

A Public Health Response to
ASTHMA



A Public Health Response to Asthma
A PHTN Satellite Broadcast

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Theories for the Asthma Epidemic

- Genetic Predisposition
- Indoor Environmental Exposures
- Airtight Building Construction
- Hygiene Hypothesis
- Diet
- Obesity and Exercise

The Report:

- Examines how indoor air pollutants contribute to asthma
- Evaluates the scientific basis for mitigating the effects of air pollutants implicated in asthma

Report Highlights

- Causal link to house dust mites
- Association between preschool-aged children and environmental tobacco smoke
- Bring on or worsen symptoms:
 - house dust mites
 - tobacco smoke
 - cats
 - cockroaches

Report Components

- Assessment & monitoring
- Control of contributing factors
- Pharmacologic therapy
- Education for partnership

Key Points From NHLBI Guidelines

- Take time for accurate assessment and diagnosis
- Other ailments can cause asthma-like symptoms
- Diagnosis difficult for very young and elderly

Assessment should include:

- Detailed medical history
- Physical exam
- Pulmonary function testing (spirometry)

Asthma Medications

- Quick Relief
 - relax muscle constriction and restore airflow
- Long Term Control
 - control persistent asthma

Asthma Management Plan

Key element to effectively controlling the disease by reducing symptoms, hospital and ER visits, and preventing long term complications

Management plan is developed with:

- Person with asthma
- Family members
- Physician

Management plan includes:

- Avoidance of environmental triggers
- Special items, e.g., exercise
- Daily required medications
- Emergency care information
- As-needed medications

CDC Asthma Control Program

- Expand surveillance
- Implement science-based asthma interventions
- Work in partnerships

Developing an Asthma Surveillance System

- Identify key features in asthma surveillance
- Identify and describe “existing” and “new” data sources
- Emphasize a multidisciplinary approach

Why Do We Need Asthma Surveillance?

- Measure occurrence & prevalence
- Monitor asthma treatment, management and compliance
- Track exposures to causal and risk factors
- Identify regional & demographic variations
- Monitor effect of interventions

Surveillance Challenges

- Lack of a "Gold Standard"
- A moving target
- Lack of routine data systems

Prevalence is measured through population-based surveys

- BRFSS
- International Study of Asthma and Allergy in Children
- SENSOR

First Step

Conduct a data needs assessment

Prevalence estimates

Questions on:

- BFRSS
- Child Health Survey
- Youth Risk Behavior Survey
- County health surveys
- SENSOR
(physician reports, hospitalization data,
Worker's Compensation)

Future Priorities

- Surveillance of school-aged children for prevalence and absenteeism
- Collection mechanisms for ED data
- Access to state's Medicaid database
- Environmental risk factors in areas with high asthma burden

Collecting the Data

- Tap existing sources
- Cost may limit developing new data collection
- Need local level data
- Adopt multi-disciplinary approach

Your approach must involve appropriate partners!

- Health care systems
- Hospitals
- Insurance companies
- Purchasers
- Public health
- Community based organizations
- School systems

Michigan Community Health Department Conclusions

- Need data about prevalence, severity, health care utilization and risk factors
- Must address problem at many levels
- Use a multi-disciplinary approach
- Develop surveillance data from existing sources
- Asthma surveillance is a good model
- Coalitions are critical to obtaining data

Recommendations for Beginners

- Conduct data needs assessment
 - Who is your audience?
 - What are their priorities?
- Find existing sources of data
 - Who has the data?
 - What are their motivations for sharing?
 - Ensure timely response and useful formats
- Collaborate with data audience and sources

Why School-based Asthma Education is Essential

- Asthma is the leading chronic cause of school absenteeism
 - Asthma can be controlled
- School-based asthma education is a key component of asthma-friendly schools

Why School-based Asthma Education is Essential

- Health education for childhood asthma improves asthma management skills

Why School-based Asthma Education is Essential

- Schools have several advantages as sites for health education
 - Available to all children
 - Have resources needed
 - Children expect to learn in school

Open Airways for Schools Program 2000

- 6,926 schools across the U.S.
- 138,490 students

Anne Arundel County, MD

- 94,360 children, ages 5 - 19
- 75,000 students in public schools
- 77 elementary schools
- 31 secondary schools

Anne Arundel County Schools 1999 - 2000

- Total students with asthma 5,102
- Prevalence 6.9%
- Range 2 - 20.6%

U.S. Asthma Prevalence

Children under 18 7%

Anne Arundel County Program 1999 - 2000

- No deaths
- Tracked a limited number with severe asthma
 - Attendance
 - Health room visits
 - Hospitalizations

Anne Arundel County Program 1999 - 2000

Asthma Education Coverage

	Students	Schools	% Schools
OA	709	73/76	96%
PB	303	21/32	66%

Key Lessons Learned

- School nurses are busy
Solution: Asthma management must be a high priority
- Obtaining information is time consuming
Solution: Community awareness campaigns
- Some physicians do not use the NHLBI guidelines
Solution: Educate physicians
- Lack of peak flow meters
Solution: Obtain a meter for each school

Key Lessons Learned (cont)

- Some principals don't allow students to miss class
Solution: Keep working at it !
- Local health departments should develop partnerships with local schools
Solution: Ensure collaboration between leaders

Results of a Follow-up Study

Students in the program had:

- Higher scores on an index of asthma management
- Greater self-efficacy
- More influence on parents' decisions
- Better grades in school
- Fewer episodes of asthma
- Shorter asthma episodes

Broadcast Summary

- Described the disease, its causes, and how it can be managed
- Highlighted statewide surveillance and coalition programs
- Reviewed importance of school interventions