

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.

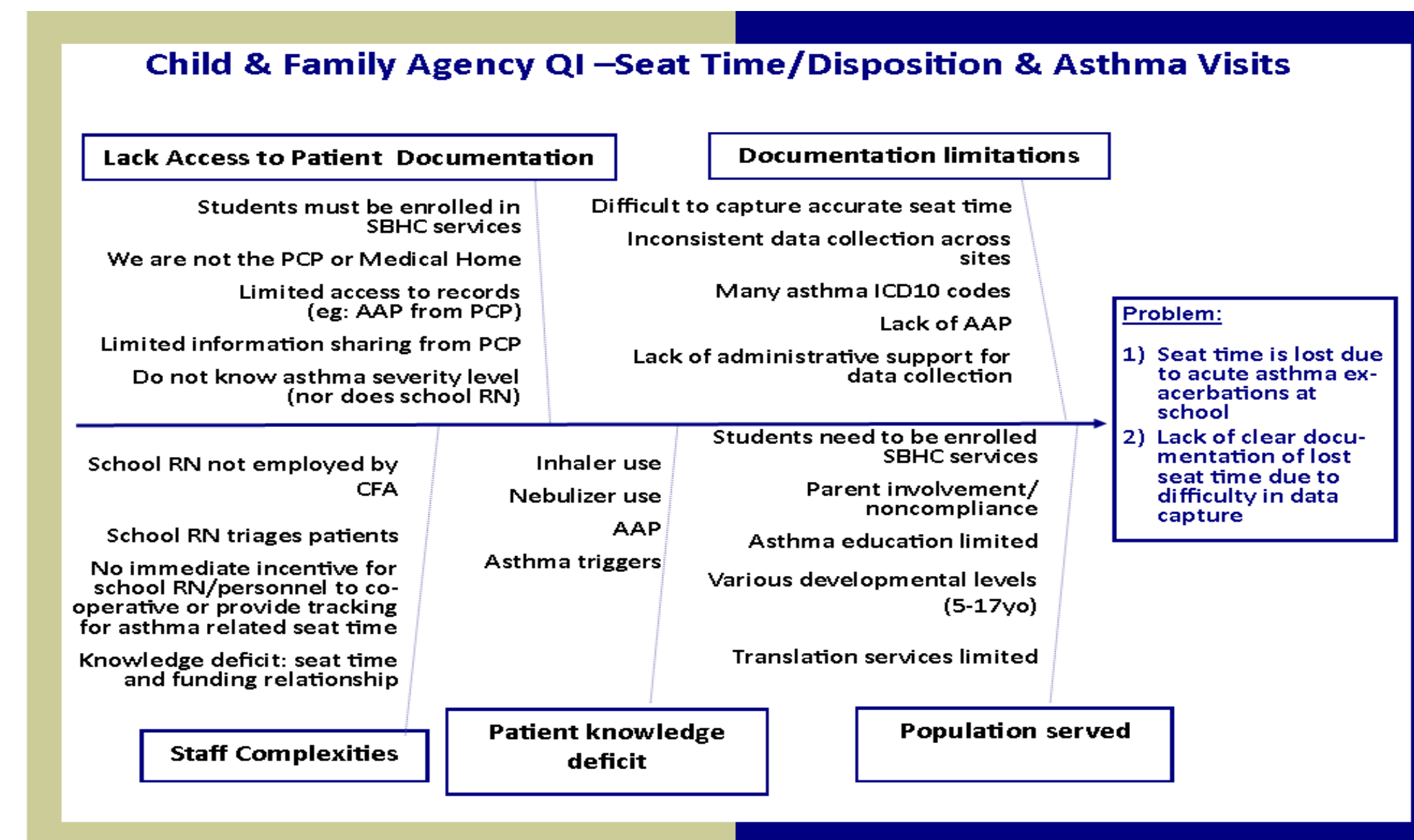
PLAN

- 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.

- Informed school nurses at participating SBHCs regarding project and intent.
- Created an asthma seat time log to collect data on time in/out, treatment provided and disposition of visit.
- 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.
- Assessed our region(s) school administrators, business offices, and school personnel on chronic absenteeism and level of reimbursement provided for services at their schools.
- 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 that is required for funding services for SBHCs.

- 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.
- Report project findings to stake holders, including advocacy efforts demonstrating fiscal implications 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 received from the state for their attendance.
- Of the 182 student asthma visits across all 14 SBHCs, 180 students were not sent to the ER, saving 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