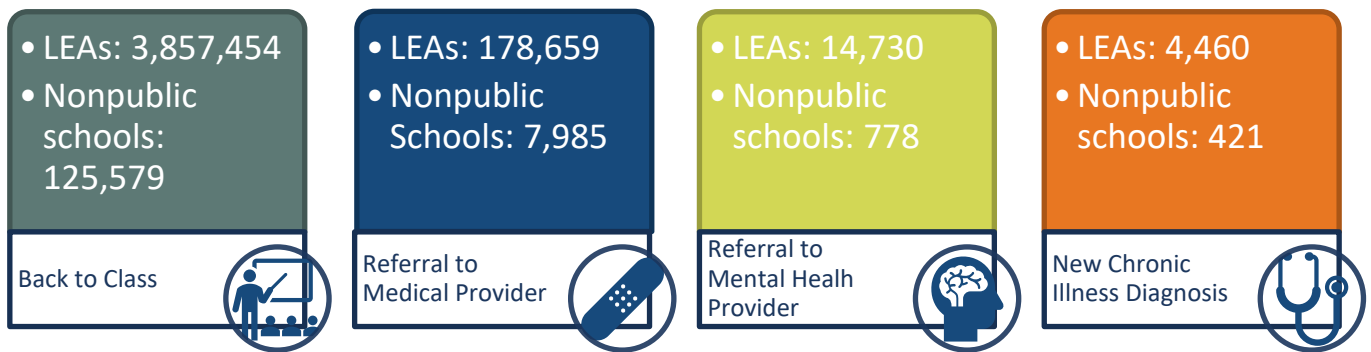
<sup>3</sup> Attention Deficit Disorder (ADD) is no longer a medical diagnosis but is sometimes used to describe inattention-type ADHD.

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.<sup>4</sup> 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 2020-21 school year, LEA school nurses reported **4,616,636** student encounters. Of those, **84 percent** of students seen by the LEA school nurse were returned to class. There were **146,408** student encounters with a nonpublic school nurse and **86 percent** of students seen by a nonpublic school nurse were returned to class. **Forty-one percent** of student visits to the LEA school nurse resulted in the student being referred to medical or mental health provider and **4,460** student visits to the LEA school nurse resulted in a new diagnosis (Figure 13).

Figure 13: Health Office Encounters



### Health Screenings

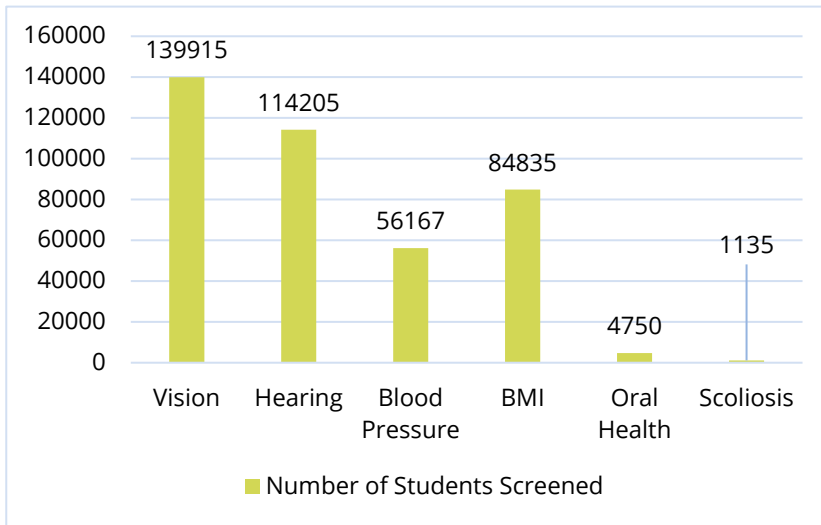
Health-related problems, if not detected and treated, can limit the ability of a child to learn. Healthy students are better learners. Often, the best way to identify these problems is through school health screenings. When health concerns are identified early through regular school health screenings, 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 Washington County Schools and Sumner County Schools*

<sup>4</sup> Health Screenings were tracked separately.

**Figure 14: Student Health Screenings in LEAs, 2021-22**



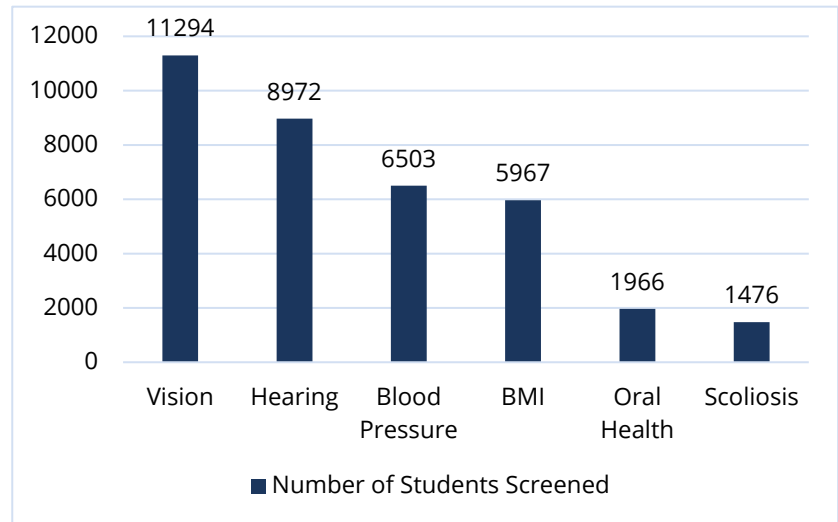
School nurses assist with health screenings by screening students and making referrals for follow-up care when needed. Parents are responsible for making appointments for the follow-up care specified in the referral, and for ensuring students keep the appointments. During the 2021-22 school year, **141** public school districts conducted **999,783** student health screenings. Figure 14) and **134** nonpublic schools conducted **36,178** student health

screenings (Figure 15)<sup>5</sup>.

### 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:

**Figure 14: Student Health Screenings in Nonpublic Schools, 2021-22**



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

<sup>5</sup> These numbers represent initial screenings, and do not include re-screenings.

Figure 15: Number of Students Receiving Complex Procedures Ordered by a Medical Provider, 2021-22

Complex Procedure	LEAs	Nonpublic Schools
Urinary Catheterization	271	15
Wound Care	5242	148
Blood Glucose Monitoring	2694	261
Ketone testing	1666	88
Insulin Injection	1755	1776
Insulin pump management	1180	92
Carbohydrate Counting	2283	112
Oxygen Saturation	2654	232
Nebulizer Treatment	432	151
Peak flow measurement	44	13
IV/Heparin flush	2	0
Tracheal Suctioning/Tracheostomy Care	47	6
Ventilator Care	11	0
Nasogastric/Gastrostomy-Tube Care/Feeding/Medications	692	28
Ostomy Care	81	3
Oxygen Delivery	34	2
Other Complex Procedures	297	1

School nurses also provide care to school staff. During the 2021-22 school year, there were **91,529** staff visits to the LEA school nurse.

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 training, provides ongoing supervision, performs performance evaluation, 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, maintain student health records, non-complex procedures, assisting students in the self-administration of medications, and other health office duties. During the 2021-22 school year, there were **17,810** LEA school personnel and **895** nonpublic school personnel trained by the RN in non-complex tasks.



### 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 that received medication during the school year. There were **50,33** LEA students and

Figure 16: Number of Students Administered Medication by Type, 2021-22

Medication	LEAs	Nonpublic Schools
Insulin Administration	2312	141
Other Injections	1051	834
Intravenous	4	11
Inhaler (or nebulizer)	9876	515
Oral	50333	1930
Nasal	690	39
Rectal	474	23
Topical	16380	172
Ophthalmic	1626	52
Otic	318	15

**1,930** nonpublic school students that receiving an oral medication during the school year (Figure 16), School nurses provide oversight for medication administration through administering medication to students, delegating the administration to appropriate trained staff, 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, must 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 handle medications and record-keeping.

### Emergencies

Figure 17: Number of Students Administered Emergency Medication by

Emergency Treatment/Medication	LEAs	Nonpublic Schools
Albuterol	20779	581
Epinephrine	538	157
Glucagon	67	2
Emergency Seizure Medications	190	23
Cardiopulmonary Resuscitation	23	2
Automatic External Defibrillator	23	4
Other Emergency treatment	4052	124

An important 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 procedures to be

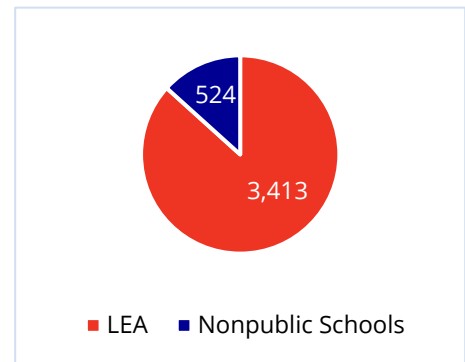
performed by school personnel with appropriate training including, but not limited to, administration of antiseizure medication, Epinephrine, Glucagon, and Naloxone. During the 2021-22 school year, **25,672** emergency treatments were administered to LEA students and **893** emergency treatments were administered to nonpublic school students at school or during a school-sponsored function. Figure 17

highlights the type of emergency medication or treatment and number of times the medication or treatment was administered during the school year. Albuterol was administered **20,779** times in LEAs and **581** times in nonpublic schools and was the most frequent emergency medication administered to students during the 2021-22 school year. During the 2021-22 school year, LEA staff received emergency treatment **1,231** times and nonpublic school staff received emergency treatment **91** times.

### *Automated External Defibrillators (AEDs)*

Sudden Cardiac Arrest (SCA) is a life-threatening emergency that occurs when the heart suddenly and unexpectedly stops beating. This 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 LEAs 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, 2021-22



There were **3,413** AEDs in **1,711** public schools (**146** LEAs) and **524** AEDs in **198** nonpublic schools during the 2021-22 school year (Figure 18). AEDs located in public school districts were used **23** times and were used **four** times in nonpublic schools during the 2021-22 school year.

### *Cardiopulmonary Resuscitation (CPR)*

CPR is an emergency lifesaving procedure performed when the heart stops beating. Immediate CPR can double or triple 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 2021-22 school year, 20,725 LEA full-time school employees had CPR certification and **364** schools provided CPR training to **49,647** students. There were **4,344** nonpublic school full-time employees who had a CPR certification and **21** nonpublic schools provided CPR training to **861** students.

During the 2021-22 school year, **93 percent** of LEAs and **66 percent** of nonpublic schools conducted CPR/AED drills for all school staff. CPR/AED drills are an important component of a school or district's emergency plan.

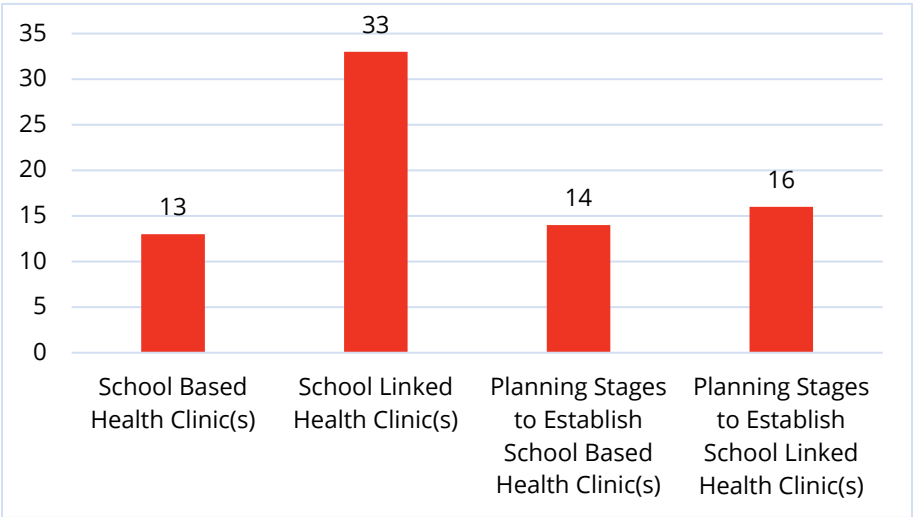
*Head Injuries/Concussions*

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 LEAs and **78 percent** of nonpublic 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).

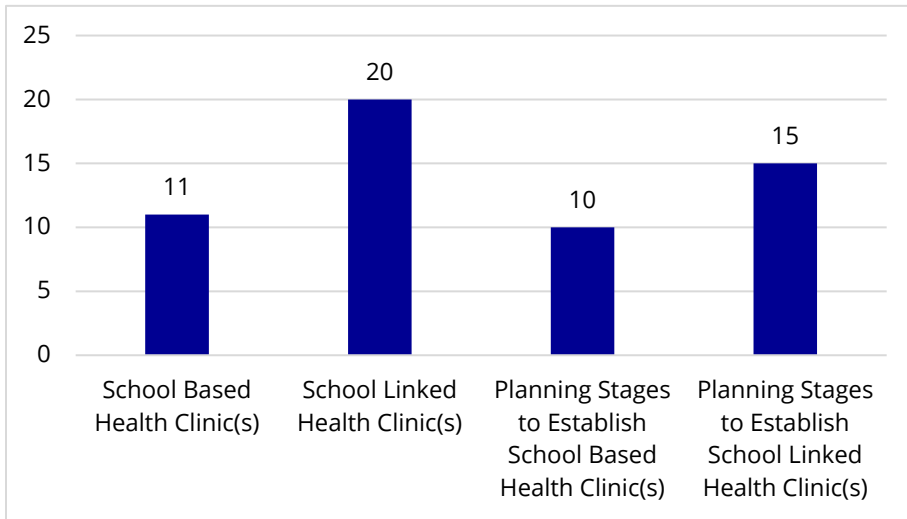
**School Health Clinics**

**Figure 19: Number of LEAs with School Based and School Linked Health Clinics, 2021-22**



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

**Figure 20: Number of Nonpublic Schools with School Based and School Linked Health Clinics, 2021-22**



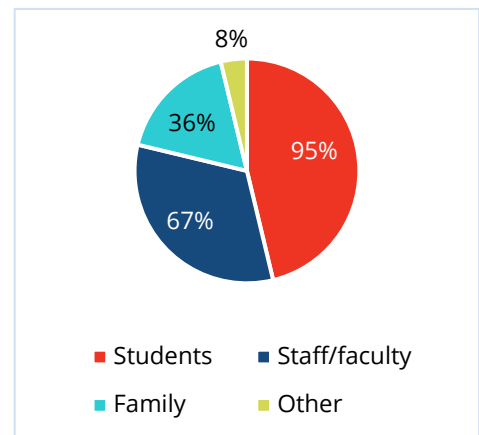
school linked health clinic and **11** nonpublic schools with a school-based health clinic. There were **30** LEAs and **25** nonpublic schools in the planning stages to establish school linked and/or school-based health clinic(s) (Figure 19, 20).

Services provided in school based and school linked clinic(s) services are provided to students, school staff, families, community members, and others. Figures 21 and Figure 22 display who services are most provided to, with **95 percent** of LEAs and **80 percent** of nonpublic schools with a school based or school linked clinic(s) providing services to students

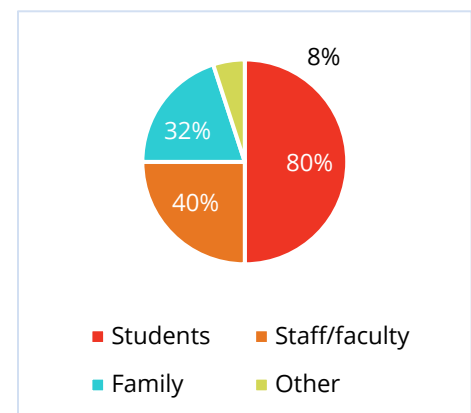
There were **21,218** LEA students in LEAs and **4,104** nonpublic school students who received services in school based/school linked clinic(s) during the 2021-22 school year. There were **2,189** student referrals made by school based/school linked clinic(s) in LEAs to an external mental health provider and **498** referrals were made by school based/school linked clinic(s) in LEAs to an external mental health provider.

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 2021-22 school year, there were **33** LEAs with school linked health clinics and **13** LEAs with school-based health clinics. There were **20** nonpublic schools with a

**Figure 21: Demographic of LEA School Based and School Linked Clinics, 2021-22**

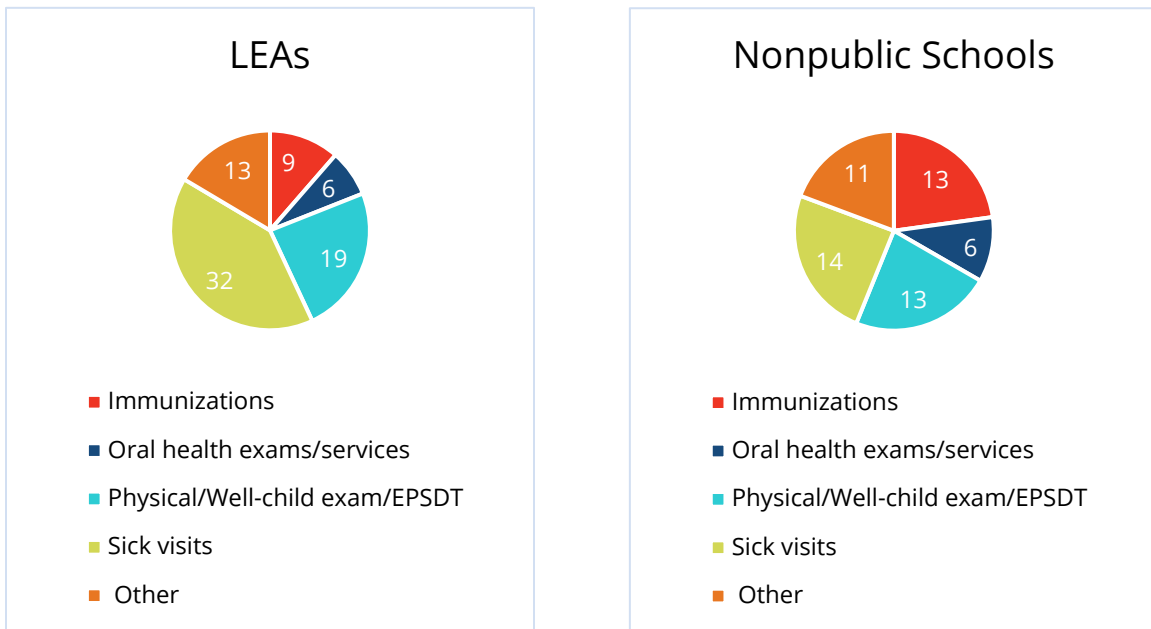


**Figure 22: Demographic of Nonpublic Schools School Based and School Linked Clinics, 2021-22**



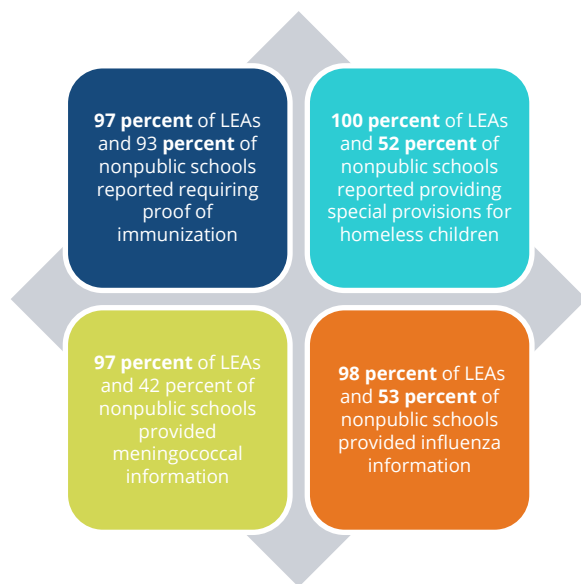
**Thirty-two** LEAs and **14** nonpublic schools with school based/school linked health clinic(s) provided immunizations and **19** LEAs and **13** nonpublic schools provided physical/well-child exams, making immunizations and physical examinations the most common services provided in school based and school linked clinic(s) during the 2021-22 school year (Figure 23).

**Figure 23: Number of LEAs or Nonpublic Schools Providing Listed Services in School Based/School Linked Clinics, 2021-22**



### 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 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 LEAs reported requiring proof of immunization prior to

permitting a child to attend any public school, nursery school, kindergarten, pre-school, or daycare and

**100 percent** of LEAs reported providing special provisions for homeless children. **Ninety-three percent** of nonpublic schools reported requiring proof of immunization prior to permitting a child to attend any public school, nursery school, kindergarten, pre-school, or daycare but only **52 percent** of nonpublic 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 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 disease 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.

# 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](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-reducingabsences-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>