

Community Collaboration to Address Childhood Asthma

BHP Breakout Session

11/9/18

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Disclosures

- None



Objectives

- Consider public health options for trigger reduction to reduce asthma morbidity in children
- Identify school based interventions for high risk asthma
- Engage in a dynamic discussion from which we all can leave with at least one actionable idea.

Intros

Hi, My name is...

I work at...as...

I'm here because....

The case for housing interventions in childhood asthma

- Boston Children's Community Asthma Initiative

Outcomes

As of December 2016, there are over 1,769 patients who have enrolled in the Community Asthma Initiative. So far their involvement has led to:

- 80% reduction in the percentage of patients with asthma-related hospitalization
- 58% reduction in the percentage of patients with Emergency Department visits
- 45% reduction in the percentage of patients with missed school days for children
- 53% reduction in the percentage of patients with lost work days for parents

- Boston Home Visit Asthma Collaborative

Do asthma home visits work?

Studies show that asthma home visits by Community Health Workers help children and teens control asthma. Patients receiving the recommended number of home visits report having:

- 21 fewer days with asthma symptoms per year*
- 12 fewer days of school missed per year*

* median decrease

Things that work

- **Multifaceted, in-home, tailored interventions for asthma**
- **Cockroach control through integrated pest management**
- **Combined elimination of moisture intrusion and leaks and removal of moldy items**

Things that may work

- **Improved insulation**
- **Repeated dry-steam cleaning and repeated vacuuming**
- **Use of air cleaning devices**
- **Moisture control through dehumidification**
- **One-time professional cleaning**

No good evidence to date

- **Air cleaners generating high levels of ozone**
- **Bedding encasement, sheet or upholstery cleaning alone**
- **Acaricides (chemicals for dust mite control) as a single intervention**

[Krieger J, et.al. Housing interventions and control of asthma-related indoor biologic agents: A review. J Public Health Manag Pract. 2010 Sep-Oct; 16\(5 0\): S11–S20.](#)

MATH

Managing Asthma Triggers at Home

- Asthma registry used to identify high risk asthma patients at Akron Children's Hospital
- Patients and families recruited from HR Asthma Clinic or the list of HR patients
- Baseline asthma information available in the EMR and registry output
- Home assessment done by SCPH Sanitarian (Sue Cummings)

MATH (Cont.)

- ACT used for monitoring asthma status
- Environmental Intervention
 - Professional Cleaning
 - Pest Control
 - Bed bags and pillow bags
 - HEPA Vacuum, air purifier, dehumidifier, CO detector
 - Furnace filters changed quarterly
 - Lead abatement if indicated
 - Spacer for use with inhaler

Funding

- Clean Air funds (170k) for Medina, Portage, and Summit counties
- Noah Miller Fund (discretionary funds from Pediatrics Chair, Norm Christopher) to pay student intern

The case for school-based asthma interventions

- Asthma education programs lead to improved knowledge, self efficacy, and self management skills
- Asthma education programs may lead to improved quality of life, and reduced symptoms. Evidence is mixed.

Coffman et.al. Do school based asthma education programs improve self management and health outcomes? [Pediatrics. 2009 Aug; 124\(2\): 729–742.](#)

School Based Health Centers

- SBHC's reduce asthma admissions and ED visits and associated costs.
- SBHC's improve school absenteeism related to asthma
- SBHC's have led the way in terms of environmental trigger reduction both at home and school.

Guo, et.al. Impact of school based health centers on children with asthma. [J Adolesc Health](#). 2005 Oct;37(4):266-74.

Council on School Health. School based health centers and pediatric practice. *Pediatrics*. 2012 Feb; 129(2)

ODH School/Home Health Asthma Grant

- Targeted at high risk asthma population as individuals and at high risk schools identified through the registry.
- Funding supports a portion of a nurse's time in Youngstown and in Akron devoted to support of this population

Grant Activities

- Case identification with support of school nursing staff to optimize care of individuals
- Asthma education (Open Airways)
- Home Health, MATH, and CHW referrals as indicated
- Smoke free school environments