



Connecticut State Department of Education

Health Services Program Information Survey Report

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Developed for:

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Executive Summary

Executive Summary

The Connecticut State Department of Education (CSDE), as part of its ongoing efforts to support and expand school health services provided to Connecticut students, is continuing the data collection process for school health services begun in 2004. This process is designed to assist the CSDE to understand the status of school health services in Connecticut school districts, the needs of school districts and students in the area of school health services and progress being made in these areas over time. As one component of these ongoing efforts, the CSDE commissioned the Center for Program Research & Evaluation (CPRE) at EdAdvance (formerly EDUCATION CONNECTION) to develop an online survey to collect information regarding the status of school health services from school districts throughout the state.

The survey development process was designed to encourage participation of state and district staff through each stage in the process. The process included the initial consultation of the CSDE with the CPRE. The survey was developed for data collection after a review of the professional literature related to school health services. The CSDE and the Connecticut State Health Records Committee (CSHRC) assisted EdAdvance to adapt the survey development process as necessary to meet the needs of school districts and the CSDE.

The CSDE and the CSHRC provided suggestions to EdAdvance for areas and categories for which they sought information. Additionally, as appropriate, questions were used from similar surveys administered by other states. The use of these questions was intended to maximize survey reliability and to allow Connecticut to compare results as necessary, with results from other states.

EdAdvance staff developed specific questionnaire items based on these suggestions and questions asked on other state health questionnaires. The CSDE and CSHRC approved all aspects of survey development before survey administration. The survey was pilot-tested in spring 2003. Based on the results of the pilot test, and consequent survey administrations, the survey has been revised as necessary over time.

Scales were developed to identify perceptions of the importance, satisfaction or frequency of an item using a Likert-type scale. Demographic information was collected including the type of district; types of districts served by the respondent; district reference group (DRG); and the name and identification number of the school district. Open-ended questions allowed respondents to comment freely on their expectations, needs, and satisfaction. Survey questions have been revised each year slightly based on district requests or the results of survey data analysis.

The survey was incorporated into the EdAdvance website to facilitate completion by respondents. The Coordinator of Health Services (or equivalent) in each Connecticut school district was asked to complete the online survey.

Questionnaire results were analyzed statistically using IBM SPSS Statistical software. Frequencies and means were obtained on all data as appropriate.

Profile of Districts Who Participated in the Data Collection Process:

For 2018-2019 a total of 197 questionnaires were distributed with **157** completed in time to be analyzed, yielding a response rate of **82.2%**.

93.6% of respondents represented public school districts, 2.6% from charter schools and 3.8% from RESCS. Suburban districts accounted for 57.3% of responses while urban districts were represented by 12.7%, and rural districts, 29.9%. All 157 districts completing the survey responded to demographic questions.

Respondents represented districts from all District Reference Groups (DRG) and were grouped by the following percentages:

DRG	% Survey Responses
A	7.6
B	14.7
C	15.9
D	16.6
E	13.4
F	8.3
G	10.8
H	5.1
I	7.6

Conclusions and Recommendations

Nursing staff across most Connecticut school districts provided several insights into the status of health services in Connecticut districts, as indicated by the quantitative survey results, as well as the breadth of qualitative comments. The CSDE and EdAdvance staff examined data resulting from the sixteenth year of survey administration.

That examination resulted in the following conclusions regarding school health services in Connecticut:

- Diagnosed Concussion accommodations were most frequently cited for physical activity and academic modifications.
- Optional services provided by participating districts to public school students generated approximately 4,928 referrals to outside providers. (Since 2014-2015, dental screening services have not been included in this report.)
- A total of 18,899 students were reported with documented dietary restrictions including peanut and tree-nut allergies, as well as lactose intolerance.
- Districts prescribe emergency medications as needed, especially epinephrine (37.2%).
- The need for increased mental health services training and support on site is expressed in the majority of districts, a trend that has been apparent for the last five years.
- In 2018-2019, 2,114 9-1-1 calls were reported by participating Connecticut public and private, non-profit schools for students and adults combined.
- 148 PUBLIC school districts, and 44 PRIVATE, non-profit schools identified a total of 2,669 students as uninsured during 2018-2019.
- Approximately 95% of PUBLIC schools and 52% of PRIVATE, non-profit schools report using computer software to collect and record school health information. SNAP is the software of choice in 62.9% of PUBLIC school districts, and 24.9% of PRIVATE, non-profit schools using health management software.
- Between ½ and 2/3 of respondents indicated at least some involvement in teaching topics including Nutrition, Physical Activity, Human Sexuality, and Disease/Injury Prevention.
- The most consistent feedback by respondents pertained to understaffing of nurses in many districts, due to the ever-increasing number of students with complex medical and behavioral concerns.

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Introduction

EdAdvance submits this report to the Connecticut State Department of Education (CSDE) in fulfillment of the task to collect survey data to assist the CSDE to identify the status of school health service in Connecticut. Survey results are used to monitor the characteristics of, and trends in school health services in CT school districts at the elementary, middle and high school levels. Data were collected through the administration of the Health Services Program Information Survey. The SSCE provided funding for this project. This report summarizes the results of data collection for the 2018-2019 academic year. This is the sixteenth year for which data has been collected.

Review of the Literature

A summary of national literature regarding the importance of school health services and student health to student academic performance was provided in the 2003-2004 report and will not be repeated here. The concepts outlined in this review of the literature were used to guide and focus data collection efforts and include the following:

Academic Performance and Health

- Nutrition
- Physical Health
- Mental Health
- Vision Care
- Oral Health
- Access to Health Care and Coverage

Status of Student Health

- Alcohol and Drug Use
- Injury & Violence Prevention (including suicide)
- Nutrition
- Physical Activity
- Sexual Behaviors
- Tobacco Use

Status of School Health Services

- Staffing
- Medication Administration
- Computer Software Available
- Role of School Health Services
- Guidelines and Ratios
- Health Care Provision in School Districts
- Effectiveness of School Health Services

Emerging Issues

- Concussion Occurrence (new in 2015)
- Food Safety
- Asthma
- Skin Cancer
- Type I Diabetes
- Type II Diabetes
- Dental Disease

Data Collection Process

Survey Development

All survey development processes were described in the 2003-2004 report and will not be repeated here. Based on results of the 2009-2010 survey administration, a limited number of changes were made in the survey before the 2011 through 2015 administrations, and again for the 2015-2016 survey. The CSDE and the Connecticut State Health Records Committee assisted EdAdvance to adapt the survey as necessary to meet the needs of school districts and the CSDE. Ongoing adaptations have been made in collaboration with Kevin Glass, Ph.D., Director of the Center for Program Research & Evaluation at EdAdvance. The survey collected data in the following areas:

- Types and results of services provided in CT public and private, non-profit schools
- Staff of health services in CT schools
- Availability of health coordination and education activities
- Involvement of health services staff with health coordination and education activities

- number of Staff
- nurse/student ratios
- qualifications of staff
- specialists linked to nursing services
- Number of students dismissed and reasons for dismissal in public and private, non-profit schools
- Number of students without health insurance in public and private, non-profit schools
- Number of, and reasons for 9-1-1 calls in public and private, non-profit schools
- Concussion Diagnosis and Frequency
- Software available to support health service data collection
- Demographic information including:
 - District Reference Group (DRG)
 - Type of district
- Rural/urban/suburban: and private/public school/district
- Types of schools to which the districts provide health services
- Name and identification of district, and
- Name of survey respondent

Reliability was maximized through a comprehensive pilot testing process and the development of questions following generally accepted standards. Survey validity is primarily determined using a survey development process that collects data on all relevant, vital concepts and is generally assessed non-statistically by a panel of experts. This survey was developed in close partnership with CSDE. It is expected that the questionnaire is sufficiently valid and reliable.

Survey Administration

The survey was posted to EdAdvance’s website to increase ease of completion. Survey directions, sources of data necessary for survey completion, and results of the fifteen prior survey administrations are also available for downloading from the EdAdvance website.

Dr. Ms. Stephanie Knutson, the CSDE Education Consultant, Bureau of Health/Nutrition, Family Services and Adult Education, introduced participants to the purpose and history of the survey and shared it with the group online. Ms. Knutson answered questions concerning the practicalities of survey completion, state expectations for its completion and expected use of the data.

The CSDE sent a letter of intent to each Coordinator of Health Services or the equivalent in Connecticut, informing them that they would shortly be receiving a letter requesting that they complete the survey. The letter directed recipients to the EdAdvance website for survey completion.

The CSDE and EdAdvance responded to questions and concerns regarding the survey as they arose. Of the 197 questionnaires distributed, **157** responses were sufficiently completed in time to be analyzed, yielding a response rate of **82.2%**.

Data Analysis Methodology

Survey results were analyzed using IBM SPSS Statistical software. The total number of individuals, frequencies, and means were obtained as appropriate.

Results

The response totals mean frequencies or mean responses are listed below as appropriate. Responses of “Don’t Know” were not calculated in the analysis.

Concussion Evaluation

Across all districts, survey participants reported that **5,177** students were diagnosed with concussions during the 2018-2019 school year. The number of FEMALE vs. MALE students diagnosed with a concussion by grade level during the school year is detailed in the table below:

Table 1: Students Diagnosed with Concussion

Grade	Female	Male	Total
Pre-Kindergarten	6	6	12
Kindergarten	16	19	35
1 st Grade	20	39	59
2 nd Grade	30	54	84
3 rd Grade	43	84	127
4 th Grade	74	149	223
5 th Grade	128	196	324
6 th Grade	169	224	393
7 th Grade	229	251	480
8 th Grade	293	273	566
9 th Grade	427	389	816
10 th Grade	490	381	871
11 th Grade	383	357	740
12 th Grade	286	273	559

Of the diagnosed concussions that occurred during the 2018-2019 school year, the number of occurrences in reporting districts during the categories listed below:

Table 2: Diagnosed Concussions by Activity

Category	Concussions
School Athletics – Interscholastic	1,509
Outside of school – Other	1,247
Non-school sports-related (i.e. local town recreation sports)	829
Don’t know	342
Physical Education Class	321
School Recess	197
Any other school-sponsored activities	190
School Athletics – Intramural	182
Other	134

Of all diagnosed concussions that occurred during school-related sports events, occurrences are broken out by each school sport below.

Table 3: Diagnosed Concussions by Sport

Sport	Concussions
Football	596
Other	485
Girls Soccer	268
Boys Soccer	225
Cheerleading	182
Girls Basketball	159
Ice Hockey	143
Boys Basketball	121
Girls Volleyball	76
Boys Lacrosse	75
Girls Lacrosse	64
Field Hockey	58
Wrestling	49
Swimming and Diving	42
Rugby	31
Softball	31
Baseball	30
Track and Field	29
Dance Team	18
Boys Volleyball	13

Of student diagnosed with concussions during the 2018-2019 school year, the accommodations below were provided for the following number of students.

Table 4: Students Requiring Accommodations

Accommodations	Students
Physical Activity Accommodations	4,181
Academic Accommodations	3,489
Individual Health Care Plans	1,599
No Accommodations Required	317
Section 504 Plan	214
Homebound Instruction	31

Of diagnosed concussions during the 2018-2019 school year, the AVERAGE length of time (in days) that accommodations were needed.

Table 5: Average Length of Time for Accommodations

Accommodation	Mean Days
Section 504 Plans	28.0
Physical Activity Accommodations	23.7
Academic Accommodations	20.9
Individual Health Care Plan	15.1
Homebound Instruction	5.7
Not known	1.5

The number of students (if known) who missed school days due to diagnosed concussions during the 2018-2019 school year.

Table 6: Students Missing School Days Due to a Diagnosed Concussion

Category	Students Missing Days
Less than 5 school days	3,346
5-10 school days	562
11-15 school days	97
16-20 school days	29
21-60 school days	25
61-120 school days	2
Greater than 120 school days	2
Not known	311

Student Health

Student Health Care Needs

Responding districts provided data on a wide variety of topics related to student health. The 2018-2019 survey gathered information on the health care needs of students in public and private; non-profit schools served in these districts. Results are summarized below.

Table 7: Students with Specific Health Care Needs

Specific Health Care Need	Total Students PUBLIC	Total Students PRIVATE	Total Students
Allergies – Bee sting	2,114	196	2,310
Allergies – Food (Life Threatening)	18,970	1,421	20,391
Allergies – Latex	941	65	1,006
Allergies – Seasonal	27,675	2,017	29,692
Allergies – Other	14,111	1,075	15,186
Arthritis	401	19	420
Asthma	56,987	3,106	60,093
Autism Spectrum Disorders	7,853	200	8,053
Behavioral/Emotional ADHD/ADD	24,730	1,195	25,925
Behavioral/Emotional – Anxiety	9,901	854	10,755
Behavioral/Emotional – Depression	4,673	304	4,977
Behavioral/Emotional – Eating Disorders	632	58	690
Behavioral/Emotional - Other	5,759	309	6,068
Blood Dyscrasias – Hemophilia	212	11	233
Blood Dyscrasias – Sickel Cell Trait	600	15	615
Blood Dyscrasias – Other	809	54	863
Cancer	298	7	305
Cardiac Condition	2,212	132	2,344
Cerebral Palsy	701	26	727
Diabetes Type I	1,274	51	1,325
Diabetes Type II	386	3	389
Lyme Disease	986	64	1,050
Migraine Headache	3,439	401	3,840
Neurological Impairment	2,399	147	2,546

Orthopedic Impairment	3,785	207	3,992
Seizure Disorder	3,384	175	3,559
Speech Defects	12,001	286	12,287
Severe Vision Impairment	1,567	68	1,635
Severe Hearing Impairment	1,753	98	1,851
Spina Bifida	101	1	102
Swallowing Dysfunction	432	4	436

A total of **18,899** students across all reporting school districts (PUBLIC and PRIVATE, non-profit schools) have special dietary needs documented by an appropriate medical statement that is maintained on file.

Table 8: Dietary Accommodations by Diagnoses

Diagnosis	% of Districts Having Students with this Diagnoses
Peanut Allergies	94.9
Tree Nut Allergies	93.9
Lactose Intolerance	92.6
Milk Allergies	91.1
Egg Allergies	88.4
Wheat Allergies	88.2
Shellfish Allergies	86.7
Diabetes	85.9
Other Food Intolerances	84.5
Celiac Disease	83.9
Fish Allergies	83.6
Soy Allergies	82.1
Other Allergies	81.9
Seed Allergies	81.8
Other Diagnoses	62.4

Other Food Allergy Diagnoses - The five most reported: Irritable Bowel Syndrome/Crohn's Disease, Fruits (primarily strawberries, blueberries), food dyes, religious accommodation, and gluten restriction

Table 9: Emergency Medication Administration

Emergency Medication Administration	% of Districts Having Used in the Past Year
Epinephrine	37.2
Diastat	15.8
Glucagon	4.7
Cardiopulmonary Resuscitation	2.1
Automatic External Defibrillator	0.4

Responding districts reporting emergency medication interventions indicated that epinephrine was administered by 37.2% of them. Diastat use was reported by 15.8% of districts, and Glucagon use by 4.7%. 181 students with DIAGNOSED life-threatening food allergies required administration of epinephrine during the 2018-2019 school year.

Table 10: Number of Students DIAGNOSED with Life Threatening Food Allergies Administered Epinephrine by the Following Individuals

	Total Epinephrine Administration
School Nurse (RN) / Nurse	179
Other Personnel	2

Table 11: Number of Students UNDIAGNOSED with Life Threatening Food Allergies Administered Epinephrine by the Following Individuals

	Total Epinephrine Administration
School Nurse (RN) / Nurse	53
Other Personnel	0

Table 12: Districts Performing Procedures

Procedure	% PUBLIC School Districts Performing Service in School Setting	% PRIVATE School Districts Performing Service in School Setting
Blood Sugar Testing	89.9	47.1
Nebulizer Treatments	88.6	60.1
Insulin Pump Management	83.9	29.7
Gastronomy Tube Feedings	47.8	3.0
Catheterizations	26.8	0.8
Other Treatments	26.8	3.9
Suctioning	22.4	0
Ostomy Care	20.4	0.8
Oxygen Therapy	20.1	0.8
Tracheostomy Care	10.3	0
Nasogastric Tube Feedings	8.6	2.7
Ventilator Care	8.6	0
IV Therapy	3.9	0

Other procedures most often performed in **PUBLIC** schools were wound care and asthma/inhaler care. Other procedures most often performed in **PRIVATE**, non-profit schools were Inhaler therapy (including metered dose treatment).

Table 13: Percentage of Students Returned to Class within ½ Hour

% Student Returned within ½ Hour	% Response
0-25%	3.9
26-50%	0
51-75%	9.2
76-100%	86.9

Approximately 87% of survey participants indicated that between 75-100% of students were returned to their classrooms within a ½ hour of receiving a nursing intervention.

Table 14: Reason for Student Dismissal

Reason for Dismissal	% PUBLIC School Students Dismissed	% PRIVATE, Non-Profit School Students Dismissed
Illness	92.3	94.1
Injury	6.9	3.9
Other	0.8	2.0

The majority of dismissals for both PUBLIC and PRIVATE, non-profit school students were due to illness, while 6.9% of PUBLIC school students, and 3.9% of PRIVATE, non-profit school students were sent home because of injuries.

Table 15: Dismissal Destination

Dismissal Destination	PUBLIC School Districts	PRIVATE, Non-Profit School Districts
Home	93.6	92.8
Emergency Room	3.0	1.8
Other Healthcare Provider	3.4	5.4

The majority of students at both PUBLIC and PRIVATE, non-profit schools who were dismissed for health reasons went home. 3.0% of PUBLIC school students and 1.8% of PRIVATE, non-profit school students were sent to an emergency room.

Other Factors Impacting Student Health

Table 16: 9-1-1 Calls

	PUBLIC Schools	PRIVATE, Non-Profit schools	Total
Number of Students in Responding Districts	419,842	27,389	447,231
Number of 9-1-1 Calls per 1,000 Students	4.8	3.8	4.7
Total Number of 911 Calls*	2,009	105	2,114

*Total Number includes 9-1-1 calls made for students and staff combined.

141 PUBLIC School districts reported on the total number of 9-1-1 calls made for the 2018-2019 school year, with **42** PRIVATE, non-profit school districts reported the same. Approximately five calls per 1,000 students were placed by PUBLIC school districts, while PRIVATE, non-profit schools placed approximately four calls.

By a small margin, anaphylaxis (30.1%) was selected by PUBLIC and PRIVATE, non-profit districts as the primary reason for placing 9-1-1 calls, followed by seizures (29.2%) as the second most common reason. The third most common reason was listed as ‘other’ (24.6% - possibly for unknown reasons), and then injuries (19.8%) as the least likely reason.

For staff members or other adults, 140 PUBLIC Schools districts reported a total of 287 calls made, while 40 PRIVATE, non-profit schools reported a total of 45 calls made.

Table 17: Students Referred to Receive Health Insurance

	PUBLIC School Districts Students Referred for Health Insurance	PRIVATE, Non-Profit School Students Referred for Health Insurance
Districts Reporting	148	44
Total Students Referred	2,583	86

In 2018- 2019, 148 PUBLIC school districts, and 44 PRIVATE, non-profit schools provided information on the number of students without Health Insurance coverage. For PUBLIC and PRIVATE combined, 2,669 students were reported to have been referred for coverage during the school year.

Services Provided in Connecticut School Districts

Table 18A: PUBLIC School Students Receiving Services

Note: For the table below, percentages were calculated ONLY for districts for which all data is available. Therefore, the total number of students reported by the districts varies by category and is dependent upon whether other data necessary to calculate percentages were provided. The total number of PUBLIC school students reported for 2018-2019 was **427,301**.

Health Service	PUBLIC School Students	Students Receiving Service	% Students Receiving Service	Students Referred to Outside Provider
Body Mass Index Screening	199,427	18,609	9.3	598
Pediculosis	329,916	31,447	9.5	1,387
Nutrition Screening	331,971	2,701	0.8	253
Mental Health Consultation	327,006	9,991	3.1	2,690
Total		62,748 screenings		4,928 referrals
Vision				16,011
Scoliosis				1,985
Hearing				3,991
Total				21,987 referrals

*No data collected for Mandatory Services, as these screenings are required for all students.

Table 18B: PRIVATE, Non-Profit School Students Receiving Services

Note: For the table below, percentages were calculated ONLY for districts for which all data is available. Therefore, the total number of students reported by the districts varies by category and is dependent upon whether other data necessary to calculate percentages were provided. The total number of PRIVATE, non-profit school students reported for 2018-2019 was **28,936**.

Health Service	PRIVATE School Students	Students Receiving Service	% Students Receiving Service	Students Referred to Outside Provider
Body Mass Index Screening	24,122	684	2.8	8
Pediculosis	27,742	3,581	12.9	86
Nutrition Screening	26,489	102	0.4	34
Mental Health Consultation	27,349	801	2.9	409
Total		5,168 screenings		537 referrals
Vision				781
Scoliosis				81
Hearing				271
Total				1,133 referrals

*No data collected for Mandatory Services, as these screenings are required for all students.

Staffing of Health Services in Connecticut School Districts

I. Nursing Staff

Table 19: Number and Classification of Staff

Staff Type	Nursing Staff Classification	Total Staff in Participating Districts (FTE)	% Staff in Participating Districts
Registered Nurse	Nurse Leaders (no school assignments)	41	2.7
	Nurse Leaders (with school assignments)	127	8.4
	School Nurses	1,009	67.1
	Permanent Float Nurses	28	1.9
	One-to-one Nurses	44	2.9
Total Registered Nurse Staff	All RN Classifications	1,249	83.1
Nursing Support	Licensed Practical Nurses	55	3.7
	Health Aide	161	10.7
	Nursing Clerk / Other Support Staff	38	2.5
Total Nursing Support Staff	All Support Classifications	254	16.9
Total Staff	All Classifications	1,503	100%

For 2018-2019, Nurse Leaders were again designated as either assigned to schools or NOT assigned to schools. In reporting districts, Nurse Leaders comprised 11.1% of full-time equivalent of school health services staff. 71.9% were reported as registered nurses who do not hold leadership positions. The majority of remaining staff were classified as nursing support staff.

II. Additional Staff

District Medical Advisor:

94.1% of survey participants in 157 districts indicated that a medical advisor provided monthly services. Approximately 92% received services less than 10 hours per month. 5.0% received between 11 -20 hours of

service per month, and 1.4% received services between 21-30 hours per month. Two districts reported receiving between 31-40 hours, and one district more than 40 hours of service by a medical provider per month.

Medical Advisors serving Connecticut school districts specialize in the following areas:

- Adolescent Health 29.3%
- Family Medicine 39.5%
- General Medicine 10.4%
- Internal Medicine 5.5%
- Orthopedics 2.2%
- Pediatrics 71.9%
- Public Health 4.8%
- Sports Medicine 2.7%
- Other 6.3%

Note: Medical advisors can have more than one specialty area. Numbers do not equal 100%.

District Dental Services:

Results for 2018-2019 show that the majority (75.8%) of responding districts do NOT provide Dental services to their students. Among those who do, 3.9% received services from a dentist, and 96.1% received services from a dental hygienist.

III. Staffing Levels:

For the school year 2018-2019, 84.9% of participating districts reported having a nurse leader designee who is a nurse. There was also a total of 1,098 full-time equivalents (FTE) registered nurses and 235 FTE nursing support staff employed in Connecticut among reporting districts.

Staffing by Grade Level and School:

Table 20: Nurse to Student Ratio

	One Nurse to less than 250 Students	One Nurse to 251-500 Students	One Nurse to 501-750 Students	One Nurse to more than 750 Students
Elementary	19.4	67.1	11.7	1.8
Secondary	13.4	35.0	35.4	16.2

Results suggest that a majority of Connecticut school districts continued to meet national guidelines recommending that districts have a nurse to student ratio of no less than 1 nurse to every 750 students in the general population. Also, the guidelines recommend one nurse to every 225 students in populations with complex health care needs, and 1 nurse per student for individual students who require daily and continuous professional nursing services. Findings continue to indicate that slightly less than 1 in 5 CT secondary schools fall short of the guidelines for general population nurse to student ratio. It is important to note that no information is collected regarding the acuity levels of the populations of students reported.

Table 21: Qualifications of Nurse Leaders

Nurse Leader	Respondents	Diploma Registered Nurse	Associate Degree in Nursing	Other Associates Degree	Bachelor of Science in Nursing	Other Bachelor's Degree	Master of Science in Nursing	Master of Public Health	Master of Health Education	Master of Business Admin
1	149	10.8%	10.8%	5.0%	55.8%	6.7%	6.7%	1.8%	2.4%	0
2	19	25.0	19.0	0	56.0	0	0	0	0	0
3	8	12.5	0	12.5	50.0	25.0	0	0	0	0
4	4	50.0	0	0	25.0	25.0	0	0	0	0
5	3	50.0	0	0	0	50.0	0	0	0	0

Districts reported the qualifications of each nurse leader in their district. A district with more than one nurse leader reported additional qualifications under Nurse Leader 2 – 5 above. The most common degrees among nurse leaders were bachelor’s in nursing degrees, followed by Associate Degrees in Nursing. Over 60% of districts reported having at least one nurse leader with a BSN degree. Other qualifications provided by respondents included APRNs (Advanced Practitioner Nurses), BSN & master’s in public administration and Nationally Certified School Nurse (NCSN).

Health Coordination / Education

Table 22: Health Care Management Services

	Never	Sometimes	Always	Don't Know
Development of Individual Health Care Plan	0%	20.0%	80.0%	0%
Development of Individual Emergency Plan	0	15.0	85.0	0
Development of 504 Plan	0	85.0	15.0	0.6
Staff Training to meet Individual Student Health Needs	0	15.0	85.0	0

The majority of respondents for this question reported ALWAYS providing health care management services, and 20.0% reported providing these services SOMETIMES. A smaller number of respondents reported providing 504 plans ALWAYS, and 85.0% indicated that their districts SOMETIMES provide 504 plans.

Table 23: Computer Software Used

	Public School Districts	Private, Non-Profit School Districts
None	4.9%	48.6%
SNAP	62.9	24.9
Health Master	1.4	3.2
Other District-wide Data Program	30.8	15.9
School Nurse Manager	0	0
Not Known	0	7.4

Among participating PUBLIC School districts, 62.9% relied on computer-based SNAP software to collect student health information, while 48.6% of PRIVATE, non-profit school respondents indicated that no computer-based software was used to maintain student health records. Almost one-third of PUBLIC school districts claimed using other programs not identified in the survey.

Table 24: Collaboration with Colleagues to Implement Health Programs

Type of Program	% That Collaborate
Injury Prevention and Safety	81.1
Emotional and Mental Health	75.8
Asthma	70.4
Physical Activity and Fitness	69.9
Violence Prevention (e.g. bullying, fighting, homicide)	61.4
Human Sexuality	49.7
Foodborne Illness Prevention	49.0
Alcohol and other Drug Use Prevention	48.9
Suicide Prevention	47.6
Tobacco-Use Prevention	43.8
STD Prevention	31.7
Pregnancy Prevention	29.5
HIV Prevention	28.0

Health programs listed in the above table were implemented to varying degrees in PUBLIC and PRIVATE, non-profit school districts in the 2018-2019 school year. The data from responding districts reflected that approximately three-quarters of districts collaborated with school health services staff on the topics of Injury Prevention and Safety, Emotional & Mental Health and Asthma. The least amount of collaboration occurred in the areas of Pregnancy Prevention and HIV Prevention.

Table 25: Involvement in Teaching

	Never	Sometimes	Always	Don't Know
Nutrition	18.2%	70.2%	10.4%	1.2%
Physical Activity	10.4	82.5	5.9	1.2
Human Sexuality Education	33.3	50.6	15.4	0.6
Disease Prevention	30.2	51.2	17.9	0.6
Injury Prevention	17.9	51.2	30.2	0.6
Substance Abuse Prevention	1.2	47.3.3	50.3	1.2
Other	46.1	30.4	5.9	17.6

In participating districts, many respondents frequently identified with ‘Sometimes’ being involved in teaching the above-listed content areas, particularly in the areas of Nutrition and Physical Activity. Among districts listing ‘Other’ content areas, topics most often included hygiene and medication management. Many respondents indicated that teaching was typically done one-on-one with students when they came to the nursing office.

Table 26: Student Referrals to Sexual Health Services

Type of Sexual Health Service	Districts Providing Referrals
Formal or informal organizational Partnerships between districts, and Youth-Friendly sexual health service providers	51.6%
A list of Youth-Friendly organizations to which youth can be referred for sexual health services	47.9
A written procedure for making referrals	27.5
A written procedure for maintaining student confidentiality throughout the referral process	22.5

Close to ½ of responding districts indicated that they provided a list of youth-friendly organizations to which youth could be referred for sexual health services, and approximately 50% claimed to offer formal or informal organizational partnerships between districts and youth-friendly sexual health service providers. In 2018-2019, 20.5% of districts reported having a school-based health center within their district, and 7.2% of respondents stated that their district provided reproductive health services.

Demographics

Table 27: District Reference Group

	Number	Percent
A	12	7.6
B	23	14.6
C	25	15.9
D	26	16.6
E	21	13.4
F	13	8.2
G	17	10.8
H	8	5.1
I	12	7.6
Total	157	100.0

Table 28: District Type

	Frequency	Percent
Urban	20	12.7
Suburban	90	57.3
Rural	47	29.9

Table 29: District Type

	Frequency	Percent
Public School District	147	93.6
Charter School	4	2.5
Regional Educational Service Center	6	3.8

Survey Open-Ended Questions

The most frequently addressed topics by respondents in the open-ended question format are summarized below.

Student Health

Survey participants wanted the CT State Department of Education to know about some of the following concerns that would facilitate increasing demand for support in their districts.

- *Mental health issues are taking up more and more of our time. We need more training and better solutions to help our kids*
- *The mental health issues are tracking younger and younger*
- *The mental health issues we're seeing are having a greater impact on student performance than they had in the past*

- *Access to affordable insurance is an issue, especially for those parents who make just enough not to qualify for Husky.*
- *Students need more formal health education. Students in district have little access to fresh, healthy food. More mental health services needed for children. Every school needs a full time nurse.*
- *Large amounts of students with Asthma. Many kids with uncorrected vision problems. More social work needed. We have multiple complex medical needs and behavioral needs that pull many of the staff and utilize their time.*
- *Need more resources for children with mental health needs. Have low income families with nutritional concerns.*
- *There is an increase of Type 1 Diabetes students in grade Pre K - grade 5. Increase of post emergency intervention assessments, Increase in daily control med administration especially for ADD/ADHD diagnosis, increase in behavioral health needs, increase of acute anxiety issues among students, increase of Pre K 4 and Kindergarten students not potty- trained, increase OF 911 CALL due to acute emotional /behavioral /mental health issues, decrease of development of coping skills in middle school students, increase of vaping among middle school students.*
- *A marked increase in Anxiety, also undiagnosed anxiety Many medically fragile children Increasing mental health issues A large number of psychiatric medications Increased allergies- food, seasonal, environmental*
- *Mental health needs are increasing. Self injury behaviors are increasing and behavior concerns at all levels.*
- *We have seen a huge increase in the number of students with significant mental health and behavioral issues. Many of our families continue to struggle to find a medical home for their children. They continue to use the emergency room and walk-in clinics for primary medical care which leads to lack of continuity in care and little to no medical follow up for chronic or acute conditions. Asthma and obesity numbers continue to rise.*
- *Increasing number of mental health problems. Mental health and behavior dysregulation is high and we are not equipped to manage it. Dental van bring utilized more. First Choice SBHC opened – need to advertise more*
- *Many students are over-weight; Many have mental health issues, i.e. anxiety, depression; There are not enough mental health clinicians at the school to deal with all the issues; wait list for mental health clinician at one middle school is over 3 months for new referrals; several nurses voiced their concern about the frivolous misuse of the religious exemption form*
- *Many emotional issues with poor supply of support services for students and their families. There are also a great number of parents that don't know or choose to disregard proper procedures for returning a child to school after an illness.*
- *1. There has been a trend over the last 2-3 years of an increase in anxiety. 2. Vaping is on the rise. 3. We need more mental health care providers both on the schools and locally.*

Districts requested assistance from the CSDE in a broad range of areas. Respondents most often cited the following needs:

- *Would like to start an after school running club and enter 5K for fun. Improve breakfast and lunch options. Too many packaged food more fresh foods. Consistent tracking program or universal health record computer system. More resources for Behavioral and Mental Health.*
- *Advocate for more state services for physical, mental health and dental care. Opportunities for School Based Health Centers in the primary schools.*
- *Provide more education and support to manage mental health/behavioral health issues to teachers, health services staff and guidance. Provide more helpful guidance in developing policy/procedure for school health services. Development of General School Health Services Manual that includes standard policies and procedures.*

- *We need help to get more mental health and behavioral support services for our students and their families. While we have some supports in school, the number of students needing help is overwhelming. And schools can only do so much in the limited time we have the students.*
- *More education and training. More social work staff/support. Mental health counseling for students/families. Parenting classes. Nutrition education for families. Asthma education/inhaler technique reinforcements.*
- *Consistency and clarity of policies/protocols throughout the state would be helpful in our practices. MD vigilance in immunization/physical requirements and compliance would be helpful. Request removal of School RN from Religious Exemption form.*
- *Would love to see more outreach geared towards teens; it would be helpful if doctor's offices could assist in obtaining medical clearance for students to return to normal level of functioning, i.e., if parents miss follow-up appointments the office could help rescheduling and assist with parental compliance; more specialized services for students with mental health issues; schools need a better variety of health food choices for our students; Need support increasing mental health/behavioral needs of young children; There is no maximum number of students to School Nurse Ratio; Mobile flu clinics; Easier access to healthcare, need to provide-transportation to families to foster to access care;*
- *Students with mental health and behavior issues are frequently seen in the School Nurse's office. More guidance counselors, school psychologists and social workers would benefit all students. More mental health training opportunities for School Nurses would also be beneficial*
- *1. An improvement in school nursing record keeping--more secure. 2. An increase in mental health services. 3. Have MD's more responsible for adhering to Immunization mandates and physical exam mandates.*
- *Please support abolishing the Religious Exemption for required immunizations. Also, please support changing the law to require automated vision screening, such as the Welch-Allyn Spot Vision checker or the Plus Optix vision screener, as the standard for vision screening. Please have 2nd graders reinstated into the mandatory vision screening. Second grade is usually the first years you begin to see myopic vision changes and the last year to correct any previously undiagnosed problems such as amblyopia.*

Services Provided /Staffing Levels

Respondents shared the following concerns they wanted the State Department of Education to know regarding Health Services provided to CT school districts:

- *In addition to the medically complex students we care for, there is an increase in mental issues across all school levels in the district. We also have self-contained ED classrooms. The immigrant population is also increasing with many lacking health insurances and a medical home.*
- *Our software program identifies immunization non-compliance issues that MD offices are not tracking requiring lengthy amount of follow up time. Also, mandatory physicals are not completing all of the state required asterisks. RN's time involvement in Homebound impacts on delivery of health services.*
- *Speech/Language Pathology/Special Education Teacher and School Psychologist are assigned to this school only once per week; SBHC is up and running but its hours are limited due to staffing issues; one nurse per school is not sufficient in larger school settings;*
- *The nursing services provided to students in school are increasingly more complex. The cost around providing skilled nursing care for some of our kids, a ventilator student, for instance, is challenging. Currently, funds for schools do not support the competitive wage for skilled nurses seen in hospitals and other higher acuity level facilities. The difference in pay is off-putting to potential school nurse candidates.*

Respondents would like the SDE to improve Health Services to students in school districts in the following ways:

- *There is a need for more mental health services and for more psychologists and social workers as well as counselors in the primary and middle schools. There needs to be more staff in-services on mental health issues with school nurse inclusion on this.*
- *More training in de-escalation while managing a full classroom.*
- *Provide more support/ training in helping meet the needs for the growing mental health issues. Help support the need for more social workers and school psychologists in the schools. Help provide more resources for families with dealing behavioral /mental health issues,*
- *Provide parenting classes with a focus on limiting a child's use of social media. Incentive programs to decrease the use of social media.*
- *More help with vaping and substance issues*
- *Would like to see consistency in interpretation of policies/protocols throughout the State, i.e. what constitutes a Field Trip, lice protocols, PE excuse formats, change in parent "opt out" clause for undiagnosed epinephrine regulations. Would like to see clear guidelines on "off label" medications used for seizure disorders and delegation of same, such as Midazolam. Remove RN from religious exemption forms.*
- *Spanish Health Forms/Documents*
- *One nurse suggests improved training for dealing with autistic children; private school nurse would like for children at her school to have access to school-based health centers as well. She feels that not all the families are financially secure and many have difficulty missing work to keep appointments with medical providers*
- *School-based health clinics would greatly improve the health services provided to our students*

Staffing of Health Services in School Districts

Survey respondents continued in 2018-2019 to stress the importance of increasing staff presence to keep up with the demand for mental and physical health support services for students across all districts.

- *Staffing in the district is poor. The District would benefit greatly with a floater nurse or even a medical assistant.*
- *state should mandate school nurse for every building and more than one nurse per building for large census.*
- *School Health Services provided by local Health District. A school health services coordinator (not assigned to a school) overs school health services. A public health nurse is assigned as the school nurse for the parochial and private schools.*
- *We have one nurse assigned to each school in Stratford. We are fortunate to have a school-based health center established in one middle school and one high school. This year we added another school-based health center to our other middle and high schools starting February and March.*
- *Staffing tied to town budget, not BOE and not based on acuity needs of students. Frustrations in convincing town on need for increased staffing/compensation/affordable health insurance. Nurse Leader is also full-time elementary nurse with no additional time built in for supervisory work.*
- *It continues to be difficult to retain and recruit nurses in School Health. The complex medical needs of students today require the care from a highly skilled registered nurse.*
- *The need for additional staffing in the elementary schools is increasing as behavior issues increase. For example, nurses have to leave their office to observe and assess children who are being restrained. Restraints are happening multiple times a day leaving the nurses office vacant of skilled help.*
- **Due to budget cuts, the nurse-student ratio of some of our elementary schools may be increasing for next school year to an average of 1:700. *We have very few substitute nurses and often have to use a staffing agency to cover absences, or have to shuffle nurses around, leaving some schools with less nursing coverage than normal. *We do not have a nursing supervisor, only a coordinator who also has a school. Our immediate supervisor is not a nurse. This person is an admin with educational background in special education.*

- *Yes, we are handling more and more mental health issues that take up a lot of time and we don't have enough manpower to do so. The kids are getting more violent starting in preschool. There are not enough services to handle all of this.*

What respondents would like from the SDE to address district and school staffing needs:

- *Provide funding or grant to staff the District Health Offices better. 1 RN with no assistance of aid, CNA, medical assistant, nothing for 650 children including a large number of SPED students is a lot. Plus expecting them to complete the required screenings is a bit much*
- *Continue to provide education and support to school nurses to address and manage overall significant care issues. Provide an educational program to train health aides to support school nurses and school services.*
- *Provide districts with guidance on RN/student ratios based on acuity needs of students. Provide guidance/support for RN in dual role of full-time school nurse/full time supervisor.*
- *Mandate a student to registered professional nurse ratio.*
- *Nurses working with Pre-K students within an elementary school require more staff than traditional elementary schools*
- **An updated recommended staffing ratio of nurses to students. With the increasing trends in mental health, severe allergies, and other health issues--school nurse jobs are becoming more and more complex with worsening nurse to student ratios. We would love to be able to show our district what safe staffing ratios look like in today's world.*
- *Legislation that requires mandated school nurse to student ration that reflect the nursing services that are required for the 21st Century school.*

What survey participants would like the SDE to know about the coordination of Health Services, or about Health Education provided to students in their districts:

- *Having four school-based health centers in our school district has made an enormous difference to our families. Students now have easy access to a provider who can diagnose and treat most routine and acute conditions. We are especially pleased that BOE allows them to talk about and provide reproductive health services.*
- *All school nurses are registered nurses with most having a BS degree in Nursing and most have more than 5 years of experience in school nursing.*
- *Our Agency prefers BSN prepared school nurses, but not a mandate. Certification/recertification requirements are costly and timely. Our employer allows for only 2 paid professional development days/yr provided we can get per diem coverage.*

Data Strengths and Limitations

This report summarizes data collection efforts developed and implemented to present a comprehensive picture of the state of school health services in public and private, non-profit schools in Connecticut.

To this end, the data collection effort had the following strengths:

- Highly accurate analysis of data collected from the School Health Services Survey (Health Services Program Information, 2019);
- Data received from a wide variety of types of schools including public and private, non-profit schools, schools in each DRG, and urban, suburban and rural schools.
- A response rate of 82.2%
- Sixteen years of data collection

However, as with any research study, data collection and the use of data have some limitations. These include but are not limited to:

- Differential response rate per question and a high percentage of questions with missing data. Specifically, districts often skip questions if the answer is “0”. However, missing data cannot be assumed to be zero. The percentage of districts that do not enter 0 into the appropriate space may lead to the data being skewed in a positive direction.
- Use of one data collection tool. There is no supporting data available from focus groups, interviews or other triangulated data collection methods.
- Changes in the data collection tool over time to reflect the changing needs and interests of the CSDE and participating districts. Before 2016, as a result of changes, some data was tracked longitudinally while some other topics were not, and some queries were discontinued.

Conclusions

In 2018-2019, School health services survey participants provided a broad vista of perceptions about the status of health services in CT school districts which included observations and suggestions for improvement, indicated by the volume of constructive comments posted following each survey category. The CSDE and EdAdvance staff analyzed the data, resulting in the following conclusions:

- Nurse to student ratios continues to pose a significant concern to district nursing personnel, as decreases remain consistent with previous years as grade levels increase. At the secondary level, 16.2% of respondents reported more than 750 students to one nurse, a 3.0% increase over the prior year.
- Optional services in CT generated approximately 5,000 referrals to outside providers, with the highest number of referrals being made for a mental health consultation.
- The acuity of student health conditions is changing rapidly and intensifying the need for nursing staff expansion throughout the state.