



Breathing Easier: SBHCs as Leaders in Addressing Environmental Asthma Triggers

September 23, 2020





Presentation Objectives

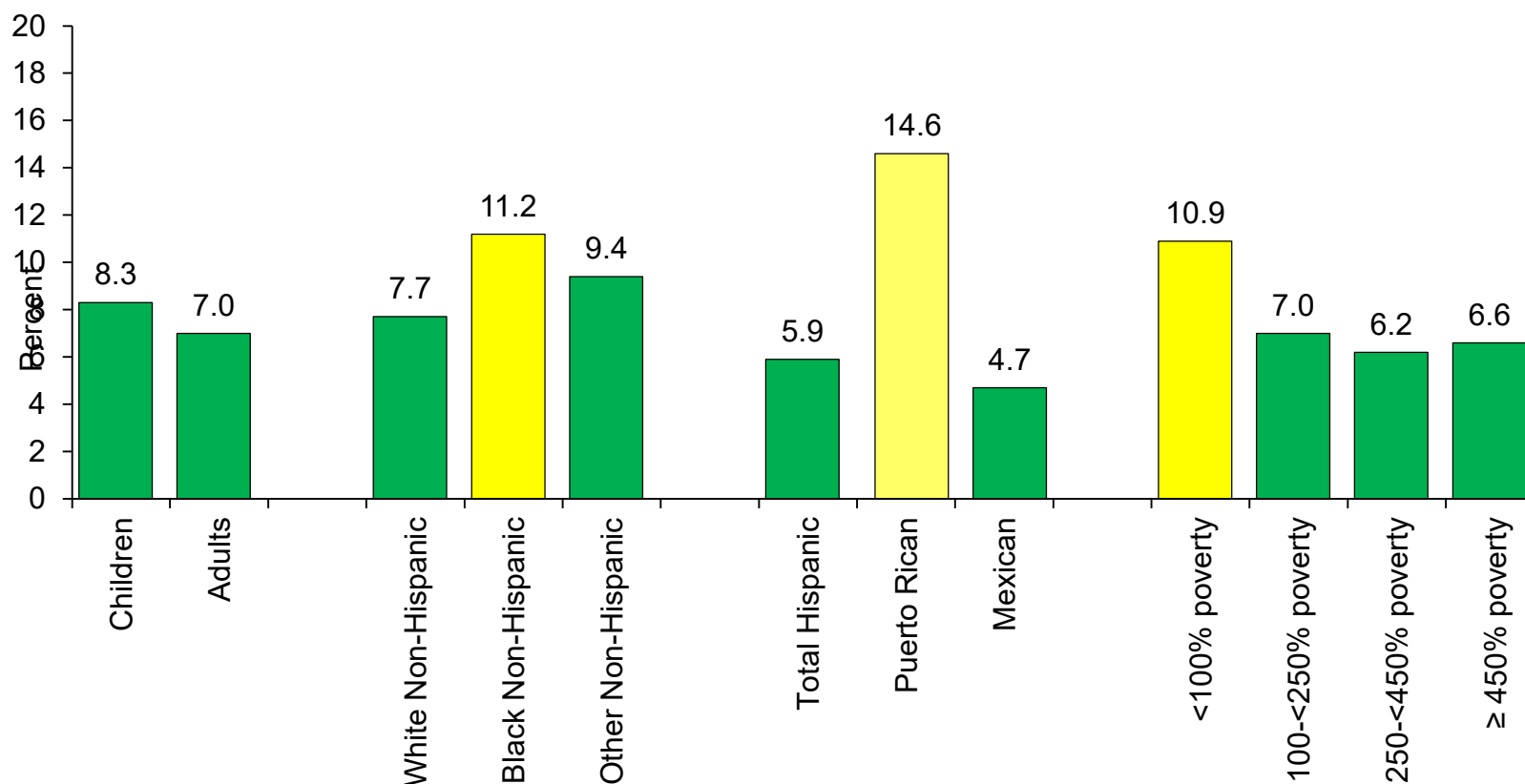
- **Describe** the role of SBHCs in reducing asthma disparities and chronic absenteeism among children and adolescents.
- **Access** tools to support SBHCs in reducing exposure to environmental asthma triggers
- **Identify** best practices for reducing environmental asthma triggers in schools and communities that are replicable to the field.

Asthma in children

- 7 million children under the age of 18 in the U.S. have asthma
- Most common cause of disability among children in the U.S.
- Leading cause of school absences due to chronic disease.

Asthma disparities

Current Asthma Prevalence by Age Group, Race and Ethnicity, and Poverty Status (2013)



How do we reduce the burden of asthma?

Utilize a broad and comprehensive approach that aligns with National Guidelines

- Assessment of disease severity and control
- Comprehensive pharmacologic therapy
- Patient education
- Environmental control measures to avoid or eliminate factors that contribute to asthma onset and severity

What do we mean by environmental asthma triggers?





The important role of SBHCs

SBHC users are:

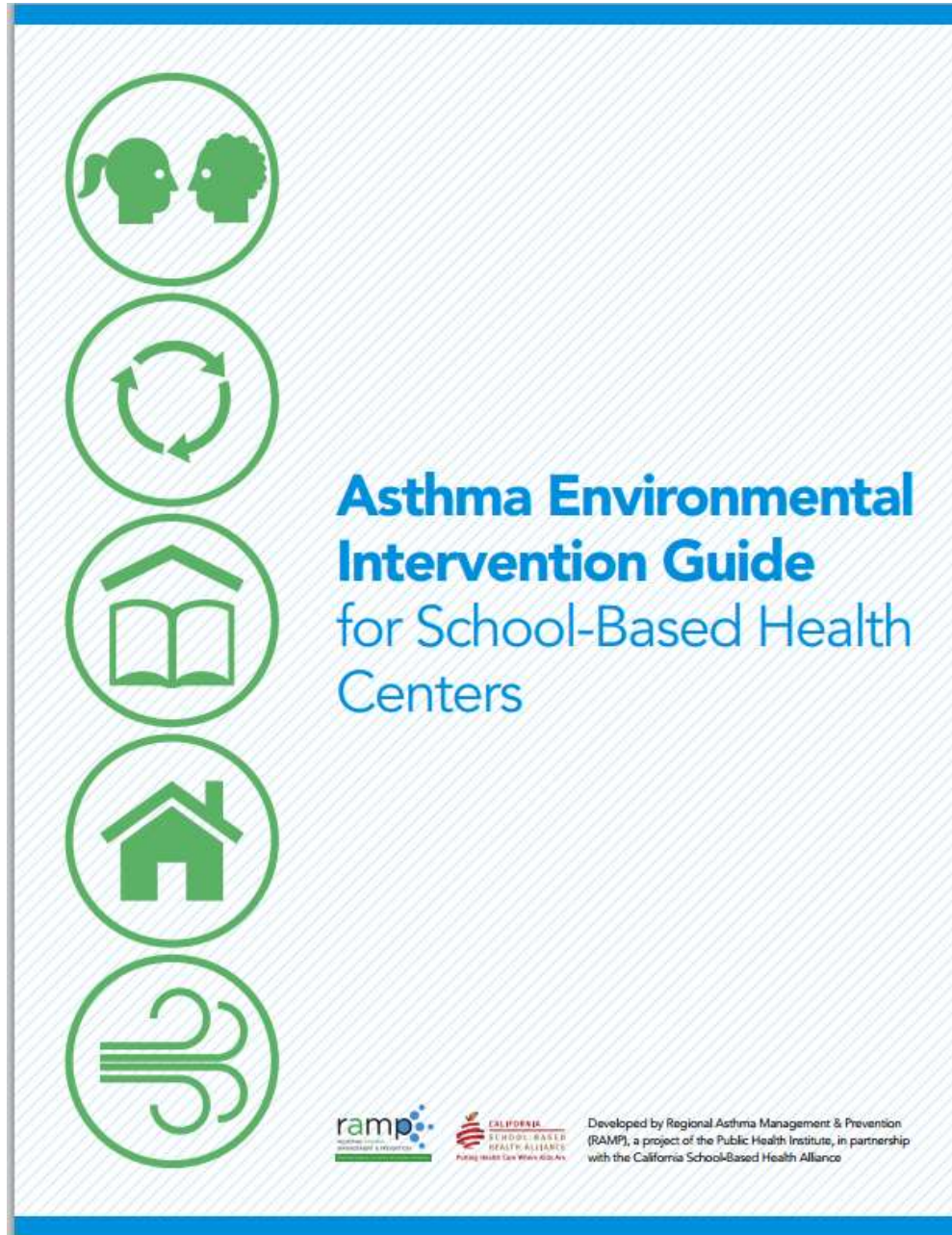
- Less likely to go to the ED or be hospitalized for asthma
- Less likely to have asthma-related restricted activity days
- Less likely to miss school as a result of their asthma



Underlying premise of the project:

SBHCs provide an ideal setting in which to incorporate environmental components into chronic disease management programs, leveraging their role as a strong link between the student, school, and home.

http://www.rampasthma.org/uploads/asthma_guide_sbhc.pdf



At-A-Glance: How can SBHCs engage in interventions to reduce exposure to environmental asthma triggers?

As School-Based Health Center staff, you can...



Strategy 1: Education

- Conduct one-on-one education about environmental asthma triggers during patient visits.
- Conduct, organize, or support school-based group education for students.
- Provide education for school staff.
- Print/order and distribute materials, tools and curricula for educating students, families and school staff.



Strategy 2: Case Management

- Incorporate strategies to reduce exposure to environmental asthma triggers into your case management approach to students with asthma.
- Facilitate connections to resources that exist, communicate with and educate other partners critical to effective asthma management (parents, school staff, etc.), and identify when direct advocacy is needed.



Strategy 3: Improving Indoor Air Quality in Schools

- Increase awareness.
- Conduct or facilitate an assessment.
- Support or lead a comprehensive approach to improving indoor air quality.

- Support or lead an intervention to address specific triggers or other factors (such as mold and moisture, chemical irritants from school and personal products, and ventilation.)



Strategy 4: Improving the Students' Home Environments

- Establish referral systems for in-home asthma education and environmental remediation programs in the community.
- Educate students and families.
- Provide supplies to students and families.
- Utilize case management strategies to connect families with resources.



Strategy 5: Improving Outdoor Air Quality around the School and Community

- Conduct an assessment of local air quality.
- Partner with the school to implement programs and policies to reduce exposure to outdoor triggers near the school.
 - Increase awareness and protect students on high pollution days.
 - Develop anti-idling education and policies.
 - Develop approaches to reduce pollen exposure.
- Partner with others in the community on clean air advocacy.

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Managing Asthma Triggers from School to the Home: How One School-Based Health Center is Educating a School Community

Located in Milwaukee County in Southeast Wisconsin, Frances Starns Discovery Learning School serves a predominantly African American community (96% of students are Black, non-Hispanic) and has one of the highest rates of asthma in the state, at 22%. Contributing to these high rates of asthma are a variety of environmental factors.



Many schools in Milwaukee County are over 100 and have limited resources to address issues such as excess dust, and pests. Many homes in this county are also old, non-owner occupied, and in various states of disrepair, further contributing to asthma triggers. Additionally, nearly one in four (24%) adults in Milwaukee County are smokers, according to the 2010 Behavioral Factor Surveillance Survey.

Rita Higgins, the Asthma Management Program Coordinator with the Children's Hospital of Wisconsin School Nurse Program understands how environmental factors contribute to asthma and impact student. She explains that, "asthma can result in unproductive, missed classroom time for students and missed for parents." Rita and her team at Frances Starns Learning School recognized the need to integrate environmental asthma trigger education into existing Asthma Care Program, and through a school hospital partnership, they worked to update curriculum change how asthma education was delivered.

The revised, comprehensive approach to reduce environmental asthma triggers targeted the entire community, including students and staff. Community education, empowerment, and advocacy activities:

- 1 A survey to help students identify triggers at school
- 2 Education classes to help students identify triggers that could make changes to the environment
- 3 Role playing scenarios and tools to help students respectfully advocate for changes at home that would reduce asthma triggers

"A vibrant community begins with vibrant and healthy families, so helping reduce the burden of asthma helps the student, family, and community reach their maximum potential."

Leveraging Medicaid Delivery System Reform to Improve Asthma Management: The story of a network of 20 School-Based Health Centers in Texas

The 20 school-based health centers (SBHCs) run by the John Peter Smith Health Network serve over 40,000 children each year. There is great diversity in race, ethnicity, and English language ability and the majority of children seen are uninsured or underinsured. Tarrant County has asthma prevalence and emergency department visit rates that are higher than state or national averages. To address this, the School-Based Health Center Network leveraged their unique relationship with schools, students, and families along with the funding opportunity provided through DSRIP to launch a comprehensive asthma program



DSRIP, the Delivery System Reform Incentive Payment, provides states with significant funding that can be used to support hospitals and other providers in changing how they provide care to Medicaid beneficiaries. Texas was one of the first three states in the country to implement DSRIP initiatives, under which funds to providers are tied to meeting performance metrics. The John Peter Smith Health Network has a DSRIP agreement with the state to improve asthma management for children, which led to the creation of a comprehensive asthma program that reaches 2,000 children with asthma each year.

As a first step in the program, each SBHC identifies either existing or new patients between the ages of 2 and 26 with a diagnosis of persistent asthma. During the first visit, the providers focus on assessing asthma control, understanding history and symptoms, conducting allergy tests, and providing medications. They conduct one-on-one education and schedule a group asthma educational follow-up visit.

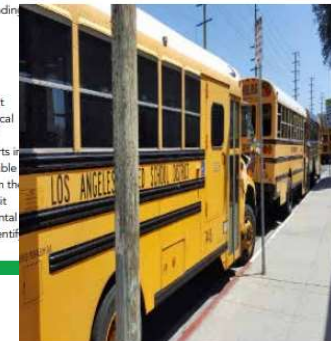
The providers know, however, that asthma management and prevention cannot be achieved solely through clinical care. Beverly Ewing, School-Based Clinic DSRIP Nurse Practitioner, explains, "We all know that prevention starts in the home and in the environment." The program was able to utilize four bilingual Community Health Workers from the Community Health Department to conduct a home visit during which they educate the family about environmental asthma triggers and conduct a home assessment to identify

"We all know that prevention starts in the home and in the environment."

—Beverly Ewing, School-Based Clinic DSRIP Nurse Practitioner

Addressing Asthma and Air Pollution: How one School-Based Health Center in Los Angeles County partnered with bus drivers to reduce air pollution

Asthma is a significant concern in Carson, CA, just 14 miles south of downtown Los Angeles. The Carson Wellness Center, which provides services to students from three schools that share a common campus, as well as individuals and families in the surrounding community, has 1,400 patients with a documented diagnosis of asthma.



The clinic staff know that a common environmental asthma trigger—outdoor air pollution—isn't something that patients and their families can fully control, yet it's a significant problem in their community. The Center is on the corner of a busy intersection and the bus pick-up location for the schools is directly behind the center. Staff in the clinic reported a smell of exhaust fumes, mostly in the mornings and afternoons on really hot or really cold days. They realized that the smell was coming from the school buses idling outside of the clinic, right next to the air intake vent. They augmented this anecdotal data with data collected from an assessment they conducted with patients to increase their understanding of which asthma environmental triggers are most common. The data from the student assessments pointed to idling buses and trucks as the most concerning asthma environmental trigger in their school community.

In response, the Wellness Center staff undertook efforts to reduce bus idling. They began by conducting a survey of bus drivers to gain a better understanding of their knowledge and behaviors. What they learned is that the bus drivers were idling in order to keep their air conditioners or heaters on. They knew that there was a district policy against idling, but they didn't know about the health effects of idling.

So, the Wellness Center staff invited the drivers into the center for an educational session. They identified a champion and she made sure that all of her colleagues attended the session. She motivated the other drivers to attend and texted them reminders. The center staff provided snacks for the bus drivers during the training.

"These changes could not have occurred without our partnership with the bus drivers. Sometimes the best health champions come from unexpected places."

<http://www.rampasthma.org/uploads/casestudies.pdf>

Whitney Young Health

Albany, New York

National SBHC Asthma Demonstration Project Collaborative



Impact of Asthma on Elementary Students

- South End (12202) had asthma ED rates 4-5 times higher than Capital Region and Upstate NY
 - 3.5 times higher than Albany County overall
- West End (12206) had 4.5 times higher than Capital Region and Upstate NY
 - 3.2 times higher than Albany County overall
- Environmental triggers (mice infestations, public housing, older buildings, moisture) lead to elevated absenteeism, ER utilization, and hospitalizations
 - Asthma the focus of paneled discussion of Albany County School Nurses Meeting



Our Interventions!

- Used Inform Incentivize Approach focusing on THREE target populations:
 - Caregivers of students with asthma
 - School Staff
 - Students
 - ALL students, not just those with an asthma diagnosis



Caregivers

Inform	Incentivize
<ul style="list-style-type: none">• Education via virtual platform	<ul style="list-style-type: none">• Raffles

- Utilized student interns to develop and engage participants
- Work collaboratively with schools and Asthma Coalition of Capital Region (ACCR)
- Analyzed results to identify common misconceptions and tailor materials to address



School Staff

Inform

- In-person training with pre/post evals

Incentivize

- Asthma-friendly cleaning supplies

Cleaner's Checklist For Asthma (Modified)

DO YOU REGULARLY DO THE ITEMS LISTED BELOW?

GENERAL CLEANLINESS

	Yes	No	N/A
1. Dust and vacuum rooms.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Remove trash daily.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Make sure room is free of pests (bugs, mice, etc.....)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Use unscented, school-approved cleaners and air fresheners, if any, in rooms.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EXCESS MOISTURE IN CLASSROOMS

	Yes	No	N/A
5. Wipe moisture from windows, windowsills, and window frames.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Make sure cold water pipes are free of moisture.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Make sure areas around and under classroom sinks are free of leaks.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Make sure ceiling tiles and walls are free of leaks (<i>discoloration may indicate periodic leaks</i>).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Clean all spills promptly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE AND VENTILATION

	Yes	No	N/A
10. Is the temperature comfortable? (<i>should generally be 72°F–76°F</i>).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Make sure there are no drafts/breezes.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Know locations of air supply and return vents.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EDUCATIONAL SUPPLIES (Art, Science, Industrial/Vocational)

	Yes	No	N/A
13. Review supplies and their labels.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Make sure Material Safety Data Sheets are accessible.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Develop and perform spill clean-up procedures.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Label all chemicals accurately with date of receipt/preparation & safety precautions.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Store all supplies according to manufacturers' recommendations.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Understand and follow recommended procedures for disposal of used materials.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Create and maintain storage areas that are separate from main classroom and have their own ventilation systems.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Use diluted substances instead of concentrates, wherever possible.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Minimize exposure to hazardous materials by using non-hazardous materials and pre-mixed products.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ALL ANSWERS ARE RECORDED ANONYMOUSLY

- Validated materials offered to teachers
- Training completed with maintenance team
- Edited checklists for self and classroom eval
- Changes in products being used and methods!

CLEANERS: TEACHER EVALUATION

HOW ARE YOUR TEACHERS DOING?

- Great Poor
 Good Bad

GENERAL CLEANLINESS

	Yes	No	N/A
1) Are rooms dusted and vacuumed regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Are rooms free of clutter?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Is food removed and not stored in classroom overnight?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Is animal food stored in tightly-sealed containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) Are school-approved cleaners and air fresheners, if any, used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ANIMALS IN THE CLASSROOM

	Yes	No	N/A
6) Do teachers minimize student exposure to animal allergens?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Are cages cleaned regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8) Are cages placed away from air supply and return vents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Have sensitive students been moved away from animals and habitats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE & VENTILATION

	Yes	No	N/A
10) Is temperature moderate? (<i>Should generally be between 72°F–76°F</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) Have teachers made sure that there are no vehicle exhaust, kitchen/food and chemical odors in classroom?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) Have teachers made sure that there are no signs of mold or mildew?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EDUCATIONAL SUPPLIES

	Yes	No	N/A
13) Do teachers understand and follow recommended procedures for disposal of used substances?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTES:

Students

Inform

- Lessons on respiratory health
- Asthma obstacle course
- Asthma-focused health fairs

Incentivize

- Take-home materials
- Raffles and giveaways
- Food at health fairs



Partners in Progress

Asthma Coalition of the Capital Region (ACCR)

Albany City School District (principals, community school site coordinators, nurses, maintenance and more)

Albany County Department of Health

St. Peter's Hospital

Albany College of Pharmacy

UAlbany School of Public Health

And more! ☺



Success Story!

- After National SBHC Conference meeting, tailored school staff education to maintenance team
- Received significant support from principal to schedule education
- Informal education and discussion in cafeteria with entire maintenance team
- Maintenance team was open and honest, completed assessments
- **BEHAVIOR CHANGE!!!!**
 - RAGS FROM HOME → MICROFIBER CLOTHS
 - STRONG BLEACH → DILUTED PROPERLY



Sustainable Impact

- Behavior change by maintenance teams! (previous slide)
- Ongoing use and development of asthma website
 - Can continue to update and evaluate perceptions to provide appropriate guidance
- Continued expansion of respiratory health education
 - Recently added lessons on mucus
- Health Fairs
 - Explore virtual or scheduled options in future
 - Partners already engaged and committed





Thank you for
this opportunity!

Whitney Young Health
Community Based Programs



McKean SBHC: Our Asthma Project

2018-2020

Empowering Students with Asthma (and their Parents) to Improve the Home Environment


Kay McLean-Grant, CPNP, Site NP and Program Manager
Todd Hartsock, Community Health Worker

Asthma Snapshot @ McKean

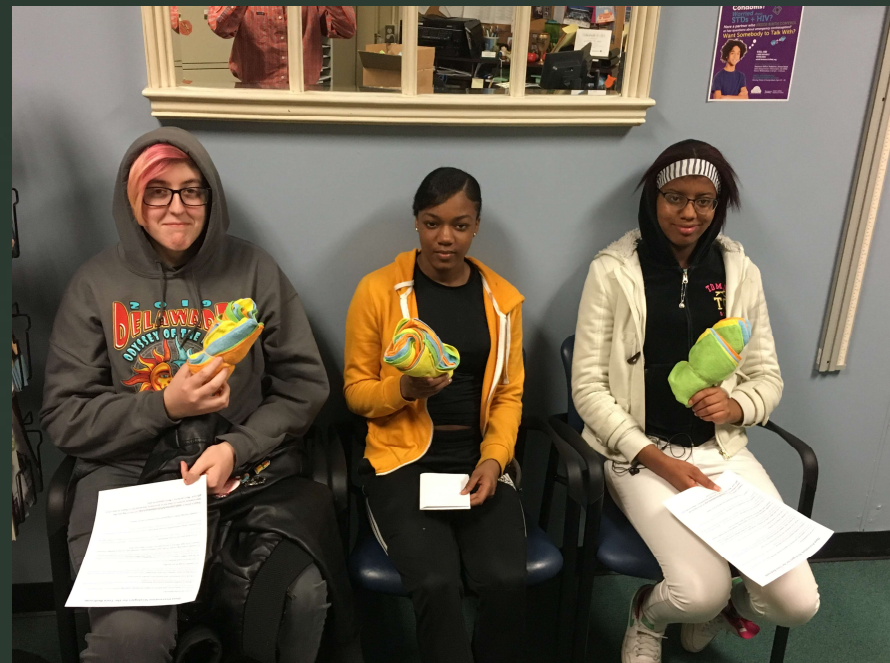
- McKean is one of 20 SBHCs in NCC and managed by Christiana Care. Despite being one of the smallest centers, McKean consistently has highest # of documented asthma visits
- McKean SBHC is located in suburbs of Delaware, but majority of students are living in inner city multifamily dwellings and are transported by bus to school
- 80% of student body is Medicaid qualified or uninsured. Frequently students cannot identify a PCP



Year 1 Intervention- Empower Student to Improve the Environment of their Bedroom

- Asthma Education using project developed teen–friendly tools
 - Creation of Mock Teen Bedroom with asthma triggers
 - Students encouraged to identify triggers in their own bedrooms and report back
 - Asthma control product distribution
 - Students completed ACT screen to evaluate current asthma control
 - Medical visit follow-up as appropriate
- 

Project Picture Page



Year Two – Expand Outreach to Parents


- Outreach Event – Asthma Education Multi-School Event – 2/19/20
- Event moved to feeder elementary school for maximal event participation
- Strong personalized outreach to invitees to encourage attendance
- Structured with stations of asthma environmental education topics and designed to encourage student and parental engagement
- Asthma prevention product distribution
- Keynote speaker – Local pediatrician
- Product raffle

Event Picture Page





Partnerships

- Joint effort of Site NP and CHW
 - McKean School Administration and School Nurse
 - Elementary Schools SBHCs and their support staff
 - Community Groups for event participation and stations
 - CC SBHC-wide staff assisted - “All Hands-on Deck!”
 - Former Camp Fresh Participants for event support
- 



Outcomes/ Success Story

- 17 McKean students participating in cohorts/mock teen bedroom
- February, 19th hosted an Asthma Education Night for students and families
 - About 12 families in attendance

Lessons Learned and Path Forward

- Getting parents/students to come out for an event is challenging!
- Elementary setting thought to have likely supported attendance
- Plan is to continue the education event as an annual occurrence
- Timing – Fall event? Coordinate with other school events?
- Plans will be impacted by COVID prevention measures
- Consider supporting prevention healthcare by coordinating with community vaccine efforts
- Availability of Community Health Worker/Ancillary staff instrumental in project and outreach success
- Project coincided with SBHC PI project to improve acute, episodic asthma care and initiation of chronic management for appropriate students

Lessons Learned

- SBHCs are uniquely positioned to do this work!
 - Passionate, knowledgeable staff.
 - Focus on low-income communities/communities of color.
 - Link between child, school, family, clinical systems.
 - Have more flexibility in working with schools.
 - Adept at doing more with less.



Lessons Learned

<http://www.rampasthma.org/D:Web%20Siteswww.rampasthma.orgwp-content/uploads/2020/03/RAMP-Tips-for-Success-6.pdf>



TIP #1

Assess the Problem

- You'll want to select an intervention that addresses the greatest needs in your community



TIP #2

Select an Intervention

Start with the At-A-Glance tool on page 54 that lists all of the interventions you might consider.

Then flip to the corresponding chapter for details on any intervention that looks like a good fit.



TIP #3

Build Relationships and Get Buy-In

- Your ability to build and maintain relationships is key to any work you do, particularly for interventions that require people to make changes to their behaviors or other environments.



TIP #4

Achieve Success with Your Community

- Your target audience may be school staff, students, parents/caregivers, or all of the above.
- Meet them where they are at— *literally and figuratively*





TIP #5

Develop a Plan of Action & Implement the Work

Asthma Environmental Intervention Work Plan

Selected intervention or goal: _____

Activity	Who is responsible/ who needs to be involved	Timeline	Outcome/ impact

TIP #6

Connect with Others Doing Similar Work & Expand Your Impact

- You're already connecting with others doing similar work!
- Find ways to sustain your work.
- Go ahead and brag!



The screenshot shows the header of a website for the School of Nursing & Dental Hygiene at the University of Hawai'i at Mānoa. The header is green with white text. On the left is the university's logo. The main text reads "SCHOOL OF NURSING & DENTAL HYGIENE" and "UNIVERSITY of HAWAI'I at MĀNOA". Below that is the motto "Leadership · Excellence · Innovation". On the right, there are links for "About" and "Alumni". Below the header is a dark green navigation bar with white text and dropdown arrows for "Prospective Students", "Research & Scholarship", "Initiatives & Centers", and "Current Students". Below the navigation bar is a light gray section titled "News and Updates" with a breadcrumb trail: "Home » News » Giving » Hawaii Keiki » Combating Asthma & Allergy Triggers at Konewaena Elementary".

🕒 January 12, 2020

Combating Asthma & Allergy Triggers at Konewaena Elementary

