



Connecticut State Department of Education

# Health Services Program Information Survey

Final Report

October 25, 2004

Developed for:

**The Connecticut State Department of Education**

By

Dr. Mhora Newsom-Stewart  
Program Evaluation and Planning Specialist

Contact:

**EDUCATION CONNECTION**  
P.O. Box 909  
355 Goshen Road  
Litchfield, CT 06759-0909  
Phone (860) 567-0863

Contact:

**Connecticut State Department of Education**

Ms. Cheryl Carotenuti, Health Promotion Consultant  
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, as part of its ongoing efforts to support and expand school health services provided to Connecticut students, has initiated the development of a data collection process for school health services. This process is designed to assist the Department 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 Connecticut State Department of Education commissioned 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 State Department of Education with Dr. Mhora Newsom-Stewart, Evaluation and Planning Specialist at EDUCATION CONNECTION. Dr. Newsom-Stewart has thirteen years experience in the development and implementation of evaluation and planning processes in educational organizations. Dr. Newsom-Stewart developed the survey for data collection after a review of the professional literature related to school health services. The Connecticut State Department of Education and the Connecticut State Health Records Committee assisted Dr. Newsom-Stewart to adapt the survey development process as necessary to meet the needs of school districts and the Connecticut State Department of Education.

Ms. Cheryl Carotenuti and the Connecticut State Health Records Committee 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. Ms. Cheryl Carotenuti and the Connecticut State Health Records Committee 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, the survey was revised as necessary prior to full-scale implementation in Spring, 2004.

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, educational reference group (ERG) and name and identification number of the school district. Open-ended questions allowed respondents to comment freely on their expectations, needs and satisfaction. The survey may be found online at [www.educationconnection.org](http://www.educationconnection.org) in the subdirectory "Survey and Questionnaire Services." Survey questions, administration format and sampling procedure were viewed as a pilot process. It was expected that, depending upon the results of the first full-scale administration, the survey format and administration process would be revised as necessary for subsequent data collection efforts.

The survey was incorporated into the EDUCATION CONNECTION website to increase ease of completion by respondents. The Coordinator of School Nursing 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 (SPSS). Frequencies and means were obtained on all data as appropriate. Comparisons between school districts in

different Educational Reference Groups (ERGs) were made using ANOVAs or Cross-Tabulations and the Chi Square statistic as appropriate. For all inter-ERG comparisons, data were grouped by ERG as follows:

High ERG = Districts in ERGs A, B and C  
Medium ERG = Districts in ERGs D, E and F  
Low ERG = Districts in ERGs G, H and I

### ***Profile of Districts Who Participated in the Data Collection Process:***

A total of one hundred sixty nine (169) questionnaires were distributed with one hundred and fourteen (114) received in time to be analyzed, yielding a response rate of sixty seven percent (67%).

Respondents were approximately equally distributed across ERGs. There were fewer respondents from ERG I than from other ERGs. The majority of respondents (96%) were public school districts with an additional 1% being charter schools and approximately 3% of respondents working for a Regional Educational Service Center (RESC). The majority of respondents provided services to public schools (91%) and 38% provided services to private, non-public schools.

## **Conclusions**

### ***School Health Services:***

Overall, Connecticut school district staff appear to have a positive perception of the status of health services in Connecticut school districts. Survey respondents were generally positive as indicated by the quantitative questionnaire results and the number of comments on the survey questionnaire. Data resulting from the first year of survey administration were examined by the Connecticut State Department of Education and EDUCATION CONNECTION staff and lead to the following conclusions and recommendations regarding school health services in Connecticut:

- Connecticut school districts offer a range of screening services. Non-mandated screenings offered by districts include body mass index screening, pediculosis screening, nutrition screening and mental health consultations. Mandated screenings include vision, scoliosis, hearing and health assessments. Overall, districts reported that these screenings result in a number of students each year being referred to an outside provider for follow-up treatment. It can be hypothesized that these referrals result in treatment of underlying conditions for students and therefore to an increased ability to learn and improved student outcomes.
- Of the non-mandated screenings, nutrition screening and mental health consultations are offered by approximately 50% or more of districts. In districts offering these services, the procedures are generally provided to a percentage of students. It can be expected that the common provision of these non-mandated services indicates a relatively high need for these screenings. It can also be hypothesized that this same need exists in districts not offering these services.
- Data indicate that 88% of responding districts do not provide dental services. State and national literature suggest that oral health needs are currently affecting a large proportion of our students.
- Data indicate that, in responding school districts, nurse-to-student ratios decrease as grade levels increase. Additionally, survey respondents commented on the need for the Connecticut State Department of Education to set recommended nurse-to-student ratios.
- Data indicate that 23% of districts have less than 1 FTE registered nurse available in each school.
- Data suggest that Connecticut school districts are caring for children with a wide range of physical, developmental, behavioral and emotional conditions. The most common conditions reported were asthma, food allergies, speech defects, ADHD/ADD, developmental delays and other behavioral/emotional conditions. It can be expected that the high incidence of these conditions among

Connecticut students will increase the responsibilities of school nursing staff. Additionally, it can be expected that these conditions may impact the academic performance of children.

- The majority (80%) of respondents reported that 76-100% of students that receive a nursing intervention return to the classroom within one half hour. It is expected that, once the condition prompting the child to seek a nursing intervention is addressed, the child will be better able to learn upon returning to the classroom. However, there is currently little empirical data to support this link.
- Six percent of districts reported that 26-50% of students did not have health insurance. It can be expected that these students may have a number of health issues that are not addressed as a result of the lack of health insurance.
- Almost one quarter (22%) of districts do not provide school-based outreach necessary to enroll students in HUSKY.
- Districts provided a wide range of suggestions for services to increase district satisfaction with provision of health services to students. District suggestions include fiscal resources, information on available resources, non-fiscal resources, communication with state agencies and training for staff.

### **Recommendations for Future Data Collection and Program Expansion in the State of Connecticut**

#### ***Future Data Collection:***

It is recommended that the State of Connecticut:

- Develop strategies to collect data on the outcome of student referrals and explore strategies to link these outcomes to improved student learning.
- Continue to examine the need for health services across the state and to understand barriers and opportunities in districts affecting the provision of these services.
- Explore strategies to assess the impact of nursing interventions on student learning.
- Measure the impact of special health care conditions on academic performance and other student outcomes.
- Develop strategies to assess the impact of a lack of health insurance on student academic performance,

#### ***Program Expansion:***

It is recommended that the State of Connecticut:

- Develop strategies to assist districts to address the dental needs of Connecticut students.
- Explore strategies to assist school nurses to address the needs of children with special health care needs.
- Develop strategies to assist districts to meet the learning needs of students without health insurance.
- Develop strategies to maximize the ability of districts to provide health services throughout Connecticut.

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### **Bibliography**

## **Introduction**

EDUCATION CONNECTION submits this report to the Connecticut State Department of Education in fulfillment of the task to conduct a needs assessment to identify the status of school health services in Connecticut through the administration of the Health Services Program Information Questionnaire. Funding for this project was provided by the Connecticut State Department of Education.

The survey development and administration process was structured to ensure the participation of stakeholders in all aspects of data collection, planning, and implementation. The Health Services Program Information Questionnaire was developed by EDUCATION CONNECTION in partnership with Ms. Cheryl Carotenuti, Health Promotion Consultant for the Connecticut State Department of Education, and in collaboration with the Connecticut State Health Records Committee. The questionnaire will be used to monitor the characteristics of and trends in school health services in Connecticut school districts at the elementary, middle/junior school and senior high school levels.

## **Theoretical Framework**

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

## **Review of the Literature**

A brief summary of national literature regarding the importance of school health services and student health to student academic performance is provided below. A detailed review of the literature was previously presented and is not repeated here (Newsom-Stewart, 2003).

### ***Academic Performance and Health***

There is a growing body of evidence illustrating the crucial link between student health and the ability of students to learn and achieve key academic outcomes. The good physical and mental health of school children is essential if children are to participate in educational programs and services, and if children are going to be able to concentrate and learn. Overall, the literature indicates that each of the following aspects of a child's life affects academic performance:

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

### ***Status of Student Health***

It is critical to understand the current status of child and adolescent health prior to the implementation of programs designed to increase academic achievement. Additionally, in order to narrow the achievement gap and meet standards outlined in the *No Child Left Behind Act* (2001), it is crucial to understand the health status of our youth and to ensure that academic improvement programs are closely linked to health improvement programs.

National:

National research identifies four primary causes of morbidity for individuals ages 5-24: motor vehicle crashes, homicide, suicide and other injuries (National Center for Chronic Disease Prevention and Health Promotion, 2004). Additionally, every year nearly one quarter of all new HIV infections, one quarter of all new infections with other sexually transmitted diseases, and nearly one million pregnancies occur among our nation's teenagers. Only three types of behavior contribute to the mortality and morbidity previously described. These include the following: behaviors that result in unintentional and intentional injuries, alcohol and other drug use, and sexual behaviors. Six types of behavior cause the most serious problems that afflict the United States adolescent population. These behaviors include:

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

In addition to these established behaviors, there are emerging health issues beginning to affect the young people in our nation's schools. These issues include the following: food safety, asthma, skin cancer, terrorism, Type 1 and Type 2 diabetes, and dental disease.

Connecticut:

Existing Connecticut data indicates that the same factors affecting our nation's children affect our own youth. Key statistics on relevant areas, taken from *Connecticut Voices for Children, the State of Connecticut's Youth* (Carry and Cooke, 2003), are listed below:

- Alcohol & Drug Use: Half of Connecticut's youth consumed alcohol in the past month, with 28% of these binge drinking. Over one quarter (26%) used marijuana during the past month.
- Injury & Violence (including suicide): For the class of 2001, three hundred and nineteen out of every 100,000 children were arrested for violent crimes. Fourteen percent (14%) of 7-10<sup>th</sup> graders carried a weapon in the past month. One third (33%) were involved in a physical fight during the past year, thirteen percent (13%) were victims of physical dating violence and eight percent (8%) attempted suicide in the past year. There were 30 deaths from accidents, homicide or suicide per 100,000 teens ages 15-19 years old. Over ten percent (11%) of youth attacked someone with the intention of hurting them in the past month. In 1998, suicide was the third highest cause of death among youth ages 15 to 19.
- Nutrition: Obesity is on the rise in Connecticut. In 1999, nine percent (9%) of Connecticut high school students were obese.
- Physical Activity: Student performance on the President's Physical Fitness test is an indicator of adequate exercise and fitness. In 2001-2002, approximately one third of all Connecticut students passed each of these four tests.
- Sexual Behaviors: The teen birth rate was thirty two (32) births per one thousand (1000) individuals in 2000. Nearly one third of Connecticut high school students reported being sexually active. Sixteen percent (16%) reported having sexual intercourse with four or more partners during their lifetime and nine percent (9%) reported sexual intercourse for the first time before age 13.

- Tobacco Use: Nearly one third of Connecticut high school students are current cigarette smokers. Overall, fifteen percent (15%) of youth reported smoking nearly every day. Ten percent (10%) of middle school students and twenty six percent (26%) of high school students reported being cigarette smokers.
- Asthma: In Connecticut, the hospitalization rate for asthma is twenty one cases per ten thousand individuals. In 2001, the Connecticut Department of Public Health estimated that approximately nine percent (8.9%) of Connecticut children under the age of 18 have asthma (Flessner, Adams & Kertanis, 2001).
- Other Health Issues: Thirteen percent (13%) of Connecticut children have inadequate prenatal care and almost eight percent (7.6%) of babies born in Connecticut experience low birth weight.
- Oral Disease: Research suggests that there is an oral health care crisis in Connecticut (Shaw, 2003). Oral disease has been linked to heart disease, strokes, diabetes, cancer and low-birth-weight babies.
- Mental Health Issues: Many Connecticut youth report that they sometimes feel sad, lonely or depressed. In 2000, approximately one quarter (24%) of 7<sup>th</sup> and 8<sup>th</sup> grade students and one quarter (26%) of 9<sup>th</sup> and 10<sup>th</sup> grade students agreed or strongly agreed with the statement that “I feel lonely” and fifteen percent (15%) of students agreed that “I feel sad most of the time.” Seventeen out of one thousand youth have been abused. Child abuse and neglect reports have more than doubled since 1990 and quadrupled since 1970. More than eight out of ten (8/10) substantiated reports involved children under the age of ten and thirty six percent (36%) involved physical or sexual abuse. Connecticut’s rate of child maltreatment is the sixth highest in the nation.

Geballe (2003) estimates based on national figures that about 157,000 Connecticut children and youth out of a total population of 786,000 children currently have mental disorders. Of these, 71,000 have severe impairments and approximately 39,000 are extremely functionally impaired.

### ***Status of School Health Services***

All data below is taken directly from the National Center for Chronic Disease Prevention and Health Promotion, 2004 ([www.cdc.gov/nccdphp/dash/shpps/factsheets/fs01\\_health\\_services.htm](http://www.cdc.gov/nccdphp/dash/shpps/factsheets/fs01_health_services.htm)).

#### Staffing:

School health services are instrumental in addressing these issues. Nationally,

- 72.6% of states, 75.0% of districts and 77.1% of schools have a person who oversees or coordinates school health services.
- 16.2% of schools have a school physician who provides health services to students.
- 76.8% of schools have a school nurse who provides health services to students at the school on at least a part-time basis.
- 52.9% of schools have the recommended nurse-to-student ratio of one nurse to every seven hundred and fifty students (1:750) or better.
- 32.9% of schools have part-time or full-time health aides who help provide health services to students.

Medication Administration:

The administration of medication is a crucial component of school health services. Nationally,

- School faculty and staff are allowed to administer prescription drugs to students with appropriate documentation in 92.0% of states, 94.3% of districts and 97.0% of schools.
- Students are permitted to self-medicate at school in 93.8% of states and 83.1% of districts.
- Students are allowed to self-medicate with prescription inhalers in 68.1% of schools, insulin or other injected medications in 41.5% of schools, epinephrine in 33.5% of schools, other prescription medication in 20.4% of schools and over-the-counter medications in 19.7% of schools.

Role of School Health Services:

In part as a result of the numerous social and educational changes impacting schools during the past decades, the role of the school nurse has changed drastically during the past ten years. The American Academy of Pediatrics outlines four goals of a school health program that relate directly to the health service component (American Academy of Pediatrics, 1993). These include:

- Ensure access to primary health care
- Provide a system for dealing with crisis medical situations
- Provide mandated screening and immunization monitoring
- Provide a process for identification and resolution of students' health care needs that affect educational achievement

These goals focus on prevention and early intervention. The role of the school nurse within a school health program is critical. The school nurse provides acute, chronic, episodic and emergency health care.

As a result of the Individuals with Disabilities in Education Act (IDEA), the school nurse now provides care to students with a wide range of physical and emotional disabilities. Students without disabilities are also requiring more care. The increasing numbers of students with diabetes or asthma involve the nurse in all aspects of their care. School nurses provide educational services to students related to student health on both an individual and group basis.

This increased demand on the services of a school nurse has resulted in an inadequate supply of school nurses nationally. There are 86,000 public schools in the United States with only approximately 60,000 school nurses available to meet the needs of 46 million children, 20 million of which have chronic medical conditions (New York Teacher, 1999).

The roles and responsibilities undertaken by the school physician vary by the needs and resources of the school. Often, these individuals work closely with school nurses, social workers, health educators, mental health professionals, administrators and food service directors and are involved in program planning, violence prevention, training of teachers and sports coaches in emergency care and provision of direct services to students.

Guidelines and Ratios:

There are no national requirements for school nurse-to-student ratios. State law regulates this ratio, with ratios varying by state. The National Association of School Nurses recommends the following ratios:

- 1:750 in general populations
- 1:250 in mainstreamed populations
- 1:125 in severely handicapped populations

### Health Care Provision in School Districts:

School districts use a variety of staffing types including nurses, physicians and non-medically licensed personnel, including teachers, paraprofessionals and office staff, to provide nursing services within the school setting. Nursing care activities performed are regulated by state laws.

### Effectiveness of School Health Services:

School Health Services have been shown to effectively improve student health in a number of areas. School nursing interventions that target students with high absenteeism rates are effective in decreasing the number of days absent from school (Long, Whitman, Johansson, Williams & Tuthill, 1975). Schools with smaller school nurse-to-student ratios have been shown to have lower absentee rates and higher graduation rates.

School nurse interventions targeted to specific populations are particularly effective (Maughan, 2003). This success has been identified for interventions targeted to children with asthma (Persaud *et al.*, 1996), depression and chronic tension headaches (Lamb, Puskar, Sereika & Corcoran, 1998; Larsson & Carlsson, 1996), smoking and alcohol consumption (Werch, Carlson, Pappas & DiClemente, 1996).

Nursing interventions also indirectly impact student achievement. Smaller school nurse-to-student ratios correlate with a decreased number of violent deaths among teenagers and a decrease in percentage of births to teenage mothers, and positively correlate to higher graduation rates. Nursing interventions targeted to parents of children with asthma help parents manage asthma more efficiently (Perry & Toole, 2000) and ensure adequate immunization of kindergarteners.

It is clear that the implementation of school health services varies according to the needs, interests and limitations of a district, state or community. Implementation of successful health services is becoming progressively more complicated as a result of a series of societal changes. These changes include the following: inclusion of children with special medical needs, an increase in the incidence of chronic diseases such as asthma and diabetes and the progressively larger role the school district plays in addressing societal issues, such as drug use and other high risk behaviors. These changes are affecting our school districts and our students on a national and statewide basis. It is crucial that Connecticut develop and implement strategies to ascertain the status of school health services in our districts, to obtain data necessary to support our districts in addressing student needs and to monitor state and district progress in the provision of health services to students.

## **Survey Research Process**

### ***Survey Development***

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 State Department of Education with Dr. Mhora Newsom-Stewart, Evaluation and Planning Specialist at EDUCATION CONNECTION. Dr. Newsom-Stewart has thirteen years experience in the development and implementation of evaluation and planning processes in educational organizations. The Connecticut State Department of Education and the Connecticut State Health Records Committee assisted Dr. Newsom-Stewart to adapt the survey development process as necessary to meet the needs of school districts and the Connecticut State Department of Education.

Ms. Cheryl Carotenuti and the Connecticut State Health Records Committee 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. Ms. Cheryl Carotenuti and the Connecticut State Health Records Committee approved all aspects of survey development before survey administration. The survey was pilot tested in Spring, 2003. Based on the result of the pilot test, the survey was revised as necessary prior to full-scale implementation in Spring, 2004.

Scales were developed to identify perceptions of the importance, satisfaction or frequency of an item using a Likert-type scale. Where appropriate, participants were provided an option for each item of "Don't Know/Need More Information." Demographic information was collected including type of district, types of districts served by the respondent, educational reference group (ERG) and name and identification number of the school district. Optional information was requested, including the name and contact information of the individual completing the survey. Open-ended questions allowed respondents to comment freely on their expectations, needs and satisfaction. The survey may be found online at [www.educationconnection.org](http://www.educationconnection.org) in the subdirectory "Survey and Questionnaire Services". Survey questions, administration format and sampling procedure were viewed as a pilot process. It was expected that, depending upon the results of the first full-scale administration, the survey format and administration process would be revised as necessary for subsequent data collection efforts.

In addition to the pilot test and the use of survey questions administered by other states, it is expected that thorough examination of the survey conducted by the State Department of Education and the Connecticut State Health Records Committee should maximize reliability. Survey reliability on scale results is calculated using Cronbach's Alpha. Although no categorical analyses were conducted, reliability coefficients for scale items are provided, as appropriate, to assist the reader's understanding. Reliability coefficients measure the extent to which questions in a category measure the same concept. A reliability coefficient of .7 or above is generally considered sufficiently reliable.

**Table 1: Health Services Program Information Survey: Reliability Coefficient**

| Survey Category                        | Coefficient |
|--|-------------|
| Satisfaction with Services in District | .84         |

Statistical examination of validity requires factor analysis of scale results. As the majority of this questionnaire collected factual, categorical data, statistical examination of validity was not appropriate. Questionnaire 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 through a review of a panel of experts. This questionnaire was developed in close partnership with a state panel of experts on the Connecticut State Health Records Committee. It is expected that the questionnaire is sufficiently valid and reliable.

### ***Survey Administration***

The survey was incorporated into the EDUCATION CONNECTION website to increase ease of completion by respondents. Prior to survey administration, the State Department of Education introduced the survey to school nursing supervisors at the annual nursing supervisors meeting. The Connecticut State Department of Education Consultant, Ms. Cheryl Carotenuti, introduced participants to the purpose and history of the questionnaire and shared the survey online with the group. Ms. Carotenuti answered questions concerning the practicalities and state expectations for survey completion.

The State Department of Education mailed a letter of intent to each Superintendent of Schools in Connecticut informing that individual that the Coordinator of School Nursing in the district, or the equivalent, would shortly be receiving a letter requesting that they complete the questionnaire. A follow-up letter providing detailed instructions for survey completion was sent to each Coordinator of School Nursing.

The Connecticut State Department of Education and EDUCATION CONNECTION responded to questions and concerns regarding the survey as they arose. A total of one hundred sixty nine (169) questionnaires were distributed with one hundred and fourteen (114) received in time to be analyzed, yielding a response rate of sixty seven percent (67%).

### ***Data Analysis Methodology***

Questionnaire results were analyzed statistically using the Statistical Package for the Social Sciences (SPSS). Frequencies and means were obtained on all data as appropriate. Inter-ERG comparisons were made using ANOVAs or Cross-Tabulations and the Chi Square statistic as appropriate. For all inter-ERG comparisons, data were grouped by ERG as follows:

High ERG = Districts in ERGs A, B and C  
 Medium ERG = Districts in ERGs D, E and F  
 Low ERG = Districts in ERGs G, H and I

## **Results**

### ***Tables of Results***

The response frequency and mean response for each question is listed below in decreasing order of mean. Respondents who answered “Don’t Know/Need More Info” were not included in the analysis. Mean scores can be understood by viewing the first item in the scale (“Strongly Disagree” or “Very Unimportant”) as having a score of 1 with the last item in the scale (“Strongly Agree” or “Very Important”) as having a score of 5. The scale mid-point, (“Neither Disagree nor Agree” or “Neither Unimportant nor Important”) has a score of 3. On scales without a mid-point, a mean score is not calculated.

**Table 2: Percent of Student Body Receiving Service Annually: Percent Response**

|                                   | Not Offered | Percent of Student Body Receiving Service in Districts Offering the Service |       |        |        |        |        |        |         |
|-----------------------------------|-------------|---|-------|--------|--------|--------|--------|--------|---------|
|                                   |             | 0-5%  | 6-10% | 11-15% | 16-20% | 21-25% | 26-50% | 51-75% | 76-100% |
| <b>Body Mass Index Screening</b>  | 64.2%       | 63.2%   | 2.6%  | 5.3%   | 2.6%   | 5.3%   | 7.9%   | 5.3%   | 7.9%    |
| <b>Pediculosis</b>                | 1.8         | 30.3  | 13.8  | 11.9   | 5.5    | 5.5    | 19.3   | 7.3    | 6.4     |
| <b>Nutrition Screening</b>        | 53.3        | 81.6  | 6.1   | 2.0    | 2.0    | 2.0    | 2.0    | 4.1    | 0       |
| <b>Mental Health Consultation</b> | 36.8        | 56.7  | 21.7  | 3.3    | 0      | 6.7    | 6.7    | 1.7    | 3.3     |

Data suggest that a large number of districts do not offer these services. Of the districts that offer the service, the majority provide the service only to a small percent of the population.

Due to the large number of categories, the Chi Square statistic was not computed.

**Table 3: Of Students Receiving Service, Percent Referred to an Outside Provider as a Result: Percent Response**

| Service Provided           | 0-5%   | 6-10% | 11-15% | 16-20% | 21-25% | 26-50% | 51-75% | 76-100% |
|----------------------------|--------|-------|--------|--------|--------|--------|--------|---------|
| Body Mass Index Screening  | 100.0% | 0%    | 0%     | 0%     | 0%     | 0%     | 0%     | 0%      |
| Pediculosis                | 84.8   | 6.5   | 5.4    | 1.1    | 1.1    | 0      | 0      | 1.1     |
| Nutrition Screening        | 90.2   | 7.3   | 0      | 0      | 0      | 0      | 0      | 2.4     |
| Mental Health Consultation | 67.9   | 7.5   | 1.9    | 11.3   | 1.9    | 1.9    | 5.7    | 1.9     |

Of the students receiving each of the above services, data suggest that the vast majority of students are not referred to an outside provider.

Due to the large number of categories, the Chi Square statistic was not computed.

**Table 4: Of Students Receiving Mandated Service, Percent Referred to an Outside Provider as a Result: Percent Response**

**Percent of Students Referred to Outside Provider**

| Service Provided             | 0-5%  | 6-10% | 11-15% | 16-20% | 21-25% | 26-50% | 51-75% | 76-100% |
|------------------------------|-------|-------|--------|--------|--------|--------|--------|---------|
| Mandated Vision Screening    | 38.5% | 44.0% | 7.3%   | 2.8%   | 3.7%   | 1.8%   | 1.8%   | 0%      |
| Mandated Scoliosis Screening | 92.5  | 3.7   | .9     | 1.9    | .9     | 0      | 0      | 0       |
| Mandated Hearing Screening   | 86.8  | 10.4  | .9     | .9     | .0     | .9     | 0      | 0       |
| Mandated Health Assessments  | 72.8  | 4.9   | 2.5    | 2.5    | 1.2    | 3.7    | 1.2    | 11.1    |

Of respondents that offer the services, the majority of respondents referred either 0-5% or 6-10% of students to an outside provider as a result of the screenings. This suggests that mandated screenings are identifying students in need of health assistance.

Due to the large number of categories, the Chi Square statistic was not computed.

**Table 5: Nurse-to-Student Ratio: Percent Respondents**

|                  | One nurse to 250-500 students | One nurse to 501 to 750 students | One nurse to more than 750 students |
|------------------|-------------------------------|----------------------------------|-------------------------------------|
| Elementary level | 68.0%                         | 26.2%                            | 5.8%                                |
| Secondary level  | 29.5                          | 36.8                             | 33.7                                |

The majority of Connecticut school districts state they have a nurse-to-student ratio of 1:250-500 at the elementary level. At the high school level the nurse to student ratio is much more variable with approximately one third of districts having a ratio in each category. From the open-ended responses, the school nurses requested guidelines from the State Department of Education for nurse-to-student ratio in the school setting.

There were no significant between ERG group differences identified.

**Table 6: Hours of Service of Medical Advisor: Percent Respondents**

|   | 0-10 hours | 11-20 hours | 21-30 hours | 31-40 hours | More than 40 hours |
|---|------------|-------------|-------------|-------------|--------------------|
| How many hours of service does your district medical advisor provide to your district each month? | 90.2%      | 6.9%        | 2.0%        | 1.0%        | 0%                 |

Data suggest that the majority (90.2%) of Connecticut school districts employ a medical advisor from 0-10 hours per week. There were no significant differences between ERG groups identified.

**Table 7: Funding Source of Medical Advisor: Percent Respondents**

|                | Board of Education | Board of Health | Public Health/VNA | Grant | Other |
|----------------|--------------------|-----------------|-------------------|-------|-------|
| Funding Source | 86.5%              | 6.7%            | 0%                | 0%    | 6.7%  |

The vast majority (87%) of respondents stated that their medical advisor was funded by the Board of Education. The Chi Square statistic was not computed due to the number of categories with zero responses.

**Table 8: Medical Advisor: Specialty Areas  
Percent of Respondents in Each Category**

| Specialty         | Percent Yes |
|-------------------|-------------|
| Pediatrics        | 64%         |
| Family Medicine   | 26          |
| Adolescent Health | 25          |
| Internal Medicine | 15          |
| General Medicine  | 14          |
| Public Health     | 5           |
| Orthopedics       | 0           |
| Sports Medicine   | 0           |
| Other             | 0           |

Respondents stated that district medical advisors had a wide range of specialties. Medical advisors were most likely to specialize in pediatrics, followed by family medicine and adolescent health.

**Table 9: Funding Sources of Dental Service: Percent Responses**

|                  | Board of Education | Board of Health | Public Health/VNA | Grant | Other |
|------------------|--------------------|-----------------|-------------------|-------|-------|
| Percent Response | 16.7%              | 25.0%           | 0%                | 25.0% | 33.3% |

Dental services in responding districts were funded by a wide range of sources. Due to the categories with zero responses, no inter-ERG comparisons were conducted.

**Table 10: Staffing Levels: Percent Response**

|   | <1 FTE | 1 FTE | >1 to 2 FTE | >2 FTE |
|---|--------|-------|-------------|--------|
| FTE registered nursing staff available in EACH school         | 23.1%  | 58.3% | 17.6%       | .9%    |
| FTE licensed practical nursing staff available in EACH school | 84.8   | 10.9  | 4.3         | 0      |

Data indicate a wide range of staffing for registered nursing staff in each school in the responding districts. Over half of the districts reported staffing rates of 1 full time equivalent (FTE) per school for registered nurses. The majority (85%) of districts reported less than one FTE for licensed practical nursing staff in each school.

There were no statistically significant differences detected between school districts with high ERG, medium ERG or low ERG classifications.

In the districts responding to the survey, there are a total of 830 full and part-time nurses employed.

**Table 11: School Nurse National Certification: Percent of Respondents in Each Category**

|   | No staff | 1-10  | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 |
|---|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| National certification in school nursing          | 63.0%    | 34.0% | 1.0%  | 0%    | 1.0%  | 1.0%  | 0%    | 0%    | 0%    | 0%    | 0%     |
| National certification in any OTHER nursing field | 79.4     | 18.6  | 0     | 1.0   | 0     | 1.0   | 0     | 0     | 0     | 0     | 0      |

The majority of districts reported no staff certified in school nursing or in any other nursing field.

The Chi Square statistic was calculated after removing all responses greater than 1-10 from the calculations. Statistical differences by ERG group were detected in the number of staff with national certification in school nursing at  $p < .05$ . School districts in ERGs A, B and C were more likely to have no staff with these qualifications than those in other ERG categories. Districts in ERGs D, E, and F were more likely to have between 1 and 10 staff. It must be remembered that the Chi Square statistic tests dependency between variables. Results only indicate that the number of nurses with national certification is dependent upon ERG group. No causal or directional relationship can be inferred.

**Table 12: Qualifications of District Nurse Leaders: Percent Respondents**

|                                | Diploma Registered Nurse | Associates Degree | Other Associates Degree | Bachelor of Science Degree in Nursing | Other Bachelor's degree | Master of Science Degree in Nursing | Master of Public Health (MPH) |
|--------------------------------|--------------------------|-------------------|-------------------------|---------------------------------------|-------------------------|-------------------------------------|-------------------------------|
| Nurse Leader 1: Qualifications | 20.9%                    | 4.4%              | 2.2%                    | 42.9%                                 | 13.2%                   | 11.0%                               | 5.5%                          |
| Nurse Leader 2: Qualifications | 40.0                     | 20.0              | 0                       | 20.0                                  | 0                       | 20.0                                | 0                             |
| Nurse Leader 3: Qualifications | 50.0                     | 0                 | 0                       | 50.0                                  | 0                       | 0                                   | 0                             |

No district had more than three nurse leaders. The majority of districts reported that nurse leaders have either a B.S. in Nursing or are a Diploma Registered Nurse.

Due to the large number of categories and the large number of categories with no respondents, the Chi Square statistic was not computed.

**Table 13: Specialists Employed by School Districts: Percent Respondents**

|  | Yes  |
|--|------|
| <b>Nutritionist</b>                    | 7.2% |
| <b>Mental Health Consultant</b>        | 42.7 |
| <b>Psychiatrist</b>                    | 23.0 |
| <b>Assistive Technology Specialist</b> | 44.1 |
| <b>Other</b>                           | 34.2 |

Districts were most likely to report employing a mental health consultant or an assistive technology specialist. No statistical differences by ERG group were detected.

Respondents indicated the number of students in grades PreK-5, 6-8 and 9-12 with the following conditions:

**Table 14: Student Health Issues**

|   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• Bee Sting Allergy</li> <li>• Food Allergy</li> <li>• Latex Allergy</li> <li>• Arthritis</li> <li>• Asthma</li> <li>• Autism Spectrum Disorders</li> <li>• Hemophilia</li> <li>• Sickle Cell Trait</li> <li>• Other Blood Dyscrasias</li> <li>• Cancer</li> </ul> | <ul style="list-style-type: none"> <li>• Cardiac Conditions</li> <li>• Developmental Delays</li> <li>• Diabetes Type I</li> <li>• Diabetes Type II</li> <li>• Migraine</li> <li>• Cerebral Palsy</li> <li>• Spina Bifida</li> <li>• Seizure Disorder</li> <li>• Speech Defects</li> <li>• Neurological Impairment</li> </ul> | <ul style="list-style-type: none"> <li>• Orthopedic Impairment</li> <li>• ADHD/ADD</li> <li>• Depression</li> <li>• Eating Disorders</li> <li>• Other Behavioral/Emotional Conditions</li> <li>• Severe Vision Impairment</li> <li>• Severe Hearing Impairment</li> <li>• Other Health Impairment</li> </ul> |
|---|--|--|

Responses indicate that Connecticut districts are caring for students with a range of physical, developmental, behavioral and emotional conditions. Summarized information for the most common conditions is below.

**Table 15: Student Health for Common Conditions: Numbers of Students by Grade Level  
Percent of Districts**

| Grade:<br>Number of Students:         | PreK-5 |        |      | 6-8   |        |      | 9-12  |        |       |
|---------------------------------------|--------|--------|------|-------|--------|------|-------|--------|-------|
|                                       | 0-10   | 11-100 | >100 | 0-10  | 11-100 | >100 | 0-10  | 11-100 | >100  |
| Bee Sting                             | 60.0%  | 40.0%  | 0.0% | 76.0% | 24.0%  | 0.0% | 48.2% | 51.8%  | 0.00% |
| Food Allergy                          | 29.5   | 54.3   | 16.2 | 51.0  | 49.0   | 0.0  | 35.7  | 62.0   | 2.4   |
| Latex                                 | 47.5   | 38.6   | 14.0 | 61.3  | 33.3   | 5.5  | 69.5  | 24.4   | 6.0   |
| Arthritis                             | 100.0  | 0.0    | 0.0  | 98.9  | 1.1    | 0.0  | 100.0 | 0.0    | 0.0   |
| Asthma                                | 6.8    | 48.5   | 44.6 | 8.2   | 60.8   | 31.0 | 4.8   | 60.7   | 34.5  |
| Autism Spectrum Disorders             | 62.7   | 37.3   | 0.0  | 92.5  | 7.6    | 0.0  | 95.1  | 4.8    | 0.0   |
| Hemophilia                            | 100.0  | 0.0    | 0.0  | 100.0 | 0.0    | 0.0  | 100.0 | 0.0    | 0.0   |
| Sickle Cell Trait                     | 97.7   | 2.2    | 0.0  | 98.8  | 1.2    | 0.0  | 98.7  | 1.3    | 0.0   |
| Other Blood Dyscrasias                | 96.8   | 3.3    | 0.0  | 100.0 | 0.0    | 0.0  | 98.8  | 1.2    | 0.0   |
| Cancer                                | 98.9   | 1.1    | 0.0  | 98.8  | 1.2    | 0.0  | 100.0 | 0.0    | 0.0   |
| Cardiac Conditions                    | 76.3   | 23.8   | 0.0  | 96.7  | 3.3    | 0.0  | 80.7  | 19.3   | 0.0   |
| Developmental Delays                  | 36.7   | 58.1   | 5.0  | 74.2  | 25.9   | 0.0  | 74.4  | 25.7   | 0.0   |
| Diabetes Type 1                       | 96.0   | 4.0    | 0.0  | 97.8  | 2.2    | 0.0  | 95.2  | 4.8    | 0.0   |
| Diabetes Type II                      | 98.8   | 1.2    | 0.0  | 98.8  | 1.2    | 0.0  | 98.6  | 1.4    | 0.0   |
| Migraine                              | 71.3   | 28.7   | 0.0  | 67.4  | 32.7   | 0.0  | 63.8  | 36.3   | 0.0   |
| Cerebral Palsy                        | 92.6   | 7.5    | 0.0  | 97.8  | 2.2    | 0.0  | 97.4  | 2.6    | 0.0   |
| Spina Bifida                          | 97.7   | 2.2    | 0.0  | 97.5  | 2.4    | 0.0  | 97.3  | 2.7    | 0.0   |
| Seizure Disorder                      | 65.7   | 34.3   | 0.0  | 87.2  | 12.8   | 0.0  | 75.3  | 24.6   | 0.0   |
| Speech Defects                        | 34.4   | 51.2   | 14.6 | 75.0  | 25.1   | 0.0  | 85.1  | 14.9   | 0.0   |
| Severe Vision Impairment              | 85.3   | 14.8   | 0.0  | 95.5  | 4.5    | 0.0  | 90.0  | 10.1   | 0.0   |
| Severe Hearing Impairment             | 84.8   | 15.1   | 0.0  | 87.8  | 12.2   | 0.0  | 84.0  | 16.0   | 0.0   |
| Other Health Impairment               | 61.5   | 35.5   | 3.0  | 83.3  | 16.7   | 0.0  | 72.2  | 27.8   | 0.0   |
| Oral Health Needs                     | 81.8   | 10.4   | 7.8  | 86.3  | 6.9    | 6.8  | 85.9  | 7.8    | 6.3   |
| Neurological Impairment               | 74.5   | 24.4   | 1.0  | 84.8  | 15.3   | 0.0  | 80.2  | 18.5   | 1.2   |
| Orthopedic Impairment                 | 80.2   | 19.8   | 0.0  | 88.0  | 12.0   | 0.0  | 76.9  | 23.1   | 0.0   |
| ADHD/ADD                              | 21.0   | 66.7   | 12.5 | 23.0  | 69.0   | 8.0  | 13.3  | 73.5   | 13.2  |
| Depression                            | 79.6   | 20.4   | 0.0  | 66.3  | 33.7   | 0.0  | 47.5  | 50.1   | 2.6   |
| Eating Disorders                      | 96.5   | 3.5    | 0.0  | 95.3  | 4.6    | 0.0  | 86.4  | 13.5   | 0.0   |
| Other Behavioral/Emotional Conditions | 61.9   | 33.3   | 4.8  | 57.1  | 42.8   | 0.0  | 42.1  | 47.3   | 10.5  |

For students in all grades, the most common issues were asthma, food allergies, ADHD/ADD, speech defects, oral health needs, developmental delays and other behavioral/emotional conditions. The majority of districts reported a number of students with these conditions at each grade level.

Asthma was, by far, the most common condition for students in each grade category. The percentage of districts with each number of students with asthma remained relatively constant throughout the grade levels. Results were similar for the percentage of districts with students with ADHD/ADD. These percentages also remained constant through the grade levels.

However, the percentage of districts with high numbers of students with food allergies, speech defects and developmental delays declined as grade levels increased. The decrease in the percentage of districts with high numbers of students with each condition suggests that the incidence of these conditions declines with age. It is hypothesized that this may be the impact of preventative services in the earlier grades common for both speech defects and developmental delays.

Due to the large number of categories and the large number of categories with no responses, statistical comparisons by ERG group were not conducted.

**Table 16: Health Care Procedures Performed: Percent Respondents**

Procedures are listed in decreasing order of percent responding “Yes”.

|                                 | Yes   |
|---------------------------------|-------|
| <b>Nebulizer Treatments</b>     | 94.5% |
| <b>Blood Sugar Testing</b>      | 89.1  |
| <b>Insulin Pump Management</b>  | 69.7  |
| <b>Other Treatments</b>         | 61.2  |
| <b>Gastronomy</b>               | 51.5  |
| <b>Catheterizations</b>         | 46.8  |
| <b>Suctioning</b>               | 25.9  |
| <b>Oxygen Therapy</b>           | 24.1  |
| <b>Ostomy Care</b>              | 15.0  |
| <b>Tracheostomy Care</b>        | 14.7  |
| <b>IV Therapy</b>               | 9.3   |
| <b>Ventilator Care</b>          | 5.6   |
| <b>Nasogastric Tube Feeding</b> | 4.6   |

Districts reported that school nurses are performing a wide range of health care procedures. The most common procedures performed are “Nebulizer Treatments” and “Blood Sugar Testing”. It should be noted that over fifty percent of districts report performing “Gastronomy”, “Other Treatments” and “Insulin Pump Management”. There were no statistically significant differences between ERG groups detected.

**Table 17: Students Returned to Classroom within One Half Hour: Percent Respondents**

|  | 0-25% | 26-50% | 51-75% | 76-100% |
|--|-------|--------|--------|---------|
| <b>Students Returned To Classroom Within One Half Hour</b> | 2.7%  | 2.7%   | 14.5%  | 80.0%   |

The majority of districts (80%) report that 76-100% of students return to the classroom within one half hour. There were no statistically significant differences between ERG groups detected.

**Table 18: Students Without Health Insurance: Percent Respondents**

|  | 0-25% | 26-50% | 51-75% | 76-100% |
|--|-------|--------|--------|---------|
| <b>Students Without Health Insurance</b> | 93.8% | 6.3%   | 0%     | 0%      |

The vast majority (94%) of districts reported that 0-25% of students do not have health insurance. There were no statistically significant differences between ERG groups detected.

**Table 19: Number of 911 Calls Per Year: Percent Respondents**

|                           | 0-10  | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | More than 100 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------------|
| <b>911 Calls Per Year</b> | 74.3% | 15.6% | 3.7%  | 2.8%  | .9%   | 0%    | .9%   | 0%    | 0%    | .9%    | .9%           |

The majority of respondents (90%) reported that 20 or fewer 911 calls are made per year. Due to the high number of categories and the high number of non-responses in some categories, statistical comparisons between ERG groups were not conducted.

**Table 20: Reasons for 911 Call: Rankings and Ratings**

| Reasons     | Score | Rank |
|-------------|-------|------|
| Injuries    | 387   | 1    |
| Other       | 234   | 2    |
| Seizure     | 221   | 3    |
| Anaphylaxis | 197   | 4    |

Injuries were the most common reason a 911 call was placed. No statistical comparisons were calculated by ERG group.

**Table 21: Frequency of Health Care Management Services: Percent Respondents**

|  | Never | Sometimes | Always |
|--|-------|-----------|--------|
| Development of Individual Health Care Plans            | 0%    | 43.6%     | 56.4%  |
| Development of Individual Emergency Plans              | 0     | 22.0      | 78.0   |
| Development of 504 Plan                                | 1.0   | 35.2      | 63.8   |
| Staff training to meet individual student health needs | .9    | 26.6      | 72.5   |

Districts were most likely to always “Develop Individual Emergency Plans” and to provide “Staff training to meet individual student health needs”. No statistical differences were detected between ERG groups.

**Table 22: Satisfaction with Health Care Management Services: Percent Respondents**

|  | Disagree | Neutral | Agree |
|--|----------|---------|-------|
| Development of Individual Health Care Plans            | 11.1%    | 17.6%   | 71.3% |
| Development of Individual Emergency Plans              | 5.6      | 5.6     | 88.8  |
| Development of 504 Plan                                | 9.6      | 18.3    | 72.1  |
| Staff training to meet individual student health needs | 12.8     | 20.2    | 67.0  |

Districts were generally satisfied with the health care management services provided. No statistically significant differences were detected between ERG groups.

**Table 23: Health Services Staff Involvement: Percent Respondents**

Responses are in decreasing order of the percent of districts reporting the involvement of health services staff in each activity.

|   | Yes    | District Does Not Provide |
|---|--------|---------------------------|
| Child abuse reporting and prevention              | 100.0% | 0%                        |
| Maintenance of health room and equipment          | 97.3   | 0                         |
| Bloodborne Pathogen Exposure Plan                 | 95.5   | 0                         |
| PPT process                                       | 94.5   | 0                         |
| School safety/crisis plan                         | 93.6   | 0                         |
| 504 coordination                                  | 88.0   | 0                         |
| Staff education to meet health program needs      | 87.1   | 7.0                       |
| Indoor air quality program                        | 73.1   | 8.8                       |
| School-based outreach to enroll students in HUSKY | 73.1   | 22.0                      |
| Staff Wellness Programs                           | 63.2   | 37.0                      |

The majority of districts responded that health service staff were involved in each activity. Please note, percentages provided are percentages only for districts offering these services. No statistically significant differences between ERG groups were detected.

**Table 24: Services Necessary to Increase Satisfaction: Percent Response and Mean**

Services are listed in decreasing order by mean response.

|   | Percent Response  |          |         |       |                | Mean        |
|---|-------------------|----------|---------|-------|----------------|-------------|
|   | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |             |
| <b>Fiscal resources</b>                           | 0%                | 4.8%     | 12.5%   | 47.1% | 35.6%          | <b>4.13</b> |
| <b>Information on available resources</b>         | 0                 | 8.7      | 16.5    | 52.4  | 22.3           | <b>3.88</b> |
| <b>Non-fiscal resources</b>                       | 0                 | 8.4      | 29.5    | 52.6  | 9.5            | <b>3.63</b> |
| <b>Improved communication with state agencies</b> | 1.0               | 12.6     | 28.2    | 40.8  | 17.5           | <b>3.61</b> |
| <b>Training for staff</b>                         | 2.9               | 9.6      | 23.1    | 54.8  | 9.6            | <b>3.59</b> |
| <b>Improved communication within the district</b> | 3.8               | 17.0     | 21.7    | 37.7  | 19.8           | <b>3.53</b> |
| <b>On-site consultation for staff</b>             | 2.9               | 10.6     | 45.2    | 32.7  | 8.7            | <b>3.34</b> |

Districts agreed most strongly that fiscal resources were needed to increase satisfaction. However, all items received mean ratings of greater than 3.0, indicating district agreement with the need for these items.

There were no statistically significant differences detected between ERG groups.

**Table 25: Frequency of Staff Involvement in Health Promotion or Prevention: Percent Response**

|                                    | Never | Sometimes | Always |
|------------------------------------|-------|-----------|--------|
| <b>Nutrition/Physical Activity</b> | 14.5% | 66.4%     | 19.1%  |
| <b>Human Sexuality Education</b>   | 19.3  | 53.2      | 27.5   |
| <b>Disease Prevention</b>          | 10.3  | 56.1      | 33.6   |
| <b>Injury Prevention</b>           | 13.0  | 55.6      | 31.5   |
| <b>Substance Abuse Prevention</b>  | 21.3  | 56.5      | 22.2   |
| <b>Other</b>                       | 14.0  | 66.7      | 19.3   |

The majority of districts stated that staff were “sometimes” involved in each activity. Approximately one fifth of districts typically reported staff were “never” involved in each activity.

There were no statistically significant differences detected between ERG groups.

**Table 26: Respondent Distribution by ERG: Frequency and Percent**

| ERG | Number of Districts | Percent |
|-----|---------------------|---------|
| A   | 6                   | 7.0%    |
| B   | 12                  | 14.0    |
| C   | 13                  | 15.1    |
| D   | 15                  | 17.4    |
| E   | 8                   | 9.3     |
| F   | 12                  | 14.0    |
| G   | 10                  | 11.6    |
| H   | 6                   | 7.0     |
| I   | 4                   | 4.7     |

Respondents were approximately distributed equally across ERGs. There were fewer respondents from ERG I than from other ERGs.

**Table 27: Type of District: Percent**

|                |       |
|----------------|-------|
| Public School  | 96.3% |
| Charter School | .9    |
| RESC           | 2.8   |

The majority of respondents (96%) were public school districts.

**Table 28: Type of Client Served by District: Percent**

| Type of Client Served       | Percent |
|-----------------------------|---------|
| Public Schools              | 91%     |
| Private, Non-Public Schools | 38      |

The majority of respondents provided services to public schools. However, it should be noted that 38% provide services to private, non-public schools.

### ***Other Information***

#### ***Health Services Staffing:***

Connecticut school districts employ registered nurses funded by a variety of sources. The majority of nursing staff is funded by the Board of Education. It should be noted that data suggest the majority of districts do not have nursing support staff such as LPNs, health aides, nursing clerks or other support staff. Respondent comments indicate a high need for nursing support staff services.

#### ***District Dental Services:***

Responses indicate that 88% of districts in Connecticut do not provide dental services. Of the districts that offer dental services, 33% use a dentist and 66% use a dental hygienist to provide these services.

School Nurse Educational Level:

Respondents reported that nurses in their districts had a variety of educational qualifications. One third of districts employed from 1-10 Diploma Registered Nurses, between 20% and 30% of districts had 1-10 nurses with a Bachelor of Science in Nursing, 1-10 nurses with a Master of Science in Nursing, and 1-10 nurses with another Bachelor's degree. The majority of districts had no staff employed with any other Master's Degree or a Doctoral Degree. In districts with larger numbers of nurses (up to 100), these nurses were most likely to be either Diploma Registered or hold a Bachelor of Science in Nursing.

Due to the large number of categories and large number of categories with no respondents, the Chi Square statistic was not calculated.

Interventions Most Commonly Provided to Students:

Districts rated the frequency of intervention provided to students with each condition. In general, the three most common interventions were routine nursing interventions, monitoring of health care needs and as needed medication administration. For students with allergies, asthma and other emotional needs, these were the three most common interventions provided. The third most common intervention provided to students with severe speech defects was referral to a health care provider.

School Health Council: The majority (80%) of Connecticut school districts do not have a School Health Council.

School Health Staff Involvement in Teaching: Districts rated the frequency with which school health staff were involved in teaching a number of topics, including nutrition/physical activity, human sexuality education, disease prevention, injury prevention, substance abuse and other activities. In all cases, health services staff were most frequently involved in "Individual Teaching" and "Classroom Teaching with Educator."

Involvement of Nurses in IEP Development: In the majority of Connecticut districts (76%), the school nurse is involved in the development of Individual Education Profiles (IEPs).

Survey Open-Ended Questions:

Respondents appeared to be generally satisfied with the state of health services in the districts. Respondents commented freely on a number of areas including the need for sufficient funding; a need for dental programs, mental health services and collection of data regarding mental health; a need for nurse-to-student ratio guidelines from the State Department of Education; adaptation of school nursing duties to meet the changing role of the school nurse; education for administrators regarding the role of the school nurse; sufficient staffing including clerical support; increased issues with student obesity and nutrition; a need for coordination within the district; a need for professional development in line with staff needs and increased "professionalism" of the role of the school nurse. In particular, the need for nurse-to-student ratio guidelines from the State Department of Education and the need for sufficient staffing, including clerical support were frequently mentioned.

A number of respondents commented on the need to improve data collection efforts. Suggestions included making categories more specific in particular questions, revising the survey to allow distinctions between individuals working with special education students and the overall school population, and improving the coordination between the hardcopy data collection guide that goes to individuals in schools within the districts and the web-based survey completed by the Coordinator of School Nursing. It is also noted that, based on questions and comments received by both EDUCATION CONNECTION and the Connecticut State Department of Education, district nursing staff are in need of technology training and increased access to

technology. A number of respondents expressed concern that they did not know how to use the computer to complete the online survey or that they did not have access to a computer through their district. All open-ended comments and additional recommendations are available upon request. It should be noted that these open-ended entries are comments from specific individuals and cannot be considered representative of the population as a whole. Comments have been edited to remove names to protect confidentiality and to correct gross spelling errors. General grammatical or typographical errors were not edited in an attempt to maintain the thrust of what the respondent was saying.

## **Conclusions**

### ***School Health Services:***

Overall, Connecticut school district staff appear to have a positive perception of the status of health services in Connecticut school districts. Survey respondents were generally positive as indicated by the quantitative questionnaire results and the number of comments on the survey questionnaire. Data resulting from the first year of survey administration were examined by the Connecticut State Department of Education and EDUCATION CONNECTION staff and lead to the following conclusions and recommendations regarding school health services in Connecticut:

- Connecticut school districts offer a range of screening services. Non-mandated screenings offered by districts include body mass index screening, pediculosis screening, nutrition screening and mental health consultations. Mandated screenings include vision, scoliosis, hearing and health assessments. Overall, districts reported that these screenings result in a number of students each year being referred to an outside provider for follow-up treatment. It can be hypothesized that these referrals result in treatment of underlying conditions for students and therefore to an increased ability to learn and improved student outcomes.
- Of the non-mandated screenings, nutrition screening and mental health consultations are offered by approximately 50% or more of districts. In districts offering these services, the procedures are generally provided to a percentage of students. It can be expected that the common provision of these non-mandated services indicates a relatively high need for these screenings. It can also be hypothesized that this same need exists in districts not offering these services.
- Data indicate that 88% of responding districts do not provide dental services. State and national literature suggest that oral health needs are currently affecting a large proportion of our students.
- Data indicate that, in responding school districts, nurse-to-student ratios decrease as grade levels increase. Additionally, survey respondents commented on the need for the Connecticut State Department of Education to set recommended nurse-to-student ratios.
- Data indicate that 23% of districts have less than 1 FTE registered nurse available in each school.
- Data suggest that Connecticut school districts are caring for children with a wide range of physical, developmental, behavioral and emotional conditions. The most common conditions reported were asthma, food allergies, speech defects, ADHD/ADD, developmental delays and other behavioral/emotional conditions. It can be expected that the high incidence of these conditions among Connecticut students will increase the responsibilities of school nursing staff. Additionally, it can be expected that these conditions may impact the academic performance of children.
- The majority (80%) of respondents reported that 76-100% of students that receive a nursing intervention return to the classroom within one half hour. It is expected that, once the condition prompting the child to seek a nursing intervention is addressed, the child will be better able to learn upon returning to the classroom. However, there is currently little empirical data to support this link.
- Six percent of districts reported that 26-50% of students did not have health insurance. It can be expected that these students may have a number of health issues that are not addressed as a result of the lack of health insurance.

- Almost one quarter (22%) of districts do not provide school-based outreach necessary to enroll students in HUSKY.
- Districts provided a wide range of suggestions for services to increase district satisfaction with provision of health services to students. District suggestions include fiscal resources, information on available resources, non-fiscal resources, communication with state agencies and training for staff.

### **Recommendations for Future Data Collection and Program Expansion in the State of Connecticut**

#### ***Future Data Collection:***

It is recommended that the State of Connecticut:

- Develop strategies to collect data on the outcome of student referrals and explore strategies to link these outcomes to improved student learning.
- Continue to examine the need for health services across the state and to understand barriers and opportunities in districts affecting the provision of these services.
- Explore strategies to assess the impact of nursing interventions on student learning.
- Measure the impact of special health care conditions on academic performance and other student outcomes.
- Develop strategies to assess the impact of a lack of health insurance on student academic performance,

#### ***Program Expansion:***

It is recommended that the State of Connecticut:

- Develop strategies to assist districts to address the dental needs of Connecticut students.
- Explore strategies to assist school nurses to address the needs of children with special health care needs.
- Develop strategies to assist districts to meet the learning needs of students without health insurance.
- Develop strategies to maximize the ability of districts to provide health services throughout Connecticut.

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