

Connecticut State Department of Education

Health Services Program Information Survey Report

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Developed for:

The Connecticut State Department of Education

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Executive Summary

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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 and 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 2017-2018 a total of 197 questionnaires were distributed with **170** completed in time to be analyzed, yielding a response rate of **86.3%**.

95.3% of respondents represented public school districts, 1.8% from charter schools and 2.9% from RESCS. Suburban districts accounted for 48.2% of responses while urban districts were represented by 14.1%, and rural districts, 37.6%. Districts serving only public schools made up 62.4% of responses, and 37.6% indicated that their districts served private, non-profit schools as well. All 170 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
А	5.9
В	12.9
С	15.3
D	14.1
Е	17.6
F	10.6
G	10.6
Н	6.5
Ι	6.5

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 fifteenth 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 5,091 referrals to outside providers. (Since 2014-2015, dental screening services have not been included in this report.)
- For the second time, students in PRIVATE, non-profit schools served by responding districts were reported as being more likely than their PUBLIC school peers to being referred to outside providers for mental health services. (55.5% vs. 27.8%).
- A total of 21,748 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 (39.4%), with fewer reporting the use of diastat (12.9%) and Glucagon (4.9%).
- The need for increased mental health services training and support on site is expressed in the majority of districts.
- In 2017-2018, 2,272 9-1-1 calls were reported by participating Connecticut public and private, non-profit schools for students and adults combined.
- 152 PUBLIC school districts, and 48 PRIVATE, non-profit schools identified a total of 2,885 students as uninsured during 2017-2018, down by 26% from the prior year.
- Approximately 94% of PUBLIC schools and 43% of PRIVATE, non-profit schools report using computer software to collect and record school health information. SNAP is the software of choice in 59.4% of PUBLIC school districts, and 15.9% 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. A significant number of participants suggested additional nurse training to accommodate these needs.

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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 2016-2017 academic year. This is the fourteenth 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 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

Status of Student Health

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

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, MSRSM, 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 an education activities

- o number of Staff
- nurse/student ratios
- $\circ \quad \text{qualifications of staff} \\$
- 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 fourteen prior survey administrations are also available for downloading from the EdAdvance website.

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, **170** responses were sufficiently completed in time to be analyzed, yielding a response rate of **86.3%**.

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.

During 2017-2018, districts reported information for PUBLIC school districts, and PRIVATE, non-profit schools separately for a variety of topics as appropriate. As in the prior year, approximately 38% of responding districts reported that they also provided health services to private, non-profit schools.

Concussion Evaluation

Across all districts, survey participants reported that **5,975** students were diagnosed with concussions during the 2017-2018 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:

Grade	Female	Male	Total
Pre-Kindergarten	3	4	7
Kindergarten	16	34	50
1 st Grade	30	44	74
2 nd Grade	35	64	99
3 rd Grade	43	99	142
4 th Grade	80	160	240
5 th Grade	110	234	344
6 th Grade	193	264	457
7 th Grade	281	288	569
8 th Grade	372	348	720
9 th Grade	572	466	1,038
10 th Grade	500	425	925
11 th Grade	464	392	856
12 th Grade	414	344	758
Total	3,113	3,166	6,279

Table 1: Students Diagnosed with Concussion

Of the diagnosed concussions that occurred during the 2017-2018 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	1,841
Outside of school – Other	1,606
Non-school sports-related (i.e. local town recreation sports)	993
Physical Education Class	379
Don't know	314
School Athletics – Intramural	232
Any other school-sponsored activities	228
School Recess	222
Other	184
Total	5,999

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

Sport	Concussions
Football	687
Girls Soccer	330
Boys Soccer	231
Cheerleading	216
Girls Basketball	160
Boys Basketball	145
Wrestling	134
Girls Volleyball	114
Field Hockey	80
Swimming and Diving	62
Boys Lacrosse	59
Softball	55
Girls Lacrosse	46
Baseball	42
Track and Field	34
Boys Volleyball	19

Table 3:	Diagnosed	Concussions	bv	Sport
1 4010 5.	Diagnosea	Concussions	Uy	Sport

Of student diagnosed with concussions during the 2017-2018 school year, the accommodations below were provided for the following number of students.

Table 4: Students Requiring Accommodations

Accommodations	Students	
Physical Activity Accommodations	4,869	
Academic Accommodations	4,013	
Individual Health Care Plans	1,672	
No Accommodations Required	427	
Section 504 Plan	331	
Homebound Instruction	48	

Of diagnosed concussions during the 2017-2018 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	24.1
Physical Activity Accommodations	22.5
Academic Accommodations	19.6
Individual Health Care Plan	12.0
Homebound Instruction	6.9
Not known	0.7

The number of students (if known) who missed school days due to diagnosed concussions during the 2017-2018 school year.

Category	Students Missing Days
Less than 5 school days	3,923
5-10 school days	858
11-15 school days	132
16-20 school days	73
21-60 school days	52
61-120 school days	12
Greater than 120 school days	19
Not known	305

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

Student Health

Student Health Care Needs

Responding districts provided data on a wide variety of topics related to student health. The 2017-2018 survey gathered information on the health care needs of students in public and private; non-profit schools served in these districts. As in the previous year's reporting, approximately 38% of districts served students in private, non-profit schools. Results are summarized below.

Table 7: Students with Specific Health Care Needs

Specific Health Care Need	Total Students	Total Students	Total
	PUBLIC	PRIVATE	Students
Allergies – Bee sting	2,334	200	2,534
Allergies – Food (Life Threatening)	19,870	1,878	21,748
Allergies – Latex	1,062	88	1,150
Allergies – Seasonal	28.914	2,824	31,738
Allergies – Other	14,939	1,266	16,205
Arthritis	497	32	529
Asthma	58,432	3,994	62.426
Autism Spectrum Disorders	8,158	248	8,406
Behavioral/Emotional ADHD/ADD	25,146	1,400	26,546
Behavioral/Emotional – Anxiety	9,897	846	10,743
Behavioral/Emotional – Depression	4,826	326	5,152
Behavioral/Emotional – Eating	648	70	718
Disorders	040	70	/10
Behavioral/Emotional - Other	5,913	314	6,227
Blood Dyscrasias – Hemophilia	245	22	267
Blood Dyscrasias – Sickle Cell Trait	619	23	642
Blood Dyscrasias – Other	865	68	933
Cancer	357	15	372
Cardiac Condition	2,568	148	2,716
Cerebral Palsy	738	25	763
Diabetes Type I	1,428	65	1,493
Diabetes Type II	401	6	407
Lyme Disease	1,043	72	1,115
Migraine Headache	3,865	411	4,276
Neurological Impairment	2,526	145	2,681
Orthopedic Impairment	3,925	229	4,154
Seizure Disorder	3,462	178	3,640

Speech Defects	12,175	308	12,483
Severe Vision Impairment	1,716	64	1,780
Severe Hearing Impairment	1,917	110	2,027
Spina Bifida	136	1	137
Swallowing Dysfunction	464	6	470

A total of **19,914** 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.

Diagnosis	% of Districts Having Students with this Diagnoses
Peanut Allergies	94.4
Tree Nut Allergies	93.8
Lactose Intolerance	91.8
Milk Allergies	90.6
Egg Allergies	87.2
Wheat Allergies	87.2
Shellfish Allergies	85.5
Diabetes	85.4
Other Food Intolerances	83.8
Celiac Disease	83.3
Fish Allergies	83.3
Soy Allergies	81.8
Other Allergies	81.3
Seed Allergies	80.8
Other Diagnoses	59.0

Table 8: Dietary Accommodations by Diagnoses

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

Table 9: Emergency Medication Administration

Emergency Medication Administration	% of Districts Having Used in the Past Year
Epinephrine	39.4
Diastat	12.9
Glucagon	4.9
Cardiopulmonary Resuscitation	2.5
Automatic External Defibrillator	0.6

Responding districts reporting emergency medication interventions indicated that epinephrine was administered by 39.4% of them. Diastat use was reported by 12.9% of districts, and Glucagon use by 4.9%. 205 students with DIAGNOSED life-threatening food allergies required administration of epinephrine during the 2017-2018 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	159
Other Personnel	4

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

	Total Epinephrine Administration
School Nurse (RN) / Nurse	54
Other Personnel	1

Table 12: Districts Performing Procedures

Procedure	% PUBLIC School Districts	% PRIVATE School Districts	
Trocedure	Performing Service in School Setting	Performing Service in School Setting	
Blood Sugar Testing	89.6	38.6	
Nebulizer Treatments	89.5	57.9	
Insulin Pump	82.8	31.6	
Management			
Gastronomy Tube Feedings	52.1	3.5	
Catheterizations	28.2	0	
Other Treatments	27.3	3.6	
Suctioning	23.5	0	
Ostomy Care	20.4	1.8	
Oxygen Therapy	19.9	1.8	
Tracheostomy Care	14.3	0	
Nasogastric Tube Feedings	10.4	3.5	
Ventilator Care	9.3	0	
IV Therapy	4.3	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 1/2 Hour

% Student Returned within ½ Hour	% Response
0-25%	1.8
26-50%	0
51-75%	8.6
76-100%	89.6
Total	100

Approximately 87% of survey participants indicated that between 75-100% of students were returned to their classrooms within a ¹/₂ hour of receiving a nursing intervention.

Reason for Dismissal% PUBLIC School Students Dismissed		% PRIVATE, Non-Profit School Students Dismissed	
Illness	86.9	91.2	
Injury	9.1	7.2	
Other	4.0	1.6	

Table 14: Reason for Student Dismissal

The majority of dismissals for both PUBLIC and PRIVATE, non-profit school students were due to illness, while 9.1% of PUBLIC school students, and 7.2% 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	91.0	93.6	
Emergency Room	2.7	1.0	
Other Healthcare Provider	6.3	5.4	

The majority of students at both PUBLIC and PRIVATE, non-profit schools who were dismissed for health reasons went home. 2.7% of PUBLIC school students and 1% 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	433,969	31,990	465,959
Number of 9-1-1 Calls per 1,000 Students	5.0	3.8	4.9
Total Number of 911 Calls*	2,152	120	2,272

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

163 PUBLIC School districts reported on the total number of 9-1-1 calls made for the 2017-2918 school year, with **57** 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 3.9 calls.

By a small margin, anaphylaxis (28.9%) was selected by PUBLIC and PRIVATE, non-profit districts as the primary reason for placing 9-1-1 calls, followed by seizures (27.6%) as the second most common reason. The third most common reason was listed as 'other' (22.9% - possibly for unknown reasons), and then injuries (20.6%) as the least likely reason.

For staff members or other adults, 163 PUBLIC Schools districts reported a total of 332 calls made, while 57 PRIVATE, non-profit schools reported a total of 57 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	152	48	
Total Students Referred	2,775	110	

In 2017-18, 152 PUBLIC school districts, and 48 PRIVATE, non-profit schools provided information on the number of students without Health Insurance coverage. For PUBLIC and PRIVATE combined, 2,885 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 2017-18 was **433,969**.

Health Service	PUBLIC School Students	Students Receiving Service	% Students Receiving Service	Students Referred to Outside Provider
Body Mass Index Screening	211,023	20,200	9.6	620
Pediculosis	337,574	33,006	9.8	1,464
Nutrition Screening	333,603	2,617	0.8	237
Mental Health Consultation	325,731	9,954	3.1	2.770
Total		65,797 screenings		5,091 referrals
Vision				16,849
Scoliosis				2,135
3.9Hearing				4,351
Total				23,335 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 2017-18 was **31,990**.

Health Service	PRIVATE School Students	Students Receiving Service	% Students Receiving Service	N Students Referred to Outside Provider
Body Mass Index Screening	28,174	764	2.7	11
Pediculosis	31,016	4,153	13.9	103
Nutrition Screening	30.364	64	0.2	35
Mental Health Consultation	30,896	764	2.5	424
Total		5,745 screenings		573 referrals
Vision				801
Scoliosis				80
3.9Hearing				291
Total				1,172 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

Staff Type	Nursing Staff Classification	Total Staff in Participating Districts (FTE)	% Staff in Participating Districts
	Nurse Leaders (no school assignments)	46	2.8
Registered Nurse	Nurse Leaders (with school assignments)	139	8.4
	School Nurses	1,126	68.3
	Permanent Float Nurses	34	2.1
	One-to-one Nurses	41	2.5
Total Registered Nurse Staff	All RN Classifications	1,386	84.1
	Licensed Practical Nurses	57	3.5
Nursing Support	Health Aide	158	9.6
Nuising Support	Nursing Clerk / Other Support Staff	47	2.8
Total Nursing Support Staff	All Support Classifications	262	15.9
Total Staff	All Classifications	1,648	100%

Table 19: Number and Classification of Staff

For 2017-2018, Nurse Leaders were again designated as either assigned to schools or NOT assigned to schools. In reporting districts (between 127 - 155 districts), Nurse Leaders comprised 11.2% of full-time equivalent of school health services staff. 68.3% 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:

92% of survey participants in 158 districts indicated that a medical advisor provided monthly services. Approximately 92% received services less than 10 hours per month. 5.1% received between 11 -20 hours of service per month, and 0.6% 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	19.4%	•	Pediatrics	61.8%
٠	Family Medicine	33.5%	•	Public Health	8.8%
•	General Medicine	12.9%	•	Sports Medicine	4.1%
•	Internal Medicine	6.5%	•	Other	4.1%
•	Orthopedics	1.2%			

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

District Dental Services:

Results for 2017-2018 show that the majority (71%) of responding districts do NOT provide Dental services to their students. Among those who do, 4% received services from a dentist, and 96% received services from a dental hygienist.

III. Staffing Levels:

For the school year 2017-2018, 82.6% of participating districts reported having a nurse leader designee who is a nurse. There was also a total of 1,253 full-time equivalents (FTE) registered nurses and 244 FTE nursing support staff employed in Connecticut among reporting districts.

Staffing by Grade Level and School:

	One Nurse to less than 250 Students	One Nurse to 251- 500 Students	One Nurse to 501- 750 Students	One Nurse to more than750 Students
Elementary	19.9	66.0	12.8	1.3
Secondary	12.7	33.1	34.5	19.7

91.8% of school districts responded to the question. 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	167	13.8%	12.0%	0%	50.3%	8.4%	10.8%	1.8%	2.4%	0.6%
2	21	23.8	19.0	0	57.1	0	0	0	0	0
3	8	0	12.5	12.5	50.0	25.0	0	0	0	0
4	4	0	0	0	75.0	25.0	0	0	0	0
5	4	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%	18.9%	81.9%	0%
Development of Individual Emergency Plan	0	17.1	82.9	0
Development of 504 Plan	1.2	76.8	21.3	0.6
Staff Training to meet Individual Student Health Needs	0	20.9	79.1	0

The majority of respondents for this question reported ALWAYS providing health care management services, and 18.9% reported providing these services SOMETIMES. A smaller number of respondents reported providing 504 plans ALWAYS, and 76.8% indicated that their districts SOMETIMES provide 504 plans.

Table 23: Computer Software Used

	Public School Districts	Private, Non-Profit School Districts
None	6.1%	57.1%
SNAP	59.4	15.9
Health Master	1.8	1.6
Other District-wide Data Program	32.1	15.9
School Nurse Manager	0	0
Not Known	0.6	9.5

Among participating PUBLIC School districts, approximately 60% relied on computer-based SNAP software to collect student health information, while 57% 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. Contabolitation with Concagues to Implement reartin rograms					
Type of Program	% That Collaborate				
Injury Prevention and Safety	79.6				
Emotional and Mental Health	73.3				
Asthma	68.1				
Physical Activity and Fitness	68.9				
Violence Prevention (e.g. bullying, fighting, homicide)	58.2				
Human Sexuality	53.8				
Foodborne Illness Prevention	49.0				
Alcohol and other Drug Use Prevention	53.2				
Suicide Prevention	44.6				
Tobacco-Use Prevention	43.4				
STD Prevention	32.1				
Pregnancy Prevention	31.0				
HIV Prevention	26.9				

 Table 24: Collaboration with Colleagues to Implement Health Programs

Health programs listed in the above table were implemented to varying degrees in PUBLIC and PRIVATE, non-profit school districts in the 2017-2018 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 Safely, Emotional & Mental Health and Asthma. The least amount of collaboration occurred in the areas of Pregnancy Prevention and HIV Prevention.

	Never	Sometimes	Always	Don't Know
Nutrition	21.0%	66.0%	12.3%	0.6%
Physical Activity	25.3	62.6	10.4	1.8
Human Sexuality Education	33.3	50.6	15.4	0.6
Disease Prevention	17.9	51.2	30.2	0.6
Injury Prevention	19.6	51.5	27.6	1.2
Substance Abuse Prevention	36.6	50.3	10.6	2.5
Other	46.1	30.4	5.9	17.6

Table 25: Involvement in Teaching

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	37.7%
A list of Youth-Friendly organizations to which youth can be referred for sexual health services	47.7
A written procedure for making referrals	20.0
A written procedure for maintaining student confidentiality throughout the referral process	27.5

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 38% claimed to offer formal or informal organizational partnerships between districts and youth-friendly sexual health service providers. In 2017-2018, 18.5% of districts reported having a school-based health center within their district, and 6.8% of respondents stated that their district provided reproductive health services.

Demographics

Table 27: District Reference Group

	Number	Percent
Α	10	5.9
В	22	12.9
С	26	15.3
D	24	14.1
Е	30	17.6
F	18	10.6
G	18	10.6
Н	11	6.5
Ι	11	6.5
Total	170	100.0

Table 28: District Type

	Frequency	Percent
Urban	24	14.1
Suburban	82	48.2
Rural	64	37.6

Table 29: District Type

	Frequency	Percent
Public School District	162	95.3
Charter School	3	1.8
Regional Educational Service Center	5	2.9

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.

- Need more support for mental health issues. Takes too long in ER for placement, so students are sent home as no room for inpatient placement
- We are seeing many more students with mental health in the K-2 student population.
- Too many children go to the ER for routine exams and routine medical care. Nutritional education needs to be a priority and healthier foods offered in the cafeteria.
- We have seen a tremendous increase in the number of students who have significant mental health issues. These conditions severely impact the student's ability to participate in their educational program.
- A substantial percentage of our students are overweight or obese.
- Students who are not eligible for HUSKY and parents who cannot afford to insure them or access care due to high deductible is a problem.
- There is an increase in Diabetes Type 1 students in grades Pre-K- grade2. Youngest is 3yrs old, Increase of 911 calls due to emotional/behavioral/mental health issues. Administration of daily meds especially ADD/ADHD medications increase each year
- Need for more dental care for lower economic families.
- Due to the absence policy in our district, many parents do not keep their children home when they are ill, they medicate them with antipyretics and send them to school.
- Access to mental health services is a problem, Dental van very helpful, Awaiting opening of First Choice Health Center,
- Parents and students require extensive asthma teaching. Sometimes it is very difficult to obtain Emergency medications from parents. Many more students are coming to school with severe medical conditions that require more time/interventions from the nurse. Issues like allergies, mental health, and other diagnosis are not documented in health forms.
- Mental health support is not respected and often culturally, and family values discourage students from seeking support.
- There is a large problem with truancy, but no support to enforce the compliance to mandated laws and regulations.
- The acuity of the student has increased since previous years.

- Many families that have state health insurance are choosing to use the emergency room for health care rather than seeking care with a physician. A few are starting to use Urgent Care Centers.
- The demand for pediatric behavioral health clinicians exceeds providers.
- Due to cell phones during school hours, many students bypass the Health Office and call parents directly to go home--many are not sick!
- We are fortunate to have a School-Based Health Center which provides mental health services.
- Increased anxiety is leading to school refusal esp. in middle school.
- Increase in suicidal thoughts/attempts, anxiety, self-injurious behaviors, & depression. We have utilized "Emergency Mobile Psychiatric Services" (211), eight times during this school year. We dismiss an average of 4-5 students daily to attend a PHP (Partial Hospitalization Program), for social/emotional reasons.
- We have multiple students with diagnoses not listed in Section II such as Renal impairment, GI Disorders (IBS, Crohn's disease, Celiac disease), and Thyroid disorders that require some care or services from the health office.
- Students from inner-city socio-economic groups have behavioral problems resulting from trauma, incarcerated parents, domestic violence, and instability of shelter, food, safety (basic needs).
- I would like to have better communication with physicians and have them provide us with more comprehensive information to meet the needs of the students.
- One student with nephrotic syndrome, one student with multicystic kidney, one student with doparesponsive dystonia, two students with selective mutism, one student with cystic fibrosis, one student with an immunosuppressed condition.
- Please include Crohn's Disease in your survey. We currently have eight students with the diagnosis.
- This town is impoverished with addiction, apathy, mental illness, asthma, and hunger. We make gains with our students on their assessments EVERY YEAR. This year, our reward was to have \$ taken away by the Governor.
- Suspicion of drug use and overdose is now the number one reason for 911 calls at the middle/high school levels.
- Concussion due to ice hockey=4: 2 male/2 female. Other reasons for 911= suicidal ideation. Naloxone for overdose.
- Under concussions, add tracking for partial days (commonly done) as an accommodation

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

- Need better resources for the Spanish speaking families.
- Work with the medical board to ensure that primary care providers complete forms with the required information. Teach parents how to utilize primary care providers rather than emergency rooms.
- Asthma education for parents/students.
- It would be helpful if the state had a mandated, unified EMR system, such as SNAP for all student health records.
- A health educator, as the nurse has no time to leave her office to teach 710 students. Would like to see the medical provider writing actual mental health diagnoses.
- Educate parents on the importance of HPV and Flu vaccine. Advocate for more behavioral health and nutrition services for students.
- *Requiring a school nurse in every school regardless of population.*
- Guidelines for quarantine of communicable diseases and prevention strategies.
- Provide school-based programs to aid in dealing with a lot of the social emotional issues we are seeing.
- The SDE should monitor the implementation of the health curriculum and track Phys. ed data. It would also be helpful if leaders knew the magnitude of issues school nurses manages daily. PD for school nurses should be a funded mandate beyond a one or two-hour monthly meeting.

- Consistency and clarity of policies/protocols throughout the state would be helpful in our practices. MD vigilance in immunization and compliance for school entry would be helpful.
- Increase access to mental health/counseling for families. Assist with access to eyeglasses or contacts,
- Sexual harassment, school violence, drug, and alcohol use should be taught at a younger age. There is a significant problem with truancy, but no support to enforce the compliance to mandated laws and regs.
- Vaping devices have become an enormous problem in the middle and high schools causing some medical emergencies because of nicotine and illegal substances. School Nurses should have more extensive mental health training to assist in their everyday assessments of students.
- Noticing an increase in obesity and sedentary lifestyle.
- Advocating for more school-based health center/dental clinic funding.
- Our nursing department is not provided with any continuing education/in-services, and time off or reimbursement for what nurses pursue on their own is rarely approved. We need to be kept current!
- Protocols for Narcan in schools. In a district resistant to Narcan in schools how do you make a case for Narcan in all schools (pre-k thru post-secondary)? The adult population is at risk of opioid use, as well as students.
- I feel our school community would be better served if we had a school psychologist and more social workers. We have two social workers for 880 students.
- Increased hours for counselors. Increased need for paraprofessionals.
- Free lunches for more students with more choices
- Public service announcements/T.V. commercials regarding the importance of immunizations and school attendance.
- Mental health assessment/screening be part of the physical exam
- *Middle School materials are targeting improved ways for them to handle stress and reasonable expectations for their age.*
- Please have survey monkey collate the districts' school surveys and then send to the coordinator/supervisor in the district to answer the unanswered questions? Too time-consuming!
- Include families with Husky in the mobile flu clinic we offer to our community in the fall.

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: Private school has no health software program.

- Would like a standardized nursing electronic documentation system
- *PK*, 3-4 have no screening services provided
- Special services only occur once per week in parochial schools.
- Mental health staffing ratios are ridiculously inadequate
- We are unfortunately not computerized.
- School Health services provided in the school district by the Health District. There are 18 schools -public, parochial /private schools. The public schools include two high schools, one alternative high school, two middle schools, two K-8 schools, one Early Childhood Center (Pre-K), six K-5 schools, one Catholic regional high school, and three K-8 parochial schools. There are three registered dental hygienists in the district that serves students in schools K- 8 public and parochial. Oral health screenings and care are provided to high school students as needed.
- One elementary school has a "therapeutic program," which educates students with violent behavioral tendencies
- School nurses should be valued in leadership and consultative roles regarding policy and health plan development BEFORE plans are implemented, not as an after-thought.

- Our software program identifies immunization non-compliance issues that MD offices are not tracking, requiring much time following up with MDs and parents for compliance. RNs involvement in Homebound impacts the delivery of health services.
- Students medical needs are increasing, and services are not.
- Our students are very grateful to be screened but need services like Childsight free glasses provided in every school. The SBHC are very valuable and help enhance school health through collaboration with nurses, teachers, administrators, and other personnel.
- The state should require an annual hearing on school nursing services to understand the complex nature of the work better.
- We administer meds at school due to families' inability at home. Students are chronically tardy. We are told the state only cares about absence.
- Nurses are being utilized to provide custodial care/ADLs daily--this drastically cuts into our nursing duties. Often, accommodations are written by non-nursing staff for nurses to provide. Our population needs on-site medical SBHC.
- No longer mandated to do vision/hearing screening at Middle School Level. Nurse screens upon request. A social worker or Psychologist does mental health screening. The nurse does not always know who has been referred.
- There is poor communication between DCF and the school district after a referral has been made through the hotline.
- This pertains to concussions. Please include Ice Hockey and Dance team.
- Students come to school needing services they do not receive at home, i.e., nutrition, hygiene, injuries from outside of school, Tylenol, band-aids
- More resources for families to address obesity in children
- We are doing more with less. Nurses are going to burn out if the trend continues.
- Electronic student health documentation should be mandatory
- Health services summary is only a partial picture of all a School Nurse does in the office.
- Gender identity, anxiety/depression
- More medical and mental health case management is being done in school.
- As budgets crunch, school health services are squeezed. Supporting a school nurse in every building is essential. We have had districts lose students this year even with nurses present. You cannot predict life-threatening issue arising in school.

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

- Add screenings for height, weight, BMI, and BP
- School Psychologist/Social Worker/Guidance Counselor services are needed
- *At the middle school in this district, no one is doing health education. This is a disservice to the students.*
- Increase in health aide hours at all levels.
- *Require a school nurse in every school*
- The need for more social workers & school psychologists in the schools to meet the ever-growing mental health needs of students. Need to provide support and resources to schools to help with education about the opioid epidemic.
- We could benefit from more professional conferences in regional areas of the state.
- It would be beneficial if the two larger elementary schools in this district had a health aide; populations sometimes become too large for one nurse to provide care adequately.
- Acknowledgment of the impact that school health professionals have on attendance and access to learning for students. The state should pay particular attention to the school nurse staffing levels those districts serving students living in high poverty areas. There are schools in New Haven, for instance, that share nurses between them. That is a disservice to the children and family members in that a school nurse can make all the difference in a child being in school or not.

- 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 the parent "opt out" clause for Undiagnosed epi-pen regulations. Would like to see clear guidelines on "off label" medications used for seizure disorders and delegation of same, such as Midazolam.
- One nurse for each school building.
- There need to be more mental health professionals to assist with the increasing needs of the students
- Provide funding for full-time nurses in every school, every day.
- All schools ought to be required to have air conditioning in the nurses' office.
- More mental health staff, in-services for staff and school nurses.
- Improve the food served in school to things the students will eat.
- We need more health resources for student and families and more health education for students.
- Instruction on scoliosis screening.
- *Timely response and clear guidance when seeking assistance from the SDE Nurse Liaison in a grey area, i.e., glucagon administration by non-nursing staff.*
- More education for behavioral issues with possibly behavioral assessments.
- Services to increase social/emotional supports within schools.
- Have survey monkey collate the school district individual school survey and then send to the district coordinator/supervisor answer the unanswered questions. Taking the time to add up all the answers for each school is time-consuming and takes away from other essential duties,
- More mental health funding is needed to support an MSW and school psych at every level in every district. Stronger ramifications are needed for poor attendance, and there needs to be support from DCF enforcing attendance policies.

Staffing of Health Services in School Districts

Survey respondents continued in 2017-18 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.

- The acuity level of medical conditions in our schools has dramatically increased. We provide more skilled nursing services (such as catheterization, tube feedings, diabetes care, and tracheostomy care) than ever before, coupled with the significant increase in students with severe mental and behavioral health issues.
- Due to the State budget deficit, School Nurses are first in line to be cut from the district.
- This is the first year that Cheshire has had one nurse per 750 students at each school.
- It has been difficulty recruiting nurses to the field of School Health due to the lack of a competitive starting salary.
- We need full-time RNs to staff our schools appropriately.
- Securing qualified subs is always an issue. I have two part-time nurses who share a special needs position. They ride the bus and cover a student with a GTube who has many feeds during the day and Diastat PRN.
- Only the middle school has a full-time health aide. The high school has an aide for 2 hours/day, but that seems to be manageable. The two larger elementary schools have no aide: over 400 students at one school and over 500 at the other. This is not acceptable.
- The staff ratio of 1 school nurse to 750 students is only reasonable if there are no special needs students
- Staffing tied to town budget, not BOE and not based on acuity needs of students. Frustrations in convincing the town on need for increased staffing/compensation/affordable health insurance.
- A permanent sub position is being added for the coming year to reflect the need for consistent nursing coverage when regular staff nurses are not available. This is particularly important in providing for the needs of our young diabetics and other medically complex students.
- Each school needs a nurse.
- It is challenging to staff the different schools when nurses are absent due to illnesses or personal days;
- There ought to be a mandated requirement in the elementary school level of one nurse for every 500 students in each school building and an additional nurse for any number of students over 500.

- We employ health assistants to work with each nurse which allows the nurse to do professional functions.
- MENTAL HEALTH COMPLAINTS ARE SKYROCKETING
- Nurses are expected to be available to the students each minute of the day, no "formal" break.
- There should be two full-time nurses for every 400 students in the school because of severe medical issues, and lack of medical health care outside of school!
- Two RNs would be better in the middle school Health Office rather than 1 RN + 1 LPN--too large of a student population with case management needs.
- Nursing staff had no input in the selection of the new medical advisor. Admin determined nurse's access to the medical advisor for consult, physicals, scoliosis rescreen before sending a note home to parent, etc. Lawyers with no input from nurses determined decisions regarding statutes, regulations and other health-related practices.
- Difficult to supervise, have phone consultation and be available to other schools with a full-time nurse position as well.
- Change the nurse to student ratio to 2 school nurses per 750 students.
- I used to orient 2-3 people per year to become sub school nurses, and now I do not even get interest from one person per year. School Nursing is no longer just band-aids, and emotional/behavioral students are causing violence to staff, students, and even us.
- Support staff essential in maintaining a well-organized office.
- *Health services significantly impact students being in school available to learn because not given consistently at home and impacts learning.*

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

- Funding assistance to help fund the staffing necessary to support the increasing number of students who require 1:1 or multiple daily skilled nursing services.
- We need training and help to manage the students who have serious mental health and behavioral issues.
- Continue to encourage mandating of more registered nurses per school district. The school health demands require well skilled professional registered nurses to address these many complex issues.
- Mandate an appropriate nurse/student ratio based on acuity levels as well as population numbers.
- *Require at least one school nurse to each school.*
- Fund school nursing
- Have mandated minimum nurse staffing in every school building of 550 students to one nurse and require every school district to have a mandated float nurse that does not have any permanent school assignment.
- MORE TRAINING ON MENTAL HEALTH INTERVENTIONS
- Employ more RNs. Encourage programs for medical health aides who can help in the school nurses' offices.
- More professional development opportunities for school nurses including asthma education.
- Yes, we desperately need a 5th full-time RN to float between our schools. Both elementary RNs have a large workload. We also do not have substitute RNs available (only two that have other full-time jobs).
- It would be ideal if there were some acuity rating scale or program to use to determine nurse staffing needs accurately.
- SNAP computer program should be installed across CT Schools so the electronic transfer of health records can occur.
- It would be an excellent idea if the state could screen and hire a pool of per diem substitute school nurses that have been trained and fingerprinted.
- A pool of school nurses to call on for subbing in our offices
- Need for extra support staff at the elementary level.
- Would like to move to parity with teachers on their salary scale and require a BSN for all school nurses so that we have equitable pay.
- Supply free Narcan at the high school level

• Mandate BSN for a minimum degree, require new school nurse orientation and national certification within five years

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.
- We are fortunate to have a school-based health center to help the students in many ways, including sexual health counseling. Health education is minimal by the nurses; however due to a lack of time.
- All schools should have access to a school-based health center with an APRN. We have one part-timer.
- CT does not have a "real" snapshot of students with asthma. The nurses report rates based on blue state physical examinations. An asthma diagnosis in elementary school can get carried through a student's school life without being updated. It has been a struggle getting providers to update forms with parents before signing them as "complete."
- School nurses are a critical component of the interdisciplinary team, but not monetarily on par with BOE employees.
- ICE Hockey should be added to Question 11; Cystic Fibrosis should be added to Questions 15a and 15b.
- Each district uses different survey cut-off dates. It is not clear from past surveys that this survey addressed only data up to February 1 of each year. This is not giving legislators accurate data.
- We would love to see a comprehensive list of current resources for families and students.
- Would like the SDE to develop a health acuity rating and appropriate health office staffing guidelines for school administrators.
- Our elementary schools do not have a formal health education program. It is provided by the PE teacher and focuses on cardiovascular and musculoskeletal systems, with some wellness thrown in. It is not consistent between the two elementary schools as only one teacher has health certification.

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, 2018);
- 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 86.3%
- Fifteen 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 2017-18, 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, 19.7% of respondents reported more than 750 students to one nurse, a 0.4% 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.