Behavioral Health Partnership Oversight Council

School-Based Health Centers: A Cost-Savings, Integrated Health Care Program for Youth

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http://www.childandfamilyagency.org

DEFINITIONS

- "School-based health center" means a health center that:
- (A) is located in, or on the grounds of, a school facility of a school district or school board or of an Indian tribe or tribal organization;
- (B) is organized through school, community and health provider relationships;
- (C) is administered by a sponsoring facility; and
- (D) provides comprehensive on-site medical and behavioral health services to children and adolescents in accordance with state and local law, including laws relating to licensure and certification.

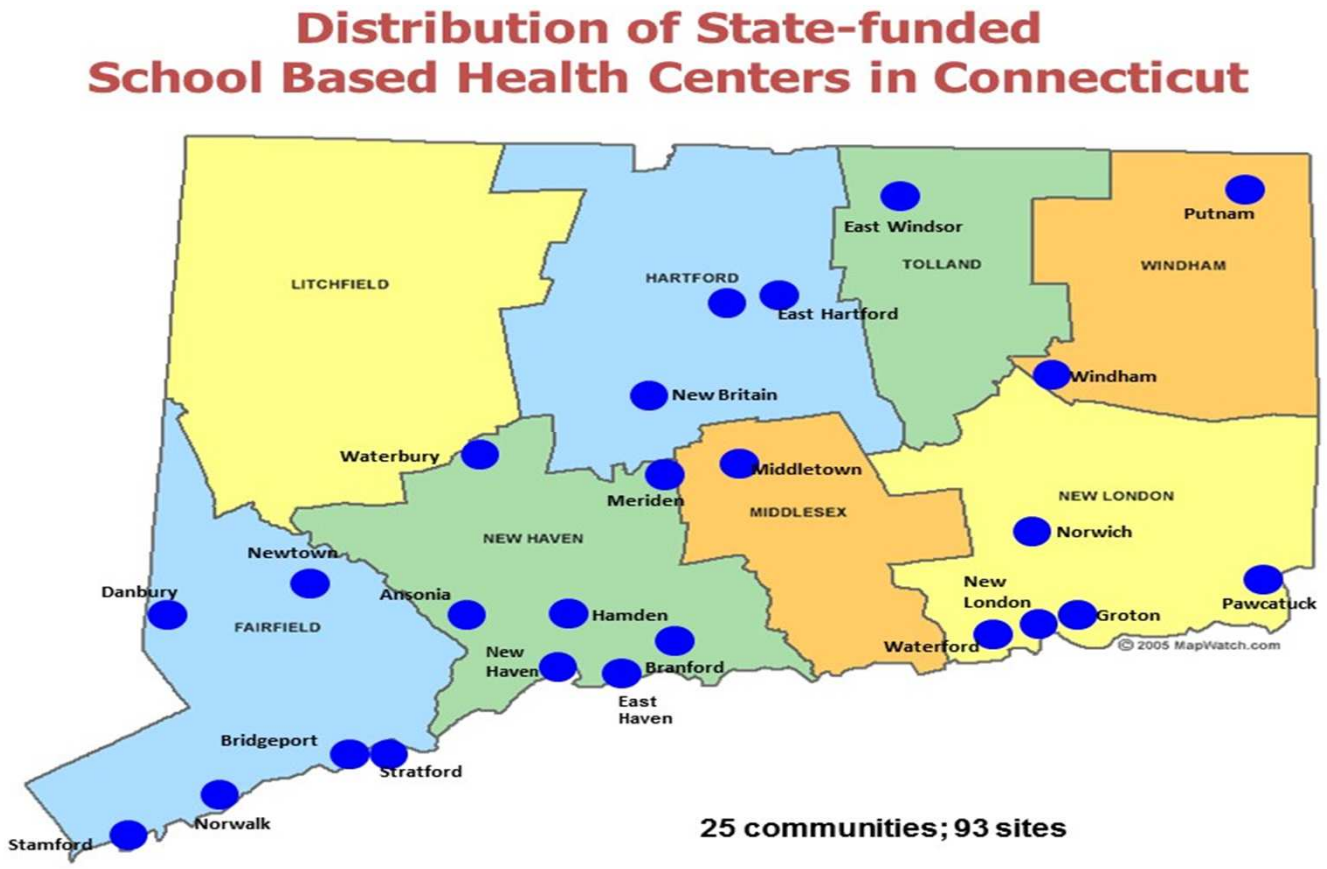
State of CT Public Act No. 15-59

Quick Facts: School-Based Health Centers in Connecticut

- Connecticut's school-based health centers have been delivering comprehensive health care to students in schools for 37 years.
- School-Based Health centers provide services annually to over 44,000 students.
- There are 93 state funded school-based health centers in 25 communities across Connecticut.
- SBHCs are fully-licensed primary care facilities.
- Parents must sign a Parent Permission Form for students to receive services.
- School-based health centers bill both HUSKY and commercial insurance for all eligible services.

School-Based health Centers in CT

- 93 state funded school-based health centers now provide services in 25 communities.



CONNECTICUT ASSOCIATION OF SCHOOL-BASED HEALTH CENTERS (CASBHC)

- *The Connecticut Association of School Based Health Centers is an advocacy and networking organization committed to increasing access to quality health care for all children and adolescents in Connecticut schools.*
- CASBHC was established in 1994, and received its 501(c)(3) non-profit designation in 1996.
- Members of CASBHC have collectively established a strong base of support for School-Based Health Centers in Connecticut through community engagement, delivery of quality services, advocacy and effective marketing.
- The Connecticut Association of School Based Health Centers is a state affiliate of the School Based Health Alliance.

Healthy Kids Make Better Learners
Connecticut Association of School Based Health Centers

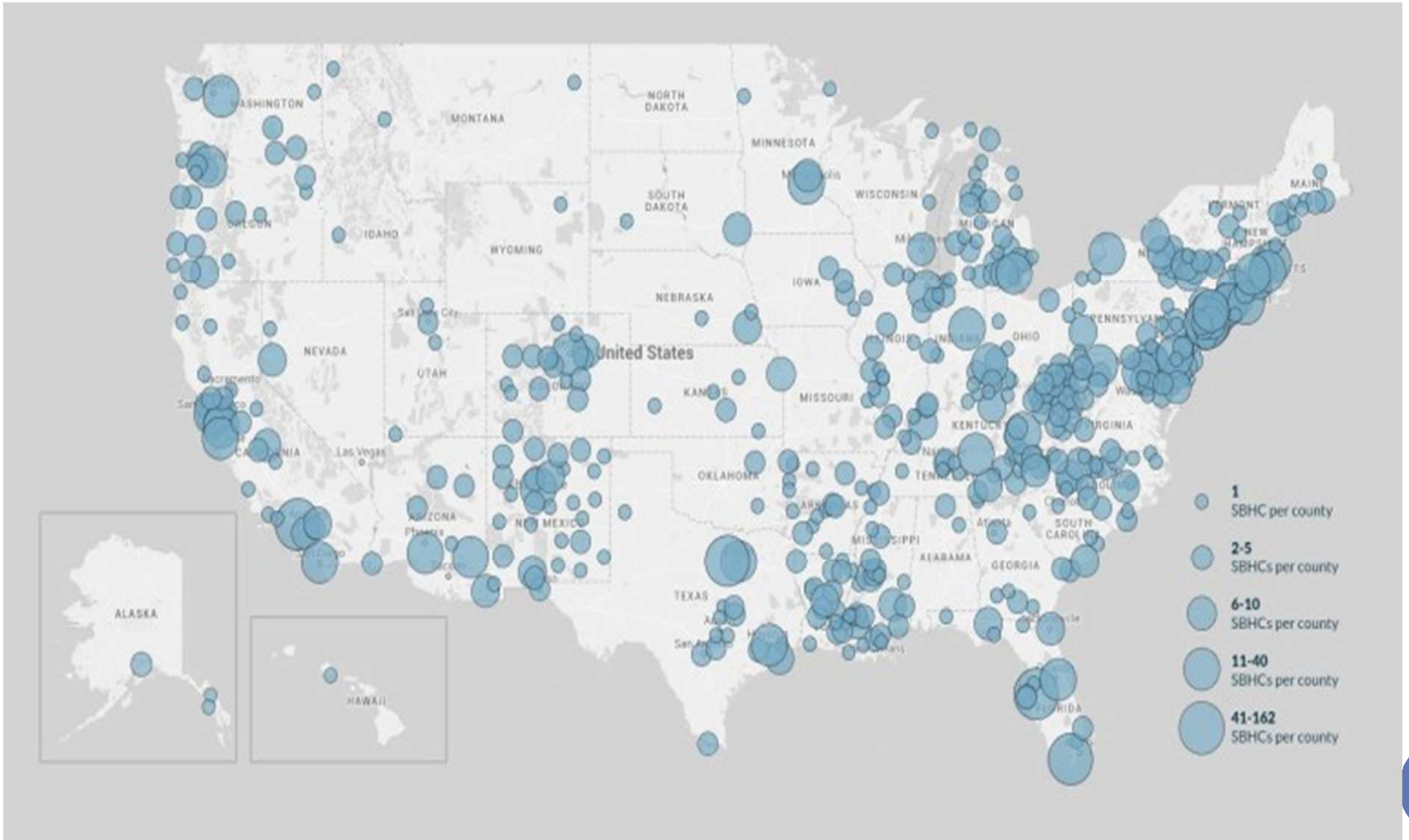
School-Based Health Centers Nationwide

The National School-based Health Alliance conducts a national school-based health center census every three years. The last census covered the 2016-17 school year:

- There are 2,584 school-based health centers in 48 of the 50 states, the District of Columbia, and Puerto Rico.
- These SBHCs serve 10,629 public schools.
- Over 6.3 million students have access to an SBHC.

SCHOOL-BASED HEALTH ALLIANCE
Redefining Health for Kids and Teens

SBHCs in the United States



School-Based Health Center Services

WHY SCHOOL-BASED SERVICES?

- **Timely admission to school**
  - To be in compliance with State of CT regulations, students need to have a school entry physical.
  - Usual wait for community providers is 4-8 weeks
- **Children miss fewer days of school**
  - Asthma * Acute illness * Follow-up
- **Children with behavioral health needs can receive services in school**
  - On-site and "en vivo" services for students with mental health challenges that impact their overall functioning and availability to learn
- **Working parents can access important services for their child without missing valuable work time/wages.**
- **Reduction of Barriers**
  - Transportation
  - Inconvenient hours of operation or lengthy wait for appointments with community provider
  - Inadequate/no insurance coverage
  - Accessibility
  - Provided in the child's familiar environment
  - Of the highest quality-- The SBHC program adheres to state and federal standards and utilizes best-practices.

SBHC Service Providers

- Medical and Mental Health providers are Master's or Doctoral Degree prepared, licensed by the state, and nationally certified by their respective professional boards
  - Medical providers- Nurse Practitioners (APRNs)
  - Mental Health providers- Social Work, Professional Counselor, or Marriage and Family Therapy as fields of study

- Dental providers– Dental Hygienists, Dentists, and Dental Assistants

Services Provided: Medical

- Well-child care (physical examinations)
  - New-entry to school district
  - Annual school physicals
  - Sports participation physicals
  - Camp or Work physicals
- Immunizations
  - Required for school
    - e.g.: IPV, Tdap, MMR, etc.
  - Recommended by American Academy of Pediatrics
    - e.g.: Flu, HPV, Menactra
- Acute care visits
  - Colds, URI, strep throat, conjunctivitis, etc.

Services Provided: Medical

- Collaboration with student's community primary care provider
- Refer for primary care provider(s) & HUSKY
  - Access-to-Care
- Chronic Conditions Education & Management
  - Asthma
  - Weight management (nutrition and physical activity counseling)
- Mental Health Screens
  - PSC, PHQ2/PHQ9, CRAFFT

"Why do you like coming to the SBHC?"

- *"Because it's easier than going to a hospital."*
- *"I like coming to SBHC because they help with my asthma problem. And when I have pain when my asthma gets bad."*
- *"Because they're nice and I need vaccines"*
- *"I don't have to miss a lot of class time"*
- *"So I can perform well/better in school and sports"*

STUDENT SATISFACTION SURVEYS

Services Provided: mental Health

- Psycho-social assessments, diagnosis, and written treatment plans
- Provide evidence-based therapy in school
- Individual, family and/or group therapy as clinically indicated
- Crisis intervention
- Consultation to school staff
- Psychoeducation and classroom presentations
- Referral to follow-up services

"Why do you like coming to the SBHC?"

- *"It's someone to talk to, a safety net almost"*
- *"It helps me as a young man to better understand who I am as a person"*
- *"Because you respect and care about who I am"*
- *"I get to talk to someone older than me about things that I can't say to other adults"*
- *"It helps me get calm when I am mad"*

STUDENT SATISFACTION SURVEYS

Services provided: Dental

- Dental Hygienists provide preventive dental care– including cleanings, x-rays, fluoride, and sealants.
- Dentists and Dental Assistants provide full dental exams.

Why Dental?

- Dental problems account for 2 million lost school days a year.
- According to the American Public Health Association, children with poor oral health status were nearly 3 times more likely than were their counterparts to miss school as a result of dental pain. They are also more likely to perform poorly in school.

WHO WE SERVE/ENROLLMENT

- All students who attend a school with a school-based health center are eligible to receive services.
- There is never an out-of-pocket cost to the student or family for SBHC services.
- All DPH funded School Based Health Centers should have at least 65% of students registered for SBHC services.
- Per DPH contract, at least 50% of registered students should be users.

FUNDING

- Connecticut school-based health centers are partially funded by the Connecticut Department of Public Health.
- Every School-Based Health Center bills both HUSKY and commercial insurance for all eligible services provided (with the exception of visits designated as confidential by Connecticut state statute).
  - HUSKY since 1996
  - Commercial insurance contracts began 1997
- Other funding sources may include: private grants, local Board of Education, and municipal funds

Establishing School-Based health Centers

- Requests for Proposals from Department of Public Health
- Legislative process

Standards of Care & Initiatives

Standards of Care

SBHCs have the endorsement of and follow clinical standards of care from a number of professional health organizations including the:

- American Academy of Pediatrics
- American Medical Association
- Society for Adolescent Medicine
- American School Health Association
- American Nurses Association
- National Association of Pediatric Nurse Practitioners
- National Association of State School Nurse Consultants

CASBHC represents SBHCs on statewide councils and committees including:

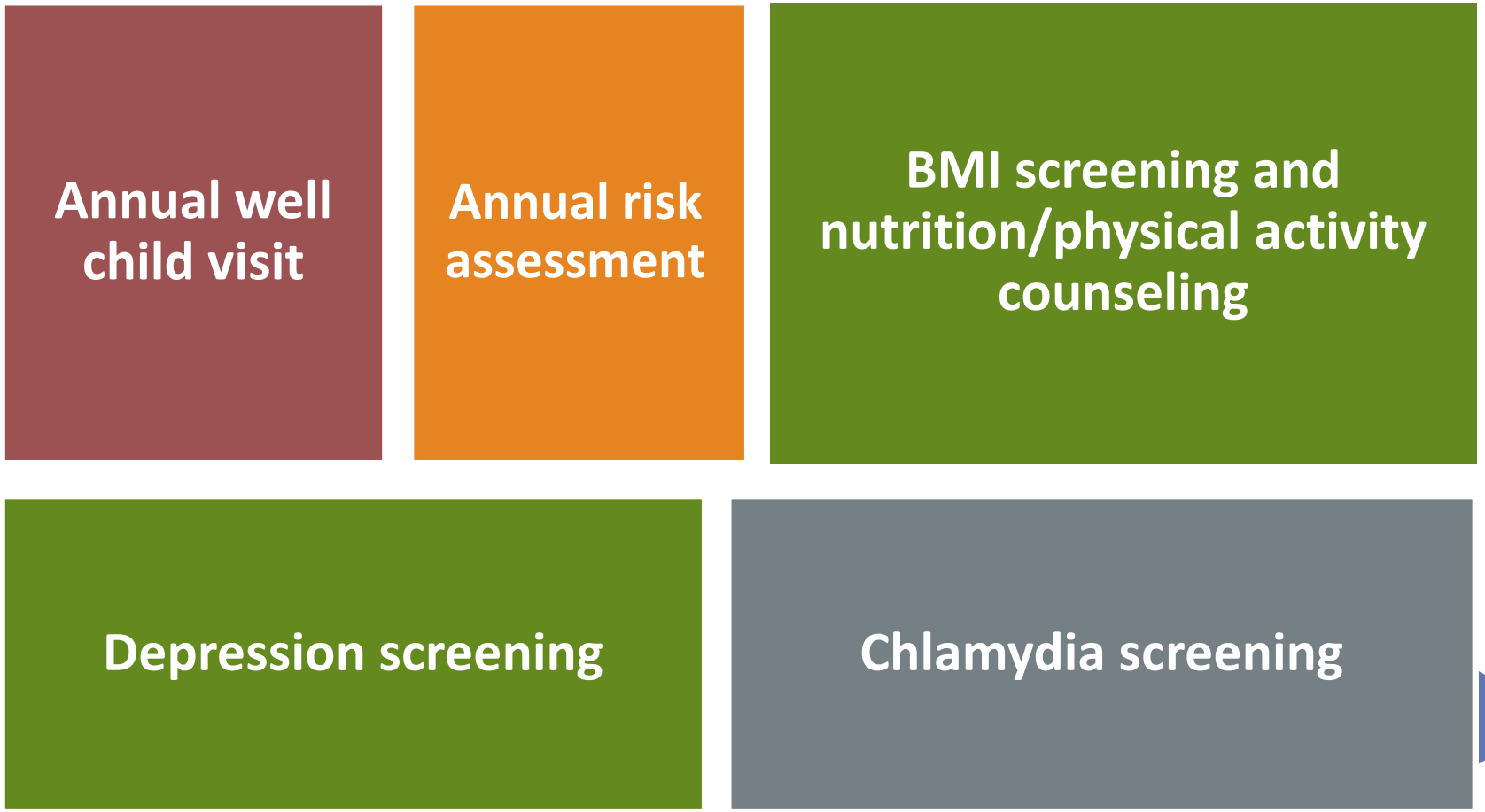
- Medical Assistance Program Oversight Council
- Behavioral Health Partnership
- Connecticut Oral Health Initiative
- Connecticut Coalition of Oral Health
- School Based Health Center Advisory Committee
- Commission on Health Equity Youth Committee
- Person-Centered Medical Home Committee
- Task Force to Study the Provision of Behavioral Health Services for Young Adults
- Keep the Promise Children's Committee

National Quality Indicators

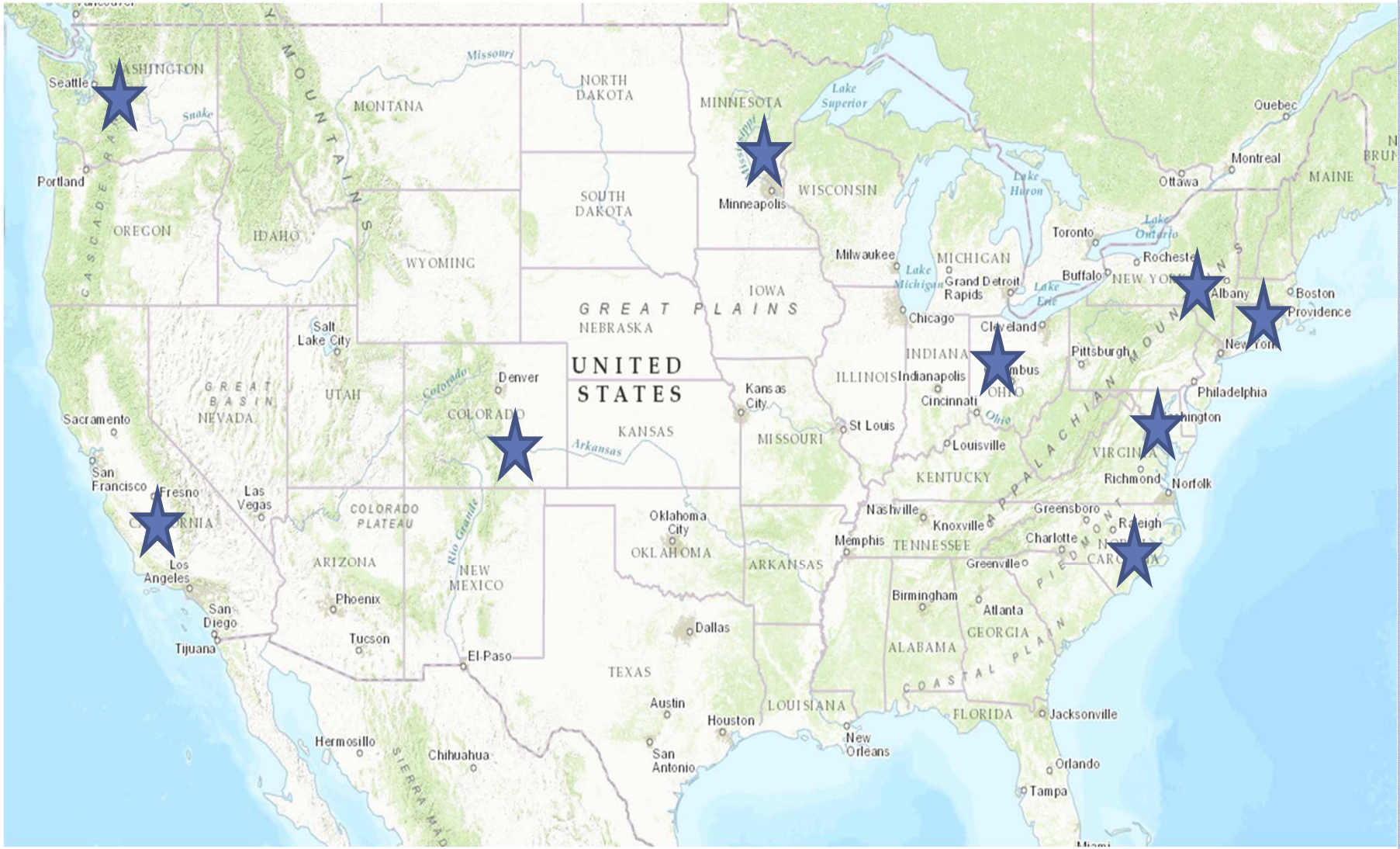
- The National School Based Alliance, under a Federal MCHB Grant, gathered over 100 SBHC representatives across the nation and decided that the best way to demonstrate the value add of SBHCs to the healthcare system is to work to ensure that children and adolescents have:
  - (1) an annual well-child visit
  - (2) risk assessment
  - (3) BMI screening
  - (4) depression screening
  - (5) chlamydia screening

- These indicators align with existing national child quality measurement frameworks (HEDIS, CHIPRA, Meaningful Use) – allowing SBHCs to compare themselves with one another and with other healthcare settings.

National SBHC Performance Measures



SBHC National Quality Initiative CoIIN



NQI Cohort 1 CoIIN Teams

Performance Measures
focus area

- Colorado Department of Public Health and Education
- Washington Public Health – Seattle & King County School-Based Partnership Program
- Connecticut Department of Public Health & Connecticut Association of School Based Health Centers
- North Carolina School-Based Health Alliance

Business Practices
focus area

- **Bassett Healthcare Network**
  Cooperstown, NY
- **Growing Well**
  Cincinnati, OH
- **Minnesota Department of Health, Child and Adolescent Health Section**

The NQI Initiative was implemented based on the Model for Improvement for Healthcare, a Quality Improvement framework as drivers for Change

CASBHC Learning QI Collaborative Cohort 1 (2017-2018)

Child & Family Agency Of Southeastern CT

- *Show me the money… SAVED!*

Community Health Centers, Inc.

- *APRNs quest for truth in data reporting*

CT Institute for Communities, Inc.

- *Risk assessment quality improvement initiative project*

Family Centers

- *Improving nutrition and physical activity counseling for students with BMI > 85th percentile*

Yale New Haven

- *Nutrition and exercise counseling in obesity treatment*

Show me the Money... Saved!

Anna Goddard, PhD, APRN; Andrew Konesky, MSN, APRN;
Vera Borkowski, MSN, APRN; Aymi Bennhoff, MSN, APRN

Child & Family Agency of Southeastern Connecticut, Inc. It's About Children

Healthy Kids Make Better Learners — Connecticut Association of School Based Health Centers

AIM Statement: *We aim to increase the percentage of documented seat time preserved among students seen at the SBHC for acute asthma exacerbation visits from 0 to 95% by June, 2018*

Introduction/Statement of the Problem

Asthma is one of the most prevalent chronic pediatric diseases. School absences and missed classroom instruction time directly affect students' education and learning, while also reducing school funding and reimbursement from chronic absenteeism. Frequent utilization of the emergency room also leads to an increase in overall healthcare costs for patients and places further financial burden on the state of Connecticut. In light of continued Connecticut state budget constraints, CFA recognizes the School Based Health Center (SBHC) role in protecting the welfare and safety of children and their families. SBHCs provide a valuable service in managing acute asthma exacerbations, and decreasing school absences, missed classroom time, and healthcare costs.

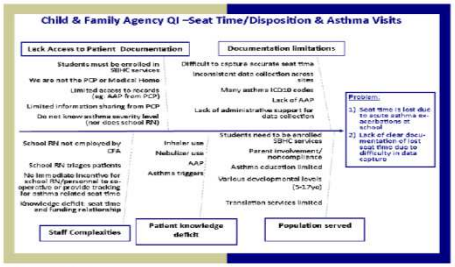
PLAN

- In FY 2017-2018, we collected "seat time" data: the actual time students are in class during a school day; to measure the amount of seat time saved due to utilization of SBHC services. This will highlight the value of the SBHC model to the patient, educator, and government funders.
- Three of our 14 SBHCs were chosen for this project based on early adopters of the National Quality Initiative (NQI) framework through the School-based Health Alliance Collaborative Improvement and Innovation Network (CoIIN): tasked with adapting nationally recognized performance standards for SBHC care.

2016-2017 Baseline SBHC Site Asthma Data

SBHC	Enrolled SBHC with Asthma Diagnosis	Medical Visit	Visit for Asthma	Disposition of Care
New London High School N=808 New London, CT	221	30	27	Back to Class: 26 Sent home: 1 **Sent to ER: 0**
Bennie Dover Jackson Middle School N = 561 New London, CT	133	38	25	Back to Class: 23 Sent home: 2 **Sent to ER: 0**
Pawcatuck Middle School N= 197 Stonington, CT	26	26	9	Back to Class: 9 Sent home: 0 **Sent to ER: 0**

- After a clinical microsystems assessment utilizing the Institute for Healthcare Improvement (IHI) framework, a root-cause analysis was performed.



$1,631/visit = Average ED visit for children in CT
$15,316/admission = Average hospitalization charge for children with asthma (CT Hospital Association CHIME Data, 2014).

Based on this data:

2016-2017 CFA SBHC Visits (14 SBHCs in New London County)		
Total visits to the SBHCs: 14,450		
Asthma visits: 182		
SBHC Cost = **$125/visit**	VS.	ED Cost = **$1,631/visit**
Minimum cost savings from SBHC care (N=182): **$296, 842**		

DO

From July 1, 2017, to June 30, 2018, seat time data was collected for all patients presenting to the SBHC for acute asthma exacerbations.

1. Informed school nurses at participating SBHCs regarding project and intent.
2. Created an asthma seat time log to collect data on time in/out, treatment provided and disposition of visit.
3. Created a template in EHR system to track all acute asthma exacerbation visits in order to obtain data on length of visit, treatment, and disposition.
4. Assessed our region(s) school administrators, business offices, and school personnel on chronic absenteeism and level of reimbursement provided for services at their schools.
5. Utilized community resources and partnerships to obtain average cost of ER visits for asthma exacerbations in order to compare cost savings.

We collected 2017-2018 school year "seat time" data related to SBHC asthma exacerbation:

- time in & out of clinic appointment.
- treatment provided related to asthma disposition post visit.
- disposition of care (back to class, home, or the ED).

This value can be extrapolated to show healthcare cost savings by utilizing SBHC services compared to ED costs.

STUDY

CHILD AND FAMILY AGENCY SEAT TIME LOG SUMMARY July 1, 2017- June 30, 2018	
New London High School SBHC, Bennie Dover Middle School SBHC, & Pawcatuck Middle School SBHC	
Total visits in reporting period	45 visits
Average visit time (acute asthma exacerbation)	29 minutes
Student disposition, N= 45 visits	
Sent back to class	N= 44 (98%)
Sent home (during school day)	N= 1 (2%)
Sent to emergency room	N= 0 (0%)
Classroom instruction time saved	
Students sent back to class	44 visits
Average classroom instruction hours saved per student	3:42 hours:mins
Total classroom instruction hours saved by all students in reporting period	166:7 hours:mins
Data were summarized by the School-Based Health Alliance as part of the National Quality Initiative. Please contact research@sbh4all.org with any questions.	

Pro-active, preventative pediatric asthma care is the most cost-effective and quality based care modality. (CT Department of Public Health Asthma Program).

A SBHC acute asthma visit includes medical assessment, nebulizer treatment, intensive education, an Asthma Action Plan, and a follow-up visit.

During this time interval:

- 45 Acute Asthma Visits to 3 of our SBHCs
- 29 minutes: Average SBHC visit time for acute asthma visit
- 98% returned to class, 2% sent home (vs the ED)
- 167 classroom instruction hours saved
- **$73,395** = minimum potential cost if those 45 visits were sent to ED for emergency treatment

ACT

This study paves the way for utilizing data for Results Based-Accountability (RBA) performance analysis tha is required for funding services for SBHCs.

1. Extrapolate this information to the other 14 SBHCs at CFA. Scale the cost-savings calculations to the other SBHCs in terms of decreased ED utilization savings.
2. Report project findings to stake holders, includin advocacy efforts demonstrating fiscal implication of maintaining SBHC funding.

2017-2018 CFA SBHC Visits (14 SBHCs in New London County)		
Total visits to the SBHCs: 13,859		
Acute Asthma visits: 182	Disposition of Care: Back to Class: 157 (86%) Sent home: 23 (13%) Sent to ER: 2 (1%)	
SBHC Cost = **$125/visit**	VS.	ED Cost = **$1,631/visit**
Minimum cost savings from SBHC care **(N=180)**: **$293,580**		

REFLECTIONS ON ANALYSIS

- The 44 student visits that were sent back to class did not have to miss classroom instruction time. Without CFA's SBHCs, these students would have missed school resulting in reduced revenue receive from the state for their attendance.
- Of the 182 student asthma visits across all 14 SBHCs, 180 students were not sent to the ER, savin a minimum of $293,580.

COST SAVINGS →
- School District
- Decreased ED utilization
- CT Healthcare System

Management of asthma exacerbations in the school are one of dozens of health care services provided by SBHCs.

School Based Health Centers save money for the school, the CT tax-payer, the Department of Public Health & keeps kids in their seats.

Acknowledgements:
Jesse Frese White, MA, LPC, CASBHC; Lea Ayers LaFave, PhD, RN, and Amy Cullum, MPH, RN, JSI Research Consultants; Samira Soleimanpour, PhD, MPH, National SBHC Alliance; Rose Shimada, CFA data analyst; Jason Morrill, CFA IT Director; Eileen Lopaze, SBHC Office Coordinator

This work was supported by funding from the Connecticut Health Foundation and the Connecticut Association of School Based Health Centers.

SHOW ME THE MONEY… SAVED

2017-2018 CFA SBHC Visits (14 SBHCs)	
Total visits to the SBHCs: 13,859	
Asthma visits: 182	**Disposition of Care:**
	Back to class: 157 (82%)
	Sent home: 23 (13%)
	Sent to ER: 2 (1%)
SBHC Cost: $125/visit vs. ED Cost: $1631/visit	
Minimum cost savings from SBHC care (N=180) = $293,580	

Child & Family Agency Seat Time Log Summary
July 1, 2017- June 30, 2018

New London High School, Bennie Dover Jackson Middle School (New London), & Pawcatuck Middle School SBHCs	
Total visits in reporting period	**45 visits**
Average visit time (acute asthma exacerbation	**29 minutes**
Student disposition (N= 45)	
Sent back to class	**N= 44 (98%)**
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Sent to Emergency Room	**N= 0 (0%)**
Classroom Instruction Time Saved	
Students sent back to class	**44 visits**
Average classroom instruction hours per student	**3:42 hours:mins**
Total classroom instruction hours saved by all students in reporting period	**166:7 hours:mins**

Data were summarized by the National School-Based Health Alliance as part of the National Quality Initiative.

RISK ASSESSMENT QUALITY INITIATIVE PROJECT 2017-2018
ROGERS PARK SCHOOL BASED HEALTH CENTER
DANBURY, CONNECTICUT

Melanie Bonjour, MPH, Carolyn Cunningham, LPC,
Jolene Henion, APRN, Terri Sliech, Medical Administrative Assistant

Connecticut Institute For Communities, Inc | CIFC
Strengthening Families, Building Communities

Healthy Kids Make Better Learners
Connecticut Association of School Based Health Centers

Connecticut Institute For Communities, Inc. (CIFC) is an FQHC dedicated to advancing our communities and fostering greater opportunities for low and moderate income individuals and families of our service areas through a combination of health and education programs and housing and economic development projects. In addition to the community health center, CIFC operates five School Based Health Centers (SBHCs) which serve 3,629 middle school and high school students in Danbury and Newtown, Connecticut. Our SBHCs provide medical, dental and behavioral health care services, as well as health education.

The SBHC at Rogers Park Middle School serves students who may experience difficulty accessing care due to financial, legal, linguistic, and educational barriers.

In School Year 2016-2017 we began to administer the Rapid Assessment of Adolescent Preventative Services (RAAPS) to identify students at risk for negative health outcomes. As a result, we were able to identify needs, refer, and intervene in a more focused and effective way.

PLAN

A systems assessment completed Fall of 2017 revealed :

- **Enablers:** Strong collaboration between clinical, educational, and administrative staff; state level legislative support; and support from the CT Association of SBHCs;
- **Barriers:** Mental health needs exceed capacity, lack of community understanding of SBHC services and lack of parental consent; challenges with EHR – IT services contracted and off-site, lack of organized training session for Electronic Health Record (EHR)use; very busy clinic.
- Based on a similar time frame from the 2016-2017 school year, we found that none of the patients seen exclusively by the dental hygienist received the RAAPS screening and accompanying education.

•Goal: Increase identification of students at risk and provide appropriate referrals, education, and follow up.

Starting fall of 2017, all students seen by the dental hygienist will also be scheduled with the APRN to complete a RAAPS form, have a BMI calculated, and receive targeted health counseling.

Initial AIM Statement:
To increase the percentage of students seen by the dental hygienist who receive risk assessment visit from 0-90% by January 2018.

DO

We developed and implemented a new workflow for students being seen for dental services:

1. At time of dental visit, medical secretary assessed whether student had had a risk assessment completed in the past 12 months.
2. If not, the student was added to the APRN schedule the same day or another time within the next two weeks based on provider and patient availability.
3. At APRN visit, student completed RAAPS and medical secretary measured height and weight and entered into HER
4. APRN met with student individually to review form and BMI, identify areas of risk, and provide patient specific education and referrals.
5. Bi-weekly, medical secretary reviewed dental patient lists to make sure RAAPS form had been completed.
6. Using data entered into the EHR, we focused on three main health risks:
   - Body Mass Index (BMI)
   - Depression Screening
   - Flu Vaccination.

BMI and depression screening were both targeted areas of improvement from the National Coalition of SBHCs, and flu vaccination was a goal we had targeted for increasing at our SBHC for all users.

STUDY

By the end of the study period 63 of the 66 dental patients (95%) had a RAAPS completed with the APRN in the weeks following their dental appointment.

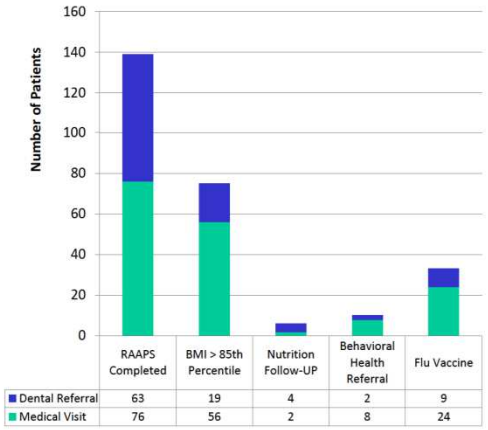
BMI Results:

30% (n=19) were identified as being overweight/obese- having a BMI greater than 85th (n=6) and 95th (n=13) percentiles.
- Each received targeted health education at time of visit
- 21% (n=4 of 19) were seen in follow up visits for further physical activity and nutrition counseling

Depression Screening Results:
- 4.7% (n=3) had a positive depression screen, and were referred to SBHC LPC for further evaluation and mental health treatment

Flu Vaccine Results:
- 100% were offered the flu vaccine
- 14% (n=9) returned the necessary paperwork & received the vaccine in the clinic

Comparison of Services Provided to Students Seen For Medical and Dental Appointments September 2017 through January 2018



Reflections on Analysis

Integrative health care is the cornerstone of the SBHC model. With the simple act of performing a standardized risk assessment we were able to connect students with the entire SBHC.

One unexpected challenge was in finding appointment time for the RAAPS at our busy clinic. Our initial plan was to have the students seen within a week, but that often had to be pushed out longer based on APRN availability.

Our mental health provider already works with a full panel of students, so adding more to her patient load resulted in her having to implement a wait list. Hopefully, the increased identification of students specifically needing mental health care can support efforts in gaining funding to increase services.

ACT

- Continue to reach out to dental students to complete BMI and RAAPS screening.
- Continue to look for opportunities to increase the number of students who are screened.
- Dental services are available at many other SBHCs. We look forward to sharing our positive findings and process with hopes of encouraging them to implement a similar program, including the CIFC high school in Danbury.
- Track ongoing expanding needs for BH capacity for data to support possible expansion of services.
- Explore options for increasing BH capacity based on newly gathered data.
- Continue to develop relationship between SBHC and school staff to connect students with services already provided by the school.

This work was supported by funding from the Connecticut Health Foundation and the Connecticut Association of School Based Health Centers.

Connecticut Institute For Communities, Inc | CIFC

Strengthening Families, Building Communities

AIM: To increase the percentage of students seen by the dental hygienist who receive risk assessment visit from 0-90% by January 2018 utilizing the Rapid Assessment of Adolescent Preventative Services (RAAPS).

Focused on 3 main health risks:

Body Mass Index (BMI) • Depression Screening • Flu Vaccination

BMI Results: 30% (n=19) were identified as being overweight/obese- having a BMI greater than 85th (n=6) and 95th (n=13) percentiles.

- Each received targeted health education at time of visit
- 21% (n=4 of 19) were seen in follow up visits for further physical activity and nutrition counseling

Depression Screening Results:

- 4.7% (n=3) had a positive depression screen, and were referred to SBHC LPC for further evaluation and mental health treatment

Flu Vaccine Results:

- 100% were offered the flu vaccine
- 14% (n=9) returned the necessary paperwork & received the vaccine in the clinic

CASBHC Learning QI Collaborative Cohort 2 (2018-2019)

Child & Family Agency Of Southeastern CT

- *Red, green, or grey…do your screenings today!*

Optimus Health Care, Inc.

- *Increase mental health screenings*

Stratford Health Department

- *Increase annual risk assessments*

Branford High School

- *It's OK not to be OK… Let's Talk!*

t: Create an alert system in order to improve the tracking of documented screenings to include: Asthma Maintenance Visits, Asthma Action Plans, Annual Physical examinat
Risk Assessment, BMI screening and counseling (>85%tile), Depression screening, Chlamydia screening, and Sexual Activity by March 2019.

atement of the Problem

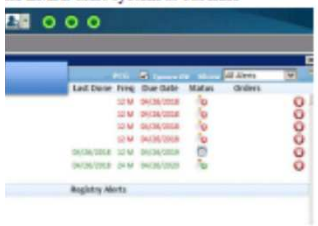
Family Agency (CFA) includes the strengthening rvices to children and their families. These ive health care services with the additional recommendations are met. Annual health

he American Academy of Pediatrics (AAP) reporting for the Department of Public Health

entation of Screening, Brief Intervention, Referral IRT) for substance use.

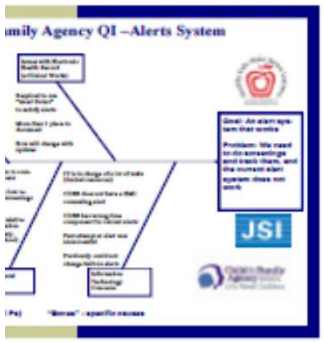
include the five Collaborative Improvement & IN) performance measures: annual examination, n screening, BMI screening, and Chlamydia

cord (EMR) is unable to support provider needs for multiple opportunities for screening and brief ue to a lacking alert system. At the start of this ed alert functionality for some screenings. d alerts were not set up for appropriate age s (academic year) and were not consistent with nts and did not facilitate screening or tracking. he EMRs alert system at baseline



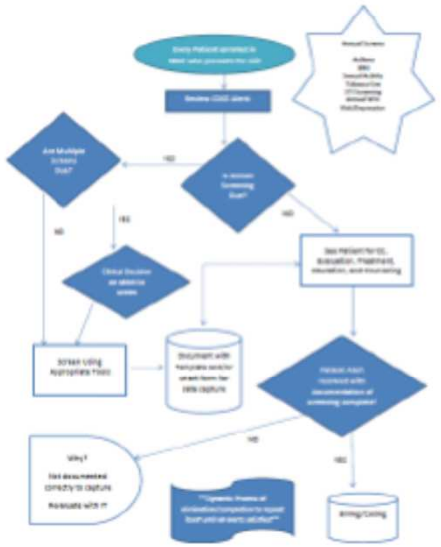
t was to establish an alert system within our Vorks/eCW) in order to identify when a patient is ual health screening(s), indicate when the enable the provider to easily track what completed pleted and which ones remain to be completed

Healthcare Improvement (IHI) framework for oot-cause analysis was performed.



PLAN

- Review EMR functionality
- Identify screening-related measures to determine which alerts should be prioritized
- Consult with IT on approaches to integrating screening alerts into EMR
- Test alerting mechanism



DO

- We met with our IT director to explore the capabilities and options within the current code/functionality of our EMR.
- Determined that our EMR's pre-populated alert functionality does not allow for new alert creation nor modification of pre-populated alerts (e.g., date parameters, populations, etc.).
- Reassessed our process and reframed objectives to explore the EMR's basic functionality in order to troubleshoot within the limitations.
- Identified the measures and definitions and created a data plan table to prioritize target alerts
- In October 2018, the IT Director attended an eCW conference to further investigate our challenges/barriers.
- We continued to screen patients and test which key strokes/entries in EMR would turn the alerts "on" or "off."

List of Goal Measures and Accompanying Alerts

Name of measure	Definition	Numerator	Denominator	Data source (updated)
Asthma Action Plan	Action Action Plan is on file or completed by SBHC once per year	ICD/AAP is documented in billing codes signifying AAP was developed or on file	All SBHC USERS with Asthma in their problem list	EHR run report Note: we can't do a procedure alert for this one, because it will come up on every kid
Asthma Maintenance	Asthma symptom assessment is done once per year	Asthma Smart form completed once per year	All SBHC USERS with Asthma in their problem list	EHR run report CDSS alert satisfied
Annual Physical Exam	Physical exam was done once per year	202.5, Z00.121 or z00.129 in assessment codes	All SBHC USERS	EHR run report
Annual Risk Assessment	CRAFFT was done once per year Age 13-21 years	CRAFFT documented in chart: Smart form: Structured data – CFA Mental health services – CRAFFT negative or positive	All SBHC USERS	EHR run report CDSS alert not working – Alcohol use screening – can it be linked to our CRAFFT We can't edit CDSS Practice Alert created 10/24/18. Must receive and review procedure.
BMI documented	BMI is documented > 3 years old at least once per school year BMI is on the problem list	BMI is documented in a note and charted on Problem list	All SBHC USERS	EHR run report CDSS alert satisfied
BMI Counseling	BMI > 85% patient was offered counseling once per year	BMI counseling is documented in a note (Structured data – Preventative Medicine – BMI counseling – Yes)	All SBHC users > 85% file	EHR run report Practice Alert created 10/24/18. Must receive and review procedure.
Chlamydia Screening	Sexually active > 13 years old are offered chlamydia screening once per year	Chlamydia screening is offered (Structured data – HPI- declines screening Yes or No)	All sexually active >13 years old	EHR run report CDSS alert satisfied (once per year)
Depression Screening < 11 year old	PSC done once per year *Depression screening < 11 y.o*	Smart form: Structured data – CFA Mental health services – PSC or PHQ negative or positive	All SBHC USERS	EHR run report CDSS needs to be linked to satisfy Practice Alert created 10/24/18. Must receive and review procedure.
Depression Screening > = 11 year old	PHQ done once per year	Smart form: Structured data – CFA Mental health services – PSC or PHQ negative or positive	All SBHC USERS	EHR run report CDSS needs to be linked to satisfy Practice Alert created 10/24/18. Must receive and review procedure.
Influenza vaccine	Influenza vaccine is given to those with HIGH RISK	90686 or 90672 is given	All High risk patients	EHR run report CDSS alert satisfied
Sexual Activity Screening	All asses > 13 years old screened once per year	SMART form or Screening is done (Structured data – HPI- Sexually active yes or no)	All SBHC USERS	EHR run report CDSS alert satisfied (once per year)
Smoking Status	Users > 12 years old are screened once per year	Charted in note (Structured data – Social history- screen/no or other)	All SBHC USERS	EHR run report CDSS alert satisfied (once per year)

STUDY

We have 2 kinds of alerts:

Clinical Decision Support System (CDSS) Global Alerts	Prepopulated alerts built into EMR, some are diagnosis or patient-specific.
Generic Practice Alerts	Able to be created by each agency, parameters are able to be modified

We had mixed outcomes:

- We were able to change date range and age parameters for the EMR alerts: with one exception, that the chlamydia screening will not turn on more often than every 12 months.
- The CDSS (Clinical Decision Support System) alerts do not capture smart form screens (i.e.: PHQ2 and CRAFFT) which the NPs are using for better documentation and more frequent screenings (e.g., SBIRT).
- We were unable to change the prepopulated "Global Alerts"
- "General Practice Alerts" can be modified and IT can also create entirely new ones, which appear on the screen directly below the CDSS/"global" alerts.

With this new procedure, the NP documents that performed, which then satisfies the practice alert coded based on satisfaction:
- Green is completed,
- Grey is acknowledged or suspended, and
- Red is due now.

ACT

Although CDSS alerts cannot be changed to coi the Agency, the Generic practice alerts can be ut changed to align with our goals.

In addition, CFA can use the EMR's functionalit what screenings are completed across their entir CFA currently uses this functionality for DPH re necessary analyses.

Further endeavors will create an alert that only a populations. For example, CFA wants to investig alerts." For example, the BMI counseling alert w patients who are above the 85th percentile.

A long-term goal is to expand use of the alerts to Further discussion and follow-up should identify facilitators to expanding the alert systems to oth

Another possibility for further investigation is a rates with new system compared to initial rates.

REFLECTION ON THE ALE

The overall goal of this project system to ensure care is being p enhancing **provider** ease of EM documentation. Utilization of th should lead to more clients pro screenings, and furthermore, fo interventions.

Red, Green, or Grey… Do your Screenings today!

- Created EHR Global Alert System in order to assure Clinical Standards being met annually
  - Depression Screenings (PHQ2, PHQ9)
  - SBIRTS (PHQ9 and CRAFFT)
  - Asthma Action Plans
  - Asthma Maintenance Visit
  - Annual Physical Exam
  - Annual Risk Assessment
  - BMI Screening and Counseling >85%
  - Chlamydia Screening
  - Sexual Activity Counseling
  - Influence Vaccination
  - Smoking Status

It's OK not to be OK so let's talk.

Need to list team: name and role/credential

SCHOOL BASED HEALTH CENTERS

Branford High School (BHS) is home to approximately 860 students and the School Based Health Center (SBHC) enrolls 90% of the student population. The racial profile includes primarily-people who self-identify as white. The two largest minority groups are Asian Pacific and Hispanic. The SBHC offers medical and behavioral health services to any student enrolled. An estimated 3.1 million adolescents aged 12 to 17 in the United States had at least one major depressive episode. This number represented 12.8% of the U.S. population aged 12 to 17. The prevalence of major depressive episode was higher among adolescent females (19.4%) compared to males (6.4%).[1]

Many patients with depression may not say they are depressed and come into the office complaining of physiological symptoms and it is up to the primary care provider to figure out what is going on.

In primary care, *"more than half of outpatient medical visits are for somatic complaints, which are often associated with depression and anxiety. However, even if patients with depression and anxiety complain of only somatic symptoms, they will answer questions about the presence of depressive or anxious symptoms if asked."*[2]

The U.S. Preventive Services Task Force[3] recommends that adolescents be screened for depression using a validated questionnaire, and only when systems are in place for diagnosis, treatment, and follow-up.

Initial Approach:

Professional Staff Involved:

- School Based Nurse Practitioner (APRN), School Based Licensed Clinical Social Worker (LCSW), and School Based Administrative Associate

Initial Process:

- EHR-embedded depression screening completed during a physical.
- *Positive score triggered and informal referral to* LCSW
  - Students who presented at routine medical visits other than physicals with depressive symptom concerns were referred to the LCSW.
  - Students who were referred to the LCSW received a depression screening, however, there was no universal tool being used between providers, but a consistent tool was used by the LCSW.

Patterns Observed:

- The APRN and LCSW used different screening tools.
- A depression screening was being completed by the APRN, but only when a physical was completed.
- There was no formal process for documentation of any follow up for screenings conducted at visits other than physicals.

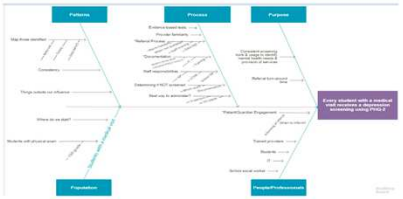
[1] National Institute of Mental Health, www.nimh.nih.gov/health/statistics/major-depression.shtml

[2] USPSTF.

[3] Gaynes, The Silent Illness: The Importance of Screening for Depression in Primary Care, October 2, 2017. *Primary Care Companion to the Journal of Clinical Psychiatry*

PLAN

We developed a fishbone diagram outlining factors that should be in place to ensure depression screening of our students, which informed our plan.



Complete a depression screening, using the PHQ2 as a tool, for every 10th grader who receives a physical at the SBHC.

- Implement PHQ2 for each 10th grader receiving physical exam at SBHC. (Start small to prevent a surge in referrals to the LCSW)
  - NP administers PHQ2
  - Each positive PHQ2 will be referred to LCSW
  - Warm handoff will be made to LCSW within one business day.
- Develop data collection tool

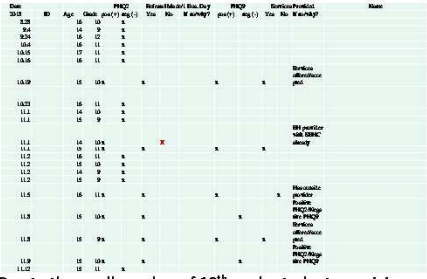
Plan for Workflow

Initial Specific AIM: To provide an annual depression screening to all enrolled students in the SBHC at Branford High School with a medical visit.

DO

PDSA #1 focused on screening only on 10th graders receiving a physical.

- Implemented PHQ2 for each 10th grader receiving physical exam at SBHC. (Started small to prevent a surge in referrals to the LCSW)
  - ARNP administered PHQ2
  - Each positive PHQ2 was referred to LCSW
  - Warm handoff was made to LCSW within 1 business day.
- Developed data collection tool



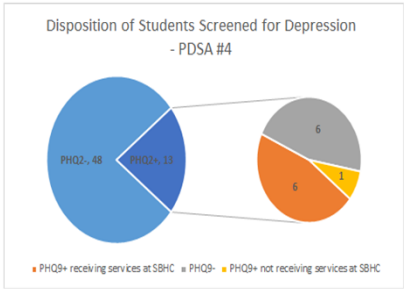
Due to the small number of 10th grade students receiving physicals in the first couple of months of implementation, we grew the initiative through several PDSA cycles. Adjustments were as follows:

10-1-18 PDSA#2	Expanded implementation PHQ2 for each 9th and 10th grader receiving a physical exam at the SBHC
10-15-18 PDSA#3	Expanded implementation to include PHQ2 for each 9-12th grader receiving a physical exam at the SBHC
11-1-18 PDSA#4	Expanded implementation to include PHQ2 for every student with a medical visit

Every student who screened positive on the PHQ2 during the initial visit with the medical provider was referred to the School Based LCSW and provided a warm hand-off within one business day.

STUDY

This project allowed our SBHC to assess and identify many students who would not have been assessed during a routine medical visit. As part of PDSA #4, we screened 122 students using the PHQ2. This resulted in 23 PHQ2-positive students who were all referred to the LCSW for follow-up and screening using the PHQ9. Of these, 10(43.5%) screened positive on the PHQ9, and 8 of the 10 (80%) began receiving services as the SBHC.



This process has become standard practice at Branford High School and Walsh Intermediate, as of January 2019.

REFLECTIONS ON ANALYSIS

One of the greatest experiences to come from this project was the evolution of the team. This small group of professionals truly came together and strengthened their team approach to collaborate. Through the collaborative approach our team took to this project, we were able to identify pitfalls and make changes efficiently. In addition, starting small is key to ironing out details before expanding a project.

When we expanded our population during PDSA #4, we saw an unexpected increase in positive PHQ2 screens and corresponding increase in workload.

Lessons Learned:

- *Clarification of 24-hr warm hand-off vs. 24-hr admin of PHQ9 and full assessment:*
  - *It was important to clarify for the LCSW what a 24 hour warm hand-off looked like. It was initially thought by the provider that the warm hand-off included a full assessment and the PHQ9. The clarification was that the warm hand-off only entailed a quick meet and greet and possibly scheduling the full assessment for the future.*
- *Why students with positive PHQ9 may not have been referred:*
  - *Some students were not referred to treatment (see data collection sheet) because they are already in treatment with an outside agency or connected within the school for therapy. Some students declined treatment and therefore the APRN will follow them closely and continue to support them as well as communicate with parents and school.*
- *Screening of students who would not have otherwise been screened (e.g., coming in only for flu shot):*
  - *Since all students receiving a medical visit completed a PHQ2, some students who would not have otherwise been screened were found to have a positive PHQ2.*
- *Through screening, we also identified other issues besides depression -- for example, drug use and abuse, weight concerns, and anxiety.*

ACT

- *Continue to use this process as a standard practice.*
- *The Walsh Intermediate School has adopted this practice with students 12 and older, with minor adjustments:*
  - *The APRN, following a warm hand-off with any positive PHQ2, will contact the guardians.*
  - *The LCSW will contact the guardians following the warm hand-off.*
- *Next Steps:*
- *Branford High School Health Center will identify a final way to indicate on patients' paper charts (by year) that a student has had a PHQ2 assessment completed.*

This work was supported by funding from the Connecticut Health Foundation and the Connecticut Association of School Based Health Centers.

Branford High School
It's OK not to be OK… Let's Talk!

- **Specific AIM: To provide an annual depression screening to all enrolled students in the SBHC at Branford High School with a medical visit.**
- This project allowed SBHC to assess and identify many students who would not have been assessed during a routine medical visit.
- Screened 122 students using the PHQ2.
- This resulted in 23 PHQ2-positive students who were all referred to the LCSW for follow-up and screening using the PHQ9.
- Of these, 10(43.5%) screened positive on the PHQ9, and 8 of the 10 (80%) began receiving mental health services at the SBHC.

Cognitive Behavioral Interventions for Trauma in School (CBITS)

- **CBITS** is a school-based group intervention (for grades 5-12) that has been shown to reduce PTSD, depression symptoms and psychosocial dysfunction in children who have experienced trauma.
- **Bounce Ba**ck is an adaptation of the CBITS model for elementary school students (grades K-5).
- Trauma screens completed by child and parent/guardian determine child's eligibility
- 10 group sessions
  - 2 individual sessions, 2 parent education sessions
- Group setting allows children who have experienced trauma to feel less alone.
- Children build skills to manage trauma symptoms.

Given that need always exceeds capacity in SBHC services, evidence-based group modalities allow clinicians to serve more children.

Child Health and Development Institute of Connecticut, Inc.

CBITS/Bounce back

Child Health and Development Institute of Connecticut, Inc.

- 1,285 children have received either CBITS or BB *(data available from 2015 through June 30, 2018)*
- 54 sites across eleven school districts offered CBITS and/or Bounce Back in SYF 2018.
- Student traumatic stress symptom scores (PTS) decreased significantly with CBITS and Bounce Back. The average score prior to treatment was well above the threshold for a likely PTSD diagnosis. Upon completion of treatment, the average scores were below that threshold.
- CBITS and Bounce Back groups report an 89% completion rate, much higher than traditional outpatient clinic treatment completion rates.

Access to care & Engagement

CASBHC: Connecticut School-Based Health Centers Engage Adolescent African-American and Latino Males in Mental Health Services (2012)

Summary Findings

- • SBHCs remove or mitigate barriers to mental health treatment for African- American and Latino adolescent males including lack of transportation, lack of insurance, and stigma
- • SBHCs provide an atmosphere of safety, confidentiality and trust; characteristics that are of paramount importance to adolescent males
- • The most important factor in the success of the mental health services offered by school based health centers is the staff, perceived by students as open and nonjudgmental.
- **• In Connecticut's School Based Health Centers (SBHC), African-American and Latino adolescent male students utilize mental health services at an average of 13 visits per student in the SBHC. When African-American and Latino adolescent males initiate mental health treatment in community settings, the majority drop out after 2-3 sessions.**

Preventative & Health Promotion Activities

- Mental Health Screening
  - Annual Mental Health Screen to include depression and suicidality
    - Patient Health Questionnaire-2 (PHQ2)
    - Patient Health Questionnaire-9 (PHQ9)
    - Pediatric Symptom Checklist (for children <10)
- Bullying
  - Mental health and medical staff
    - Classroom Presentations
    - Individual Face: Face visits
  - Substance Use- Screening and Early Intervention
  - Screening, Brief Intervention, and Referral to Treatment (SBIRTS)

SCREENING, BRIEF INTERVENTION AND REFERRAL TO TREATMENT (SBIRT)

- The primary goal of SBIRT is to identify and provide early intervention to youth who are experimenting with or already regularly using illicit substances.
  - **Screening**: Universal screening for quickly assessing use and severity of alcohol; illicit drugs; and prescription drug use, misuse, and abuse
  - **Brief Intervention**: Brief motivational interviewing and psychoeducation for any positive screens
  - **Referral to Treatment**: Referrals to mental health services or specialty care for patients with substance use (using *Teen Intervene Model*, a coping-skills-training program)

SBIRTS: CASE EXAMPLE

IN THE WORDS OF THE TREATING NURSE PRACTITIONER

13 year old male in middle school was seen at the SBHC for rash and a mental health screen was administered as part of SBIRT. His PHQ2 was positive so the PHQ9 was also given, which was positive. Discussion with the patient revealed that he has been experiencing more difficulty with organization in school and was finding it more and more difficult to keep up. He reported: difficulty focusing (increasing over the last several years), feeling poorly about himself largely because of this, and that he had been experiencing more anger, peer disagreements and feelings of sadness. He was getting by in school, so no red flags had been raised, and he is on the quieter side so was never disruptive in class. He lives with 2 loving parents so there is no substantial strife in the home. In short, this is a kid that can easily fall through the cracks.

The NP discussed the PHQ9 results with the parents and the patient gave permission to share all parts of his/NP conversation with his parents as well. The NP also spoke with guidance counselor, who reached out to teachers of the student, some of whom reported they have seen some change in him recently. This prompted a PPT meeting, and when the school psychologist looked back through his school records, she found evidence of enduring focus issues that have seemed to worsen over time. A psychiatric evaluation was scheduled and he was found to have ADHD that has been undiagnosed. In addition, the student reported openness to seeing an outside counselor (he is private and did not want peers to know he came to SBHC for counseling). Parents were supportive of this, so an appointment was set with a mental health counselor. Parents had also witnessed a decrease in self-esteem.

Next year this student will be in high school, so identifying issues now and having the year to work on them before high school will help to put measures into place that will best support him for future success. Kids who are in crisis or who have urgent needs are the ones that are often identified more easily in school systems. It is the more functional kids who can be most at risk for falling through the cracks. Yet not identifying these kids can set them up for future low self-esteem and lower achievement. Universal screening provides one avenue by which these kids may be identified and their needs addressed in a timely manner.

What's Next? Future of SBHC

Clinical Standards

- Sustainability of SBHCs will require that sites are meeting national clinical performance standards from the NQI CoIIN.
- Additional Standard Performance Measures will include asthma outcomes, immunizations, and chronic care management.
- Electronic Health Records are required in DPH contracts in order to extract data on the clinical performance standards.

Results Based Accountability (RBA)

- *"Is anyone better off?"*
  - Outcome measures based on clinical performance standards will be required to show that patients are receiving quality, cost-effective care.
    - Asthma Action Plans
    - Improvement in functioning
    - Access and Utilization of Services
- DPH requires contractors to complete RBA Report Cards with outcome data.
- Future of funding:
  - Understanding where SBHCs fit into value based care
  - Understanding the impact of SBHCs in terms of cost-savings.
    - "Multiply your multipliers"
- Measuring preventative services:
  - E.g.: How do we quantify…
    - the high school student that did not become an addict because of early intervention through SBIRTS?
    - the child that did not require multiple psychiatric hospitalizations because her trauma was managed at age 8 instead of festering through high school?
    - the student that did not become truant and subsequently drop out?

SBHC Accreditation

- SBHC that are able to meet Clinical Standards, HEDIS measures, and Performance Measures will be able to apply for Accreditations.
- National Committee of Quality Assurance (NCQA)
  - SBHC Medical Home Recognition

Frequently Asked Questions

- **How is a SBHC different from the school nurse's office?**
  - A SBHC is a fully-licensed primary care facility, providing a range of physical and mental health services, and in some sites, dental services. SBHCs and school nurses work closely together, with school nurses able to refer students to the SBHC to resolve student health problems.
- **Are parents' rights and responsibilities respected by SBHCs?**
  - Parents must sign a Parent Permission Form for students to receive services from SBHCs. It is the mission of SBHCs to work in partnership with parents, respecting the age, cultural values and family situation of every student.
- **How is a youngster's privacy protected by SBHCs?**
  - Like health care provided in a private physician's office or hospital clinic, all services provided by SBHCs are strictly confidential. SBHCs abide by nationally-accepted health care standards, breaching confidentiality only in life or death situations, or legal mandate.
- **Are SBHCs only for inner city schools?**
  - By design, SBHCs are aimed at, but not limited to, students who do not have access to a medical home or whose families have little or no health insurance. However, as more and more parents work outside the home, even children who can afford health care often do not receive care in a timely manner. Consequently, children from all socioeconomic groups, in all types of communities, benefit from the presence of a SBHC in their school.
- **Are SBHC staff members qualified to provide primary health care to students?**
  - Under the policy governing Connecticut SBHCs, they are staffed by teams of professionals specializing in child/adolescent health, including licensed nurse practitioners or physician's assistants, clinical social workers, medical assistants, and licensed oral health professionals, operating under the guidance of a medical director.
- **How do educators react to SBHCs?**
  - Throughout Connecticut, school administrators and faculty have come to recognize the unique role of SBHCs in ensuring that students come to school "ready to learn". Often overburdened by societal pressures, today's educators welcome the presence of a team of health professionals, dedicated to effective prevention and treatment of student's physical and emotional problems.