Healthy and High Performing Schools Symposium
April 18, 2014

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Who we are

• Representatives of the Illinois Asthma Partnership (IAP) – a state-wide coalition of 140 members that began in 2000

• Goal to reduce morbidity and mortality from asthma, reducing the costs of the disease and improving the quality of life for people with asthma

• IAP has Executive Committee, five workgroups, system for state-wide communication and supports activities of asthma coalitions in Illinois
Who we are

• Stacy Ignoffo, MSW; Executive Director, Chicago Asthma Consortium
• Eileen Lowery, RN, MSN; Senior Director of Programs, Respiratory Health Association
• Jessica Gerdes, MS, RN, NCSN; Illinois State Board of Education
• Monica Paguia; Asthma Program Coordinator, US EPA
• Jack Barnette; Environmental Scientist, US EPA
What we’ll cover

• Impact of asthma on children
• Overview of asthma and asthma triggers
• Overview of state policies that relate to protecting children with asthma in the school setting
• EPA asthma program and resources
• A virtual walkthrough and environmental assessment
1 in 11 children have asthma

1 in 12 adults have asthma

Black children are 2 times more likely to have asthma than white children.

9 people die from asthma every day.

Black Americans are 2-3 times more likely to die from asthma than any other racial or ethnic group.

1 in 5 children with asthma went to an emergency department for asthma-related care in 2009.
Asthma is disruptive.

- Nearly 1 in 2 children with asthma report missing at least 1 day of school each year because of asthma.
- 3 in 5 adults with asthma report missing at least 1 day of work each year because of asthma.

People with asthma limit their physical activity.

Asthma is expensive.

- Asthma costs our nation $56 billion per year.
- 1 in 4 black adults can't afford their asthma medicines.
- 1 in 5 Hispanic adults can't afford their asthma medicines.

In 2009, there were:

- 479,000 asthma-related hospitalizations
- 1.9 million asthma-related emergency department visits
- 8.9 million asthma-related doctor visits
Approximately 850,000 people in Illinois currently have asthma.

183 people died from asthma in 2010. That’s 1 person every 2 days.

4 of adults in Illinois currently have asthma.

13.6% of children in Illinois currently have asthma.

54.7% (1 in 2) children with asthma missed at least 1 day of school in the past 12 months due to their asthma.

76.5% of children do not have their asthma under control.

$383 million spent in 2011 on hospitalizations.
Asthma in Schools

- Children with uncontrolled asthma may miss more school and have poorer academic performance than children without asthma.
- Asthma is one of the leading causes of absenteeism.
- Children spend a lot of time at school.
- Environmental asthma triggers can be found in schools.
- It is crucial that schools have strong asthma management programs for students with asthma.
Asthma in Schools

- Asthma-friendly schools create safe learning environments for children with asthma
- They (in part):
  - Identify students with asthma
  - Have emergency asthma protocols in place
  - Ensure students have access to their medications
  - Have asthma education for parents, children and school staff
  - Maintain healthy environment – establish policies and maintain good indoor air quality
Asthma

Overview and Triggers

Eileen Lowery, RN, MSN

Senior Director, Programs, Respiratory Health Association
Executive Committee, Illinois Asthma Partnership
About Us
Objectives

- Describe an overview of asthma
- Review signs of asthma episode
- Discuss causes and triggers
- Explain the relevance of asthma triggers in managing asthma
What is Asthma?

• *Chronic* lung disease
• Inflames and narrows the airways
• Active vs. passive asthma
Airway Changes with Asthma

Normal airway

Uncontrolled Asthma
Asthma Overview

Causes & triggers of asthma episode

• Irritants aggravate the airways
• Allergens cause sensitive airways to react
• Allergies and asthma
Asthma Warning Signs: Level I

Warning signs early in an episode:

- shortness of breath
- cough
- feeling tired or weak
- itchy chin or throat
- watery eyes
- dark circles under eyes
- stomach ache

How to respond:

- move child away from their triggers
- administer quick-relief medication
- monitor child – never leave them alone
Asthma Warning Signs: Level II

More serious signs and symptoms are:

- medications are not working or do not last
- increase in coughing or tightness in chest
- wheezing
- inability to do usual activities

How to respond:

- If symptoms are not better within 15 minutes of using medication, call 911, follow asthma action plan and call parent.
- If symptoms worsen, call 911, follow asthma action plan and call parent.
- Continue monitoring child
Asthma Warning Signs: Level III

Severe signs and symptoms are:

- severe shortness of breath
- difficulty walking or talking (inability to finish a sentence)
- retractions (sucking in skin at ribs and neck)
- paling, blue or gray lips and nail beds

How to respond:

- Call 911 and parent for any one of the above symptoms.
- If you haven’t already, administer quick-relief medication.
Asthma Causes & Triggers

- Irritants
  - Smoke exposure
  - Air pollution
  - Strong odors
  - Hot/cold weather
Asthma Causes and Triggers

• Allergens
  – Animals with fur or feathers
  – Mold
  – Trees, grasses and pollens
  – Dust and dust mites
  – Roaches and rodents
Asthma Causes & Triggers

• Colds and Flu
• Changes in breathing pattern (response to emotions)
• Exercise
Asthma Programs

Fight Asthma Now®
• Target youth/teens, 4-40 min session

Asthma Management
• Targets caregivers, 1-hour session

Asthma Friendly Childcare
• Targets childcare center
Contact Us

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Bibliography

Asthma

Asthma Policy and Schools

Jessica Gerdes, MS, RN, NCSN
Principal Consultant, School Nursing and Health Issues
Illinois State Board of Education
Illinois State Board of Education

Mission

The Illinois State Board of Education will provide leadership, assistance, resources and advocacy so that every student is prepared to succeed in careers and postsecondary education, and share accountability for doing so with districts and schools.

Goals

GOAL 1: Every student will demonstrate academic achievement and be prepared for success after high school.

GOAL 2: Every student will be supported by highly prepared and effective teachers and school leaders.

GOAL 3: Every school will offer a safe and healthy learning environment for all students.
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- Laws and policies on medications
- Promote Green Cleaning
- Integrated Pest Management
- Individual health plans, emergency action plans, “504” plans
Emergency Medications

• Public Act 096-1460
  Self administration of emergency medications:
  • Asthma inhaler
  • Epinephrine auto injector
  • Self-carry
  • Self-administer

• Public Act 097-0361
  Self administration of epinephrine medications:
  • Auto-injector use by student on self
  • Auto-injector use by staff on designated student
  • Auto-injector use by RN on undesignated student
Green Cleaning

• Green Cleaning Schools Act
  – Passed August 2007
  – Only second state in the country to require use of environmentally sensitive cleaning products in all elementary and secondary schools
  – Resource:
    • http://healthyschoolscampaign.org/policy/environment/
Integrated Pest Management

- The Structural Pest Control Act requires public schools and licensed day care centers to, when economically feasible, develop and implement an IPM program.
- School districts and day care centers must maintain a registry of parents/guardians of students and of employees who have registered to receive written notification prior to application of pesticides to school property or provide written notification to all parents and guardians of students before such pesticide application.

- Resource:
  - http://www.isbe.net/construction/health_safety/default.htm
  - http://www.idph.state.il.us/envhealth/ipm/index.htm
Anti-School Bus Idling

• Diesel exhaust from idling school buses can affect the air quality in and around school buildings as well as throughout local communities.

• Voluntary Illinois EPA Program
Individualized Health Plans

• Individualized Health Care Plans
• Emergency Action Plans
• Section 504 Plans

• Inherent in all of the above:
  – School RN
  – School MD
  – Parents
  – Student
  – Teaching staff
  – Custodial staff
EPA Resources for Asthma Friendly Schools

Monica Paguia
Jack Barnette
U.S. EPA
Outline

• EPA’s role with asthma management
• EPA Asthma Resources for Schools
• Indoor Air Quality Tools For Schools Action Kit
• Virtual School Walkthrough
EPA's Coordinated Approach on Asthma

• EPA promotes scientific understanding of environmental asthma management.

• With federal, state and local partners, we are building the nation's capacity to control asthma.

• Our purpose is to build knowledge and awareness to improve the quality of life for millions of Americans with asthma.
Asthma Resources for Schools

Free Asthma Publications
www.epa.gov/asthma/publications.html

FREE Webinar on Asthma Disparities in Schools
Thursday, May 1, 2014
1-2:30 pm CDT
• Register at www.AsthmaCommunityNetwork.org

Student Curriculum
Breathing Easy: Keeping the Inside of our Homes Healthy and Clean
• Geared toward children ages 9 -13
• Includes lesson plans, handouts for kids, and visual aids
http://yosemite.epa.gov/ochp/ochpweb.nsf/content/lesson3.htm
Other EPA Programs

- Clean School Bus USA
  [http://epa.gov/cleanschoolbus/csb-overview.htm](http://epa.gov/cleanschoolbus/csb-overview.htm)

- Integrated Pest Management (IPM) in Schools
  [http://www.epa.gov/pesticides/ipm/](http://www.epa.gov/pesticides/ipm/)

- Air Quality Index (AQI) School Flag Program
  [http://www.airnow.gov/schoolflag](http://www.airnow.gov/schoolflag)

- Schools Chemical Cleanout Campaign
  [http://www.epa.gov/schools/chemicals.html](http://www.epa.gov/schools/chemicals.html)
The Indoor Air Quality (IAQ) Tools for Schools (TfS)

Action Kit

- HVAC
- Moisture/Mold
- IPM
- Cleaning & Maintenance
- Materials Selection
- Source Control

www.epa.gov/iaq/schools
Walkthrough Inspection Checklist

Instructions
1. Read the IAQ Background and the Background Information for this checklist.
2. Keep the Background Information and make a copy of the checklist for future reference.
3. Complete the Checklist.
   - Check the “Yes,” “No,” or “Not applicable” box beside each item. (A “No” response requires further attention.)
   - Make comments in the “Notes” section as necessary.
4. Return the checklist portion of this document to the IAQ Coordinator.

1. GROUND LEVEL
   1a. Ensured that ventilation units operate properly
   1b. Ensured there are no obstructions blocking air intakes
   1c. Checked for nests and droppings near outdoor air intakes
   1d. Checked potential sources of air contaminants near the building (chimneys, stacks, industrial plants, exhaust from nearby buildings)
   1e. Ensured that vehicles avoid idling near outdoor air intakes
   1f. Minimized pesticide application
   1g. Ensured that there is proper drainage away from the building (including roof downsputs)
   1h. Ensured that sprinklers spray away from the building and outdoor air intakes
   1i. Ensured that walk-off mats are used at exterior entrances and that they are cleaned regularly

2. ROOF
   While on the roof, consider inspecting the HRV units (use the Ventilation Checklist).
   2a. Ensured that the roof is in good condition
   2b. Checked for evidence of water ponding
   2c. Checked that ventilation units operate properly (air flows in)
   2d. Ensured that exhaust fans operate properly (air flows out)
   2e. Ensured that air intakes remain open, even at minimum setting
   2f. Checked for nests and droppings near outdoor air intakes
   2g. Ensured that air from plumbing stacks and exhaust systems flows away from outdoor air intakes

3. ATTIC
   3a. Checked for evidence of roof and plumbing leaks
   3b. Checked for birds and animal nests

4. GENERAL CONSIDERATIONS
   4a. Ensured that temperature and humidity are maintained within acceptable ranges
   4b. Ensured that no obstructions exist in supply and exhaust vents
   4c. Checked for odors
   4d. Checked for signs of mold and mildew growth

4. GENERAL CONSIDERATIONS (continued)
   Yes No N/A
   4e. Checked for signs of water damage
   4f. Checked for evidence of pests and obvious food sources
   4g. Noted and reviewed all concerns from school occupants

5. BATHROOMS AND GENERAL PLUMBING
   5a. Ensured that bathrooms and restrooms have operating exhaust fans
   5b. Ensured proper drain trap maintenance
      - Water in sumps drops below trap once per week (approx. 1 quart of water)
      - Water in sumps is pumped at least once per week (about 2 cups of water)
      - Toilets are flushed at least once per week

6. MAINTENANCE SUPPLIES
   6a. Ensured that chemicals are used only with adequate ventilation and when building is unoccupied
   6b. Ensured that trash areas and trash storage areas are operating properly
   6c. Ensured that building and kitchen exhaust fans are properly closed
   6d. Ensured that power equipment, like chandeliers and light fixtures, have been serviced and maintained according to manufacturers’ guidelines

7. COMBUSTION APPLIANCES
   7a. Checked for combustion gas and fuel lines
   7b. Ensured that combustion appliances have flues or exhaust hood(s)
   7c. Checked for leaks, disconnections, and deterioration
   7d. Ensured there is no seal on inside or outside of flue components

8. OTHER
   8a. Checked for peeling and flaking paint (if the building was built before 1980, this could be a lead hazard)
   8b. Determined date of last radon test

NOTES
Virtual Walkthrough
Learn about how your ventilation system works.

Outside air gets pulled in here.
Moldy Ceiling
Air Handler, Air Defused, and Moldy Air Duct
For air to come out of here.

It has to get in there.
Thank You!
Questions?

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