



Connecticut State Department of Education

Health Services Program Information Survey Report

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Developed for:

The Connecticut State Department of Education

By

Dr. Mhora Lorentson, Director
Ms. Margot Snellback, Research Associate
Center for Collaborative Evaluation and Strategic Change

Contact:

EDUCATION CONNECTION

P.O. Box 909
355 Goshen Road
Litchfield, CT 06759-0909
Phone: 860-567-0863

Contact:

Connecticut State Department of Education
Stephanie G. Knutson, School Health Administrator &
State School Nurse Consultant
Bureau of Health/Nutrition, Family Services and Adult Education
Connecticut State Department of Education
25 Industrial Park Road
Middletown, CT 06457
Phone: 860-807-2108

Executive Summary

Background and Methodology:

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 Collaborative Evaluation and Strategic Change (CCESC) at EDUCATION CONNECTION to develop an online survey to collect information regarding the status of school health services from school districts throughout Connecticut.

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 Dr. Mhora Lorentson, Director of the Center for Collaborative Evaluation and Strategic Change at EDUCATION CONNECTION. Dr. Lorentson has 16 years of experience in the development and implementation of evaluation and planning processes in educational organizations. She developed the survey 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 Dr. Lorentson to adapt the survey development process as necessary to meet the needs of school districts and the CSDE.

Dr. Cheryl Resha and the CSHRC provided suggestions to EDUCATION CONNECTION 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.

EDUCATION CONNECTION staff developed specific questionnaire items based on these suggestions and questions asked on other state health questionnaires. Dr. Cheryl Resha and the 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: type of district; types of districts served by the respondent; district reference group (DRG); and 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 slightly each year based on district requests or the results of survey data analysis.

The survey was incorporated into the EDUCATION CONNECTION Web site to facilitate completion by respondents. The Coordinator of Health Services in each Connecticut school district, or the equivalent, was asked to complete the online survey.

Questionnaire results were analyzed statistically using the Statistical Package for the Social Sciences. Frequencies and means were obtained on all data as appropriate.

Profile of Districts Who Participated in the Data Collection Process:

During 2012-2013, a total of 169 questionnaires were distributed with 136 received in time to be analyzed, yielding a response rate of 80.5 percent.

The majority of respondents (97 percent) were from public school districts, while 1 percent of respondents represented charter schools and 2 percent represented Regional Educational Services Centers. Over half (59.4 percent) of respondents represented suburban districts; 27.1 percent represented rural districts; and 13.5 percent represented urban districts. By a small margin, the majority of respondents (67) provided services only to public schools and 57 districts also provided services to private, non-profit schools. It should be noted that approximately 9% of respondents did not answer this question.

Respondents included districts from all District Reference Groups (DRG). Almost one fifth of respondents (19.4 percent) were in DRG C. Additionally, 18.1 percent of respondents were in DRG D, 16.7% in DRG B, 15.3 percent were in DRG G, 11.1 percent were in DRG E, 6.9 percent were in DRG F, and 4.2 percent each were in DRGs A, H and I.

School Health Services Conclusions and Recommendations:

Overall, school health services staff appear to have a positive perception of the status of health services in Connecticut districts. As with previous years, survey respondents were generally positive as indicated by the quantitative survey results and the number of comments on the survey. Data resulting from the tenth year of survey administration were examined by the CSDE and EDUCATION CONNECTION staff.

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

- Optional services provided by participating districts to public school students generated slightly over 10,000 referrals to outside providers. These numbers suggest a continued need for and interest in screenings in these areas;
- Students in private, non-profit schools served by responding districts were generally as likely as their public school counterparts to receive optional services for Body Mass Index Screening as well as other optional screening services during 2012-2013.
- In general, nurse-to-student ratios decrease as grade levels increase. Approximately 27 percent of secondary schools have only one nurse to more than 750 students;
- A wide range of health care specialists are employed by districts. The most common specialists are assistive technology specialists and mental health consultants;
- Connecticut school districts are caring for children with a wide range of physical, developmental, behavioral and emotional conditions;
- Connecticut districts have over 14,000 students with documented dietary needs including nut, wheat, milk and shellfish allergies;
- Districts regularly prescribe emergency medications as needed including glucagon, diastat and epinephrine;
- Connecticut nurses report spending an average of 28.9 hours per week on routine nursing interventions;
- Districts identify a need for more mental health services and programs that promote a healthy lifestyle;
- During 2012-2013, 1,611 9-1-1 calls were made by Connecticut public and private, non-profit schools for students and adults combined.
- In responding districts, 5228 public school students and 175 private school students were uninsured during 2012-2013;

- A wide variety of software is used by Connecticut districts to collect and record school health information. Almost 12% of responding public school districts and 57% of responding private, non-profit school districts reported having no software;
- Many Connecticut school health staff members report some involvement in teaching topics which include: injury prevention, violence prevention, asthma control, sensitivity to food-allergies in others, and dental health. Some school health staff report collaborating with teachers to facilitate health-related topics.
- Districts provide a wide range of suggestions of services that would increase district satisfaction with the provision of health services to students. District suggestions include fiscal and non-fiscal resources, information on available resources, communication with state agencies and training for staff.

Future Data Collection Conclusions and Recommendations:

A number of specific recommendations for the CSDE regarding future data collection efforts were also developed and are specified within the report.

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Date: November, 2013

Introduction

EDUCATION CONNECTION 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 services in Connecticut. Survey results are being used to monitor the characteristics of, and trends in, school health services in Connecticut school districts at the elementary, middle/junior high school and senior high school levels. Data was collected through the administration of the Health Services Program Information Survey. Funding for this project was provided by the CSDE. This report summarizes the results of data collection for the 2012-2013 academic year. This is the tenth year for which data was collected.

Theoretical Framework

The theoretical framework followed in the planning and implementation of the data collection process includes the concepts of participatory evaluation, systems thinking, and a constructivist theory of learning.

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 2003-04 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
- Absenteeism Rates
- 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 & Drug Use
- Injury & Violence (including suicide)
- Nutrition
- Physical Activity
- Sexual Behaviors
- Tobacco Use
- Emerging Issues:
 - Food Safety
 - Asthma
 - Skin Cancer
 - Terrorism
 - Type I Diabetes
 - Type II Diabetes
 - Dental Disease

Data Collection Process

Survey Development

All survey development processes were described in the 2003-04 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 prior to the 2011 through 2013 administrations. The CSDE and the Connecticut State Health Records Committee assisted Dr. Lorentson of EDUCATION CONNECTION to adapt the survey as necessary to meet the needs of school districts and the CSDE.

The survey collected data in the following areas:

- Types and results of services provided in Connecticut public and private, non-profit, schools.
- Staff of health services in Connecticut schools:
 - numbers of staff;
 - nurse/student ratios;
 - qualifications of staff; and
 - specialists linked to nursing services.
- Numbers of students with specific health care needs in public schools and private, non-profit schools.
- Types of health care procedures performed by health services staff in public and private, non-profit schools.
- 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
- Numbers of and reasons for 911 calls in public and private, non-profit schools.
- Availability of health coordination and education activities.
- Involvement of health services staff with health coordination and education activities.
- Software available to support health service data collection.
- Demographic information including:
 - District Reference Group (DRG)
 - Type of District:
 - rural/urban/suburban; and
 - private/public/regional educational service center;
 - Types of schools to which the district provides health services;
 - Name and identification of district; and
 - Name of survey respondent.

Reliability and validity of the survey were discussed in previous reports and are not repeated here. Reliability was maximized through a comprehensive pilot testing process and through the development of questions following generally accepted standards. Survey validity is primarily determined through the use of a survey development process that collects data on all relevant key concepts and is generally assessed non-statistically by a panel of experts. This survey was developed in close partnership with a panel of experts from the Health Service Advisory Committee. It is expected that the questionnaire is sufficiently valid and reliable.

Survey Administration

The survey was posted to the EDUCATION CONNECTION Web site to increase ease of completion. Survey directions, sources of data necessary for survey completion, and results of the eight previous survey administrations were also available for downloading on the EDUCATION CONNECTION Web site.

Prior to survey administration, the CSDE invited each Coordinator of School Health Services in Connecticut to attend an introductory meeting on the School Health Service Program Questionnaire. The CSDE School Health Consultant, Ms. Stephanie Knutson, introduced participants to the purpose and history of the survey and shared the survey with the group online. Ms. Knutson answered questions concerning the practicalities of survey completion, state expectations for survey completion and expected use of 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 EDUCATION CONNECTION Web site for survey completion.

The CSDE and EDUCATION CONNECTION responded to questions and concerns regarding the survey as they arose. A total of 169 questionnaires were distributed. 136 responses were received in time to be analyzed, yielding a response rate of 80.5 percent.

Data Analysis Methodology

Survey results were analyzed using the Statistical Package for the Social Sciences (SPSS). The total number of individuals, frequencies and means were obtained as appropriate.

Results

The response totals, frequencies or mean response, as appropriate, are listed below. Respondents who answered “Don’t Know/Need More Info” were not included in the analysis.

It should be noted that during 2012-2013, districts reported information for public schools and private, non-profit schools separately for a variety of topics. Results are reported separately for public and private, non-profit schools as appropriate. Almost 46 percent of districts reported that they also provided services to private, non-profit schools.

Services Provided in Connecticut School Districts

Table 1A: Public School Students Receiving Services as Percent of Total

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 was provided. The total number of public school students reported by participating districts is 393,634.

Health Service	Number of Districts Reporting Students Receiving Service	Total Number of Public School Students Reported by Participating Districts	Number of Students Receiving Service Reported by Participating Districts	Percent of Students Receiving Service	Number of Districts Reporting Students Referred to Outside Provider	Number of Students Receiving Services in Schools ALSO Reporting Students Referred	Number of Students Referred to Outside Provider	Percent of Students Receiving Service Referred to Outside Provider
<u>Optional Services</u>								
Body Mass Index Screening	122	377620	33801	8.9%	103	33704	346	1.0%
Pediculosis Screening	131	383580	85623	22.3	107	81465	2943	3.6
Nutrition Screening	120	361220	6743	1.9	105	6727	652	9.7
Mental Health Consultation	119	367666	7033	1.9	105	6917	2707	39.1
Dental Screening	120	358797	27656	7.7	103	27114	3520	13.0
Total			160856 screenings				10168 referrals	
<u>Mandatory Services*</u>								
Vision					121	344864	16219	4.7%
Scoliosis					115	358827	2431	0.7
Hearing					117	363525	2294	0.6
Mandated Health Assessments					105	344864	7433	2.2
Total							28377 referrals	

*No data collected for mandatory services, as these screenings are required for all students.

The optional service provided most frequently by Connecticut districts was pediculosis screening. In 2012-2013 22.3 percent of public school students in reporting districts received pediculosis screenings compared to 1.9 percent of students who received nutrition screenings. Mental health and dental screenings were the optional services most likely to result in a referral to an outside provider. Over 52 percent of students who received these two screenings were referred to an outside provider for further assistance. Additionally, 9.7 percent of students who received nutrition consultations were referred to an outside provider.

In 2012-2013, the number of students provided optional services by participating districts continues to be relatively small compared to the total number of students. Data suggest that many Connecticut school districts do not have optional services or offer them only on a very limited basis. Participating districts voluntarily provided 160,856 screenings. These voluntary screenings resulted in 10,168 referrals, highlighting the need for screening services in Connecticut schools.

Results were similar for mandatory screenings. In 2012-2013, mandatory screenings in the responding districts resulted in 28377 referrals to outside providers. Over half of all referrals were for vision. About 4.7 percent of vision screenings resulted in a referral.

Table 1B: Private, Non-Profit School Students Receiving Services as Percent of Total

Note: In Table 1B, percentages were calculated ONLY for districts for which all data was available. The total number of students reported by the districts varies by category and is dependent upon whether other data necessary to calculate percentages was provided. Participating districts reported a total of 35,294 private, non-profit school students.

Health Service	Number of Districts Reporting Private School Students Receiving Service	Total Number of Private School Students Reported by Participating Districts	Number of Private School Students Receiving Service Reported by Participating Districts	Percent of Private School Students Receiving Service	Number of Districts Reporting Private School Students Referred to Outside Provider	Number of Students Receiving Services in Private Schools ALSO Reporting Students Referred	Number of Students Referred to Outside Provider	Percent of Students Receiving Service in Private Schools Referred to Outside Provider
<u>Optional Services</u>								
Body Mass Index Screening	44	32797	3258	9.9%	41	3192	11	0.3%
Pediculosis Screening	47	33789	9156	27.1%	43	9149	297	3.2%
Nutrition Screening	44	32797	443	1.4%	42	443	29	6.5%
Mental Health Consultation	44	32790	734	2.2%	42	730	336	46.0%
Dental Screening	44	32797	1953	5.9%	41	1855	414	22.3%
Total			15544 Screenings				1087 referrals	
<u>Mandatory Services*</u>								
Vision					54	35294	1079	3.1%
Scoliosis					53	34309	327	0.9%
Hearing					53	35004	73	0.2%
Mandated Health Assessments					49	33512	878	2.6%
Total							2357 referrals	

*No data collected for mandatory services, as these screenings are required for all students.

Like public school students, students in private, non-profit schools received the optional service of pediculosis screening most frequently. Nutrition was the optional service provided least frequently. In 2012-2013, 27.1 percent of private, non-profit school students served by reporting districts received pediculosis screenings while only 1.4 percent received nutrition screenings. Approximately 46 percent of mental health consultations, 22 percent of dental screenings and 6.5 percent of nutrition consultations resulted in referrals.

Staffing of Health Services in Connecticut School Districts

I. Nursing Staff:

**Table 2: Numbers and Classification of Staff
Number and Percent**

Staff Type	Nursing Staff Classification	Total Number of Staff in Participating Districts (FTE)	Percent of Total FTE Staff in Participating Districts
Registered Nurse	Nurse Leaders	84	7.0%
	School Nurses	834	68.5%
	Nurse Practitioners	8	0.7%
	Permanent Float Nurses	22	1.9%
	One-to-One Nurses	27	2.2%
	Contracted Nursing Staff	59	4.8%
Total Registered Nurse Staff	All RN Classifications	1034	84.9%
Nursing Support	Licensed Practical Nurses	36	2.9%
	Health Aide	101	8.3%
	Nursing Clerk or Other Support Staff	45	3.7%
Total Nursing Support Staff	All Support Classifications	182	14.9%
Total Staff	All Classifications	1216	100.0%

About 7 percent of full-time equivalent school health services staff are designated as nurse leaders. Another 68.5% percent of FTE staff are registered nurses who do not work in a leadership capacity. The remaining 9.6 percent are classified as nursing support staff.

II. Additional Staff:

District Medical Advisor:

One hundred ten responding districts received services from a medical advisor. Of these, approximately 85 percent received services less 10 hours per month. 7.2 percent received services from 11-20 hours per month, 3.6 percent received between 31-40 hours per month and two district received more than 40 hours of services from a medical advisor each month.

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

- | | | | |
|---------------------|-------|-------------------|-------|
| • Adolescent Health | 19.1% | • Pediatrics | 50.0% |
| • Family Medicine | 25.7% | • Public Health | 5.1% |
| • General Medicine | 9.6% | • Sports Medicine | 1.5% |
| • Internal Medicine | 5.1% | • Other | 3.7% |
| • Orthopedics | 0.7% | | |

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

District Dental Services:

Results indicate that a majority (71.3 percent) of Connecticut districts do not provide dental services to their students. Among districts providing these services, 24 percent received services from a dentist and 76 percent received services from a dental hygienist.

III. Staffing Levels:

Eighty three percent of responding districts reported having a nurse leader designee who is a nurse. Responding districts also reported a total of 1,014 Full-Time Equivalent (FTE) registered nurses and 248 FTE nursing support staff in 2012-2013.

Staffing by Grade Level and School:

**Table 3: Nurse-to-Student Ratio
Percent Respondents**

	One Nurse to 250-500 Students	One Nurse to 501-750 Students	One Nurse to More Than 750 Students
Elementary nurse-to-student ratio in district	77.7%	21.3%	1.0%
Secondary nurse-to-student ratio in district	26.9	46.2	26.9

A majority of Connecticut schools meet national guidelines that recommend a school district have a nurse-to-student ratio of no less than 1 nurse to 750 students in the general population. In addition, the guidelines recommend 1 nurse to 225 students in student populations requiring daily professional school nursing services or interventions, 1 nurse to 125 students in student populations with complex health care needs, and 1 nurse per student for individual students who require daily and continuous professional nursing services. Survey results continue to suggest that approximately 1 in 4 secondary level schools in Connecticut may not meet general population guidelines. It is important to note that no information is collected regarding the acuity levels of the population of students reported.

IV. Staff Qualifications:

**Table 4: Qualifications of Nurse Leaders
Percent Response**

	Number of Respond- ents	Diploma Registered Nurse	AD	Other Associates Degree	BS in Nursing	Other Bachelor's degree	MS in Nursing	MPH
Nurse Leader 1	98	18.4%	8.2%	2.0%	52.0%	3.1%	10.2%	6.2%
Nurse Leader 2	11	27.3	18.2	0.0	36.4	0.0	18.2	0.0
Nurse Leader 3	4	0.0	0.0	0.0	75.0	0.0	25.0	0.0
Nurse Leader 4	2	50.0	0.0	0.0	50.0	0.0	0.0	0.0
Nurse Leader 5	1	0.0	0.0	0.0	100	0.0	0.0	0.0

Districts reported the qualifications of each nurse leader in their district. Districts with more than one nurse leader reported additional qualifications under Nurse Leader 2-5 above. The most prevalent degrees among nurse leaders were a BS in Nursing and a Diploma Registered Nurse. Fifty-two percent of districts reported having at least one nurse leader with a BS in Nursing. Other qualifications among Nurse Leaders included APRN, Masters-Ed., BS Human Services and MCP.

**Table 5: Additional Specialists Employed by Districts
Percent Response**

Specialist	Yes
Nutritionist	8.4%
Mental Health Consultant	44.4
Psychiatrist	19.0
Assistive Technology Specialist	44.4
Other	18.2

Districts employed additional health care specialists to address student needs. The most common specialists employed by districts were assistive technology specialists and mental health consultants.

Student Health in Connecticut School Districts

Participating districts provided data on a wide range of topics related to student health. The 2012-2013 survey collected information on the health care needs of students in public and private non-profit schools served by participating districts. Fifty four percent of responding districts served students in private, non-profit schools. Results are summarized below.

I. Student Health Care Needs:

Table 6: Number of Students with Specific Health Care Needs

Health Condition	Public School Students	Private, Non-Profit School Students	Total Number of Students
Bee Sting Allergy	1838	212	2050
Food (Life threatening only)	12936	1671	14607
Latex/Environmental Allergy	7347	1116	8490
Arthritis	592	34	626
Asthma	48712	4458	53170
Autism Spectrum Disorders	5499	244	5743
ADHD/ADD	15925	1286	17211
Depression	4602	348	4950
Eating Disorders	669	56	725
Other Behavioral/Emotional Conditions	6849	427	7276
Hemophilia	114	22	136
Sickle Cell Trait	352	15	367
Other Blood Dyscrasias	753	74	827
Cancer	332	27	359
Cardiac Conditions	2032	237	2269
Cerebral Palsy	699	23	722
Developmental Delays	5338	132	5470
Diabetes Type I	1073	69	1142
Diabetes Type II	1079	98	1177
Lyme Disease	999	150	1149
Migraine Headaches	3085	324	3409
Neurological Impairment	2450	127	2577
Other Health Impairment	5305	683	5988
Oral Health Needs	3642	84	3726
Orthopedic Impairment	2644	472	3116

Health Condition	Public School Students	Private, Non-Profit School Students	Total Number of Students
Seizure Disorder	2634	206	2840
Speech Defects	8417	280	8697
Severe Vision Impairment	1335	75	1410
Severe Hearing Impairment	1425	82	1506
Spina Bifida	175	2	177

Connecticut school nurses provide services to students with a wide range of physical and emotional health needs. The most prevalent conditions reported in order of frequency among **public school** students during 2012-2013 were Asthma , ADHD/ADD, food allergies, latex/environmental allergies and other behavioral/emotional conditions. Results from **private, non-profit schools** were similar with the most prevalent conditions including asthma, food allergies, ADHD/ADD and latex/environmental allergies. This was the fourth year for which data on Lyme disease was collected. A total of 1149 students were reported to have Lyme disease in participating schools.

In the one hundred and thirty-six districts who responded to the question, there were 11,126 students enrolled who have a special dietary need documented by an appropriate medical statement that is maintained on file.

In an effort to address the dietary needs of students, Connecticut school health services staff collaborate with food service staff on a somewhat frequent basis. Between one-third and one-half (40.8%) collaborate “*Some of the time*”, approximately one third (33.0%) collaborate “*Most of the time*” and one fourth (24.3%) collaborate “*All of the time.*” Approximately 2.0 percent “*Never*” collaborate with Food Service staff.

School health services staff itemized the medical diagnoses held by students that require special dietary accommodations. Their responses are summarized in Table 7 below.

**Table 7: Student Diagnoses Responsible for Dietary Accommodations
Percent Response**

Diagnoses	Percent of Districts having students with this diagnosis
Tree nut allergies	92.2%
Seed allergies	73.7
Shellfish allergies	85.9
Milk allergies	92.2
Peanut allergies	92.1
Egg allergies	87.0
Fish allergies	83.7
Wheat allergies	90.2
Soy allergies	76.8
Other allergies	82.5
Diabetes	88.0
Celiac disease	87.3
Lactose intolerance	94.1
Other food intolerances	74.0
Other diagnoses	53.2

The most common “other” diagnoses provided by school nurse staff include PKU, fruit allergies and food dyes.

**Table 8: Emergency Medication Administration
Percent Response**

Medication	Percent of districts having used this medication in the past year
Glucagon	4.0%
Diastat	18.2
Epinephrine	47.5

4.0% of districts reported the use of glucagon, 18.2 percent reported the use of diastat and approximately 47.5% reported the use of epinephrine during the past year.

In the 136 responding Connecticut schools, 91% percent had a standing order for epinephrine, and 102 students with life threatening food allergies required the administration of epinephrine during the last school year. The most common reasons for the provision of epinephrine were food allergies, specifically nut allergies, and unknown reactors.

Nurse’s Time in Connecticut School Districts:

I. Allocation of Nurses’ Time in Connecticut School Districts

Districts reported a range of activities engaged in by school nurses during the school day. Tables summarizing their responses are below.

Table 9: Number of Nurse Hours/Week Spent on Specific Health Interventions

Health Intervention	Number of Responding Districts	Mean Number of Hours Per Week	Total Nurse Hours Per Week Reported
Routine nursing intervention	102	28.9	2954
Referrals to health care provider	102	2.7	270
Administration of daily medication	102	3.7	382
Administration of as-needed medication	102	4.3	442
Performance of special health care procedures	101	3.4	339
Monitoring of health care needs	101	7.3	737
Case management	101	3.0	308
Mental health counseling	100	3.0	300

Over half of the time of the average Connecticut school nurses’ is spent on routine nursing interventions. Districts reported that nurses’ time was also spent on activities including monitoring of health care needs, administration of medication, case management, mental health counseling, and performance of special health care procedures. Districts reported that nurses spent an average of 3.0 hours per week conducting mental health interventions during 2012-2013.

**Table 10A: Types of Procedures Performed by Connecticut School Nurses
Percent of Responding Participants Providing Services to Public Schools**

Procedure	% of Districts Serving Public Schools Performing Procedure in the Public School Setting
Blood Sugar Testing	96.0%
Catheterizations	36.6
Gastrostomy Tube Feedings	64.9
Insulin Pump Management	86.9
IV Therapy	4.2
Nasogastric Tube Feedings	5.3
Nebulizer Treatments	97.0
Ostomy Care	32.6
Oxygen Therapy	30.0
Suctioning	40.6
Tracheostomy Care	24.0
Ventilator Care	9.5
Other Treatments	20.7

Other treatments provided by districts included wound care, dressing changes, incontinence care, albuterol pump management, and toileting training.

Districts reported that school nurses perform a number of procedures within the public school setting. The most common procedures performed in districts included: nebulizer treatments (97.0 percent), blood sugar testing (96.0 percent), and insulin pump management (86.9 percent).

**Table 10B: Types of Procedures Performed by Connecticut School Nurses
Percent of Responding Participants Providing Services to Private, Non-Profit Schools**

Procedure	% of Districts Serving Private, Non-Profit Schools Performing Procedure in the Private, Non-Private School Setting
Blood Sugar Testing	59.6%
Catheterizations	2.3
Gastrostomy Tube Feedings	9.1
Insulin Pump Management	42.6
IV Therapy	0
Nasogastric Tube Feedings	0
Nebulizer Treatments	81.3
Ostomy Care	2.2
Oxygen Therapy	2.2
Suctioning	0
Tracheostomy Care	0
Ventilator Care	0
Other Treatments	10.0

Respondents serving private, non-profit schools most frequently reported the provision of nebulizer treatments (81.3 percent); blood sugar testing (59.6 percent); and insulin pump management

(42.6 percent) to these schools. All procedures were less likely to be performed in the private, non-profit school setting than in the public school setting.

II. Impact of Nursing Interventions

**Table 11: Percentage of Students Returned to Classroom
Percent Response**

Percentage of Students Returned Within One-Half Hour	Percent Response
0-25%	1.0%
26-50%	0
51-75%	4.9
76-100%	94.1

Approximately 94% of districts reported that 76 - 100 % of students are returned to the classroom within one-half hour of receiving a nursing intervention.

Of the students dismissed and NOT returned to the classroom, districts identified the approximate percentage of students dismissed for each reason described below. Responses are summarized in Table 12.

**Table 12: Reason for Dismissal
Percent Response**

Reason for Dismissal	Number of Public School Students Dismissed	% of Private, Non-Profit School Students Dismissed
Illness	88.2%	89.0%
Injury	7.4	8.3
Other	4.4	2.7

Most student dismissals among both public school students and private, non-profit school students were because of illness during 2012-2013. Approximately 7% of dismissals in public schools, and 8% in private, non-profit schools were due to injury.

**Table 13: Dismissal Destination
Average Response**

Dismissal Destination	% of Public School Students Dismissed	% of Private, Non-Profit School Students Dismissed
Home	87.8%	91.5%
Emergency Room	2.2	1.4
Other Healthcare Provider	4.9	7.1

Approximately 90 percent of students dismissed for health reasons from both public and private, non-profit schools were sent home. Approximately 2% percent from public schools and 1.4% from private, non-profit schools were sent to an emergency room.

Other Factors Impacting Student Health:

Eighty-four public school districts provided information on the number of students without health insurance coverage. In those districts, 5228 students were without health insurance during 2012-2013.

Thirty-eight districts serving private non-profit school students provided information reporting that 175 students were uninsured during 2012-2013.

Table 14: 911 Calls in Public and Private, Non-Profit Schools

	Public Schools	Private, Non-Profit Schools	Total
Number of students in responding districts	393,694	35,294	428,988
Number of 9-1-1 Calls per 1,000 students per year	3.1	1.3	3.8
Total number of 911 calls	1232	85	1,317

Ninety-seven districts reported the number of 911 calls made in public schools and 47 districts reported the number of 911 calls made in private, non-profit schools during the 2012-2013 school year. About three 911 calls were made for every 1,000 students in the public schools. Slightly over 1 call per 1,000 students was made in the private, non-profit schools.

Sixty-five percent of respondents identified injuries as the most common reason for 9-1-1 calls. As in the previous year, “Other” was reported as the second most common reason for 9-1-1 calls followed by “anaphylaxis” and “seizure.”

For staff or other adults, ninety-four public school districts reported that 273 9-1-1 calls were made, while forty-five private school districts reported a total of 21 9-1-1 calls placed for adults. “Other” was also identified as the most common reason for 9-1-1 calls, followed by “injury”, “anaphylaxis” and “seizure”.

Health Coordination/Education

Connecticut school nurses and their districts were involved in a variety of health coordination and educational activities. Summaries of results related to health coordination/education are in the tables below.

**Table 15: Frequency of Provision of Health Care Management Services
Percent Response**

<i>My district provides the following student health care management services:</i>	Don't Know	Sometimes	Always
Development of Individual Health Care Plan	0.0%	16.5%	83.5
Development of Individual Emergency Plan	0.0	7.3	92.7
Development of 504 Plan	0.0	24.2	74.0
Staff Training to Meet Individual Student Health Needs	0.0	13.5	86.5

The majority of districts reported that health care management services are always provided. However, the number of districts that reported that services are “*sometimes*” provided ranged from 7 percent to 24 percent. Data suggest that up to one quarter of Connecticut districts provide services on an inconsistent basis. The service most frequently provided “*sometimes*” was the development of 504 plans.

Over ninety percent of responding districts stated that nursing staff were involved in the development of IEPs.

**Table 16: Computer Software Used to Collect Student Health Information
Percent Response**

<i>Software</i>	Public School Districts	Private, Non-Profit School Districts
None	11.6%	57.1%
SNAP	43.5	22.4
Health Master	4.2	4.1
School Nurse Manager	0.0	0.0
Other district wide data program	38.9	16.3

The software systems most commonly used in participating districts to collect student health information was SNAP. However, it is noted that over half of private, non-profit school districts, and more than one tenth of public school districts have no health-reporting software system in use.

**Table 17: Existence of Specific Activities
Percent Response**

<i>My district has:</i>	Yes
School Health Team	79.6%
Automatic External Defibrillator Program	95.9

Survey results indicate that 80 percent of Connecticut school districts have a school health team in place. The majority of respondents (96 percent) reported having an Automatic External Defibrillator program in place during 2012-2013.

**Table 18: Collaboration of School Health Services Staff with Colleagues
Percent Response**

<i>Staff</i>	Percent That Collaborate
Physical Education Staff	86.6%
Health Education Staff	84.5
Mental Health or Social Services Staff	84.7
Nutrition of Food Service Staff	84.5
School Health Council, Committee or Team	79.4

School health services staff collaborate with a variety of other staff members on a regular basis. School health staff most frequently collaborate with physical education staff and least frequently collaborate with the School Health Council, Committee or Team.

Table 19: Collaboration of School Health Services Staff with Colleagues to Implement Health Programs: Percent Response

<i>Type of Program</i>	Percent That Collaborate
Alcohol or other drug use prevention	52.6%
Asthma	74.5
Emotional and mental health	70.4
Foodborne illness prevention	55.7
HIV prevention	53.1
Human sexuality	56.7
Injury prevention and safety	86.7
Physical activity and fitness	81.6
Pregnancy prevention	36.1
STD prevention	35.4
Suicide prevention	49.0
Tobacco-use prevention	50.0
Violence-prevention (e.g. bullying, fighting, homicide)	72.4

School health service staff collaborated with other school staff to implement a variety of programs. The most common collaborations involved injury prevention and safety, physical activity and fitness, and asthma. Health services staff collaborate less frequently with others to develop programs in tobacco-use prevention, suicide prevention, pregnancy prevention and STD prevention.

Table 20: Involvement of School Health Service Staff in Teaching Percent Response

<i>In my district, school health staff is involved in teaching health promotion or prevention in the following areas:</i>	Never	Sometimes	Always	Don't Know
Nutrition/Physical Activity	13.3%	75.5%	11.2%	0%
Human Sexuality Education	26.5	55.1	18.4	0
Disease Prevention	8.2	58.2	33.7	0
Injury Prevention	11.5	58.3	30.2	0
Substance Abuse Prevention	27.6	62.2	8.2	0
Other	47.4	24.6	8.8	29.2

School health service staff members most commonly describe themselves as sometimes involved in teaching a variety of specific content areas. Other content areas taught by school health service staff include hygiene, puberty education, mental health and bullying issues, asthma prevention, and handling stress/anxiety.

Demographics

Demographic data was collected from survey respondents and is shown below.

Table 21: District Reference Group (DRG) of Responding Districts Percent Response

District Reference Group (DRG)	Percent of Respondents	Percent of Districts in CT
A	4.2%	5.3%
B	16.7	12.4
C	19.4	17.8
D	18.1	14.2
E	11.1	20.7
F	6.9	10.1
G	15.3	10.1
H	4.2	5.3
I	4.2	4.1

Respondents represented all DRGs in Connecticut. Percentages of respondents from each DRG are generally reflective of the number of districts in the state from that DRG.

Table 22: Demographic Location of Responding Districts Percent Response

Demographic Location	Percent
Urban	13.5%
Suburban	59.4
Rural	27.1

Between half and two-thirds of respondents represented suburban districts. Over thirteen percent of respondents were from urban districts and slightly more than one quarter represented rural districts.

Approximately ninety-seven percent of all respondents were from public school districts. One percent were charter schools and two percent were from Regional Educational Service Centers.

Ninety-two participants responded that they provided services to public schools and 44 districts provided services to private, non-profit schools. It should be noted that a number of respondents did not answer the last question so the calculation of percentages was not completed.

Open-Ended Questions

Areas commented on most frequently by respondents in open-ended questions are summarized below.

I. Health Services Provided to Students in the District:

Survey respondents commented on a number of areas including the increasing demand for school health services, especially in the areas of mental health and dental health. Common comments revolved around the following topics:

- School nurses are often first medical assessors of home injury and illness due to working parents, and neglect.
- Increase in the number of students with anxiety, depression and panic attacks due to high divorce rates and use of recreational drugs at high school level.
- Scoliosis screenings better left to PCPs as they waste time in school and yield few results.
- Increase in need for concussion management in schools and related follow-up communications with teachers and parents.
- Increasing complexity of healthcare needs of students and need for additional staffing
- Increased student enrollment and complexity of medical issues not being met with increases in nursing staff.
- More nurses want better communication with pediatricians.
- Increased demand for dental screenings and programs in schools.
- At the private schools, every school needs a dedicated fulltime nurse.

Districts requested assistance from the CSDE in a number of areas. Respondents commonly cited the following needs:

- More continuing education opportunities for nurses through CSDE.
- Less complicated standardized forms for parents.
- Improve the consistency of pediculosis screening policies, and PE excuse formats throughout the state.
- Create mandate whereby PCPs and dentists are required to accept a certain percentage of HUSKY recipients.
- Provide lists of healthcare professionals who will help uninsured students find vision and orthopedic care. Also a list of HUSKY providers.
- One full school day per week where Social Worker is on premise in all schools.
- Offer more resources on how to address mental health, and attendance issues.

II. Student Health

Student health concerns most frequently mentioned by respondents included:

- Continually increasing levels of behavioral/mental health challenges in classrooms.
- Inadequacy of student health insurance tracking systems in some districts.

- Physical inactivity levels at home and school could be alleviated through more quality active time at school.
- Lack of education for parents in identifying and navigating healthcare issues and processes.
- Inconsistency of delivery of HUSKY information to parents
- Length of time necessary to activate HUSKY, or families being denied service.
- Lack of standardized protocols for reporting and supporting students with behavioral or mental health issues.
- Increase in daily medications/pain meds, but slight decrease in number of 9-1-1 calls.

Districts requested assistance from the CSDE in a number of areas related to student health. Respondents most frequently commented on following needs:

- Standardized checklists could help refer students for behavioral/mental health support, and provide better reporting to administration.
- Create recommended guidelines related to obesity and asthma activity levels.
- Physical education and nutrition education should not be cut or reduced from any budget.
- More public service announcements to remind parents of physicals and immunization updates.
- Implement mandated public school health services in private, non-profit schools.

III. Health Coordination/Education

As with previous years, comments varied as to the degree and nature of school nurses' involvement in teaching health topics. Some respondents described their involvement in teaching as being provided on an "as needed" basis to students while others described a more consistent degree of collaboration with teachers in the classroom. In addition to teaching topics related to nutrition/physical activity, human sexuality, disease prevention, injury prevention, and to a lesser degree, substance abuse, nurses described involvement in teaching about personal hygiene, specifics to puberty education, stress/anxiety management, conflict resolution, and dealing with asthma. Some respondents continued to cite a need for improved communication between health services and other school staff, particularly in the IEP/PPT process.

IV. Staffing of Health Services in Districts:

Districts continued to recognize the need for improved staffing of health services. The additional need for staffing support was considered particularly acute in the private, non-profit schools. As with previous years, the concern most frequently stated was the need for additional qualified staff to provide services to an increasing number of students with complex medical and mental health needs. Many respondents suggested that staffing should be based on acuity of the school more than budget guidelines. Several respondents cited a need for more substitute nurses, while others addressed the need for more nursing staff at the secondary level to support the social/emotional complexity of adolescent issues requiring more time and energy.

Districts requested assistance from the CSDE in 2012-2013 primarily related to the staffing of health services in their districts. Respondents frequently described the following needs:

- Create an official state mandate to improve state-wide nurse-to-student ratios with consideration provided for schools with the highest acuity, and particularly at the secondary level.
- More clerical support staff in nursing offices.
- Employ specialist teams in each district for on-site PT, OT, Speech and ESL evaluations.

- Guidance on ‘safe’ staffing due to high volume of student visits including those with acute asthma, diabetes, or in need of tube feedings.

All open-ended comments have been provided to the CSDE and are available upon request.

Data Strengths and Limitations

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

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

- Extremely accurate data collected from the School Health Services Survey;
- Data received from a variety of types of schools including public and private non-profit schools, schools in each DRG, and urban, rural and suburban schools;
- A good response rate of 80.5 percent;
- Ten years of data collection;

However, as with any research study, data collection and the use of data have some limitations. These limitations include:

- Differential response rates per question and a high percentage of questions with missing data. Specifically, districts often skip a question 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 box may lead to the data being skewed in a positive direction.
- Use of one survey 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 on a yearly basis to reflect the changing needs and interests of the CSDE and participating districts. As a result of changes, some data can be tracked longitudinally. However, some data are not available for each of the nine years of data collection.

Conclusions

Overall, school health services staff continue to have a positive perception of the status of health services in Connecticut districts. As with previous years, survey respondents were generally positive as indicated by the quantitative survey results and the number of comments on the survey. Data resulting from the ninth year of survey administration were examined by the CSDE and EDUCATION CONNECTION staff.

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

- Optional services provided by participating districts to public school students generated slightly over 10,000 referrals to outside providers. These numbers suggest a continued need for, and interest in screenings in these areas;
- Students in private, non-profit schools served by responding districts were slightly more likely than their public school counterparts to receive body mass index screening services during 2012-2013; They were as likely to use other optional services;
- In general, nurse-to-student ratios decrease as grade levels increase. At the secondary school level, approximately 27% of respondents identified that only one nurse represented up to 750 students.

- A wide range of health care specialists are employed by districts. The most common specialists include assistive technology specialists and mental health consultants.
- Connecticut school districts are caring for children with a wide range of physical, developmental, behavioral and emotional conditions;
- Connecticut districts have over 14,000 students with documented dietary needs including primarily nut, wheat, milk and shellfish allergies.
- Districts regularly prescribe emergency medications as needed including glucagon, diastat and epinephrine.
- As with last year's findings, Connecticut nurses spend an average of 28.9 hours per week on routine nursing interventions.
- Districts consistently report a need for more mental health services and programs that promote a healthy lifestyle;
- During 2012-2013, 1,317 9-1-1 calls were made for students in reporting public and private, non-profit schools. For staff and other adults, 294 9-1-1 calls were tracked by public and private, non-profit schools.
- In responding districts, 5228 public school students and 175 private school students were uninsured during 2012-2013.
- A wide variety of software is used by Connecticut districts to collect and record school health information. Almost 12 percent of responding public districts and 57 percent of responding private, non-profit districts reported having no software;
- Many Connecticut school health staff members report some involvement in teaching topics which include: injury prevention, violence prevention, asthma control, sensitivity to food-allergies in others, and dental health. Some school health staff report collaborating with teachers to facilitate health-related topics.
- Districts provided a wide range of suggestions for services that would increase district satisfaction with the provision of health services to students. District suggestions include fiscal and non-fiscal resources, information on available resources, expanded communication with state agencies, clinicians and parents, and more access to training for staff.

Recommendations for Future Data Collection

A number of specific recommendations for the CSDE to consider for future survey administration are as follows:

- Survey data collection provided excellent information regarding a wide range of issues related to school health services. However, there were some concerns mentioned by respondents regarding the amount of time necessary to complete the survey and the need to ensure that data collected is beneficial to individual schools throughout the state.
- The use of numerical data regarding numbers of students and referrals requires the districts to provide information in each category to allow for accurate calculations of percentages between categories. To maximize the accuracy of the information provided, it is critical that a high response rate be achieved for survey completion and that respondents complete each question on the survey. During 2012-2013, an 80.5 percent response rate was achieved. However, it is noted that missing data for individual items continues to be an issue and may cause potential bias in the resulting data. It is recommended that future data collection continue to include activities designed to increase the overall survey response rate and ensure that all survey questions are completed by districts.

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