



Edward G. Rendell, Governor

Assessment of the 2006 Pennsylvania Asthma Burden Report

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Bureau of Health Promotion and Risk Reduction,
Bureau of Epidemiology, Division of Environmental Health Epidemiology,
Pennsylvania Asthma Control Program**

Introduction

Asthma is a chronic condition in the lungs that has two main components: constriction (the tightening of the muscles surrounding the airways) and inflammation (the swelling and irritation of the airways). Those two components cause narrowing of the airways, which may result in symptoms such as wheezing, coughing, chest tightness or shortness of breath. If left untreated, asthma can cause long-term loss of lung function.

Asthma affects the lives of many people in Pennsylvania, across all ages and including all racial and ethnic groups. It is the cause of numerous hospitalizations and visits to the emergency department, and even death. Asthma is one of the most common chronic diseases affecting children in the United States. It is the third leading cause of preventable hospitalizations and one of the leading causes of school absenteeism.

Asthma cannot be cured, but it can be controlled. Through careful disease management, people with asthma can avoid chronic asthma symptoms and exacerbations during the day and night, maintain normal activity levels with minimal or no side effects decrease the need for emergency department visits and/or hospitalizations.

In 2003, the Bureau of Health Promotion and Risk Reduction, Pennsylvania Department of Health (PA DOH) received funding from the Centers for Disease Control and Prevention (CDC) to address the burden of asthma in Pennsylvania. In 2006 the grant was renewed for three years, and the 2006 Pennsylvania Asthma Strategic Plan was implemented. To fulfill grant requirements, the Asthma Surveillance Team is in the process of developing an enhanced asthma surveillance system to better document the burden of asthma in Pennsylvania.

The 2006 Pennsylvania Asthma Burden Report was produced as an initial effort to systematize available data on the burden of asthma, including asthma prevalence, mortality and morbidity. Subsequent updates to this report will be forthcoming as the asthma surveillance system develops and as new data becomes available. Asthma data used in the report was gathered by the Pennsylvania Behavioral Risk Surveillance System (BRFSS) and Pennsylvania Death Registry in the Bureau of Health Statistics and Research, the hospital inpatient medical record data from the Pennsylvania Health Care Cost Containment Council (PHC4) and the Pennsylvania School Health data from the Division of School Health.

Based on recommendations in the Pennsylvania Asthma Control Program Plan to improve future editions of the Asthma Burden Report, the Pennsylvania Asthma Control Program conducted a 2006 Pennsylvania Asthma Burden Report Survey that evaluated, identified, determined and prioritized factors affecting the following considerations.

- Usefulness and value of the report
- Recommendations to improve future reports
- Findings on additional asthma data sources to enhance the existing surveillance system

Methods

The 2006 Pennsylvania Asthma Burden Report Evaluation Form (see Appendix) was distributed to members of the Pennsylvania Asthma Partnership (PAP). Nearly 50% of respondents (37 out of 80) completed the survey between October 2007 and January 2008, representing a variety of organizations. The organizations and number of respondents is represented below:

- Hospitals/Clinics (11)
- Community Health Organizations (5)
- State or Local Coalitions (3)
- Academic Institutions (3)
- Medical/Health Professional Associations (2)
- Elementary/Secondary Schools (2)
- Local Health Departments (2)
- Other, including PA DOH, Federal Agencies, Non Profit Organizations (14)

Respondents fall into the following categories:

- Nurses (10)
- Health Educators (9)
- Administrators (4)
- Government Officials (3)
- Faculties (2)
- Researchers (2)
- Physicians (2)
- Epidemiologists (1)
- Community Leaders (1)
- Other, including Respiratory Therapists, Program and Project Managers (13)

The first part of the survey included questions concerning the organization and structure of the 2006 PA Asthma Burden Report, as well as the usefulness of the asthma data in the report and the ease of understanding that data. The assigned measures were the following: Strongly Agree, Agree, Disagree, Strongly Disagree, and Not Sure. The second part of the survey assessed the organizations' preferences, requesting suggestions and recommendations for accessing or using asthma data for future reports by preferred statistical methods, geographical areas, formats and types of data. The third part of the survey asked members of PAP for additional asthma data sources that they would like shared with the PAP, and inquired about the possibility of incorporating them in future reports. Comments were welcomed and reviewed.

Results

Utilization of Asthma Surveillance Data

According to the thirty seven survey respondents, they used the 2006 PA Asthma Burden Report for the following:

Education	65%
Presentations	49%
Program Planning	43%
Priority-setting/Targeting Programs	41%
Grant Writing	30%
Research	27%
Program Evaluation	11%

The Opinions and Understanding of the Asthma Report by Respondents

The 2006 PA Asthma Burden Report was easy to understand for 94% (35) of the respondents; 5% (2) were not sure. Among respondents, 92% (34) said that the report was well organized, 5% (2) were not sure and 3% (1) said the report was poorly organized. Ninety % (33) of the respondents indicated that the report had improved their understanding of the burden of asthma in Pennsylvania, 5% (2) disagreed and 5% (2) were not sure. Ninety-two % (34) of the respondents found the report useful and 8% (3) were not sure.

Types of statistics in the report that the thirty-seven respondents found most useful were:

Age-specific rates (<5, 5-9, 10-14 etc)	64%
Counts (numbers)	44%
Annual rates	44%
10-year rate trend	42%
Age-adjusted rates (adjusted to the US population distribution by age)	28%
Crude rates (number of events divided by population)	17%
3-year average rates	14%

Over one-half (23) of the respondents preferred age-specific rates rather than counts, crude or age-adjusted rates. Data users also preferred annual rates rather than 10-year and 3-year average rates. Among respondents, 89% found statistics at the county level the most useful, rather than the state level (46%) or health districts (24%).

The respondents preferred asthma data in specific formats according to the following percentages:

Charts	59%
Tables	54%
Written reports/summaries of analyzed data	51%
Graphs	49%
GIS Maps (geographical representation of distributions)	49%

The preferred formats for receiving updates of asthma surveillance data were: fact sheets (68%), website (62%) and a surveillance report every three years (41%).

The respondents indicated that the following types of data in the report were the most useful for them:

Asthma prevalence among school students	76%
Asthma hospitalization data	70%
Cost of asthma	70%
Asthma mortality data	57%
Adult asthma prevalence data	57%
Asthma and smoking	51%
Asthma and Health coverage	49%
Comparison of Pennsylvania asthma data to Health People 2010 goal	43%
Asthma and obesity	38%

The respondents listed the following as having high priority for additional types of data that they would like to see in the next PA Asthma Burden Report

Asthma-related emergency department visits	68%
Asthma hospitalization data among children (0-17)	65%
Asthma and environment	65%
Childhood asthma prevalence data	59%
Asthma management and control	57%
Asthma hospitalization data among adults (18 and older)	43%
Asthma Medicaid data	38%
Work-related asthma data	30%
Asthma and influenza	16%

Only 8% (3) of the respondents indicated that they had additional sources of asthma data; 92% (33) reported they did not have other sources.

Conclusions

The Asthma Control Program and PAP members who responded to the survey provided information about documentation of asthma surveillance data that users would possibly like to see in future burden reports. The Asthma Surveillance Group provides asthma prevalence, mortality and hospitalization data to medical facilities, schools, academic institutions, community health organizations, state and local coalitions and local health departments for health education, research, program evaluation and planning

There is a need to include asthma data from emergency room visits, to study asthma prevalence among school students, to report asthma hospitalization data among children (0-17) and adults (18 and older), to examine asthma insurance data, to explore work-related asthma data and to discover links between asthma and influenza and between asthma and the environment.

The assessment of the 2006 Pennsylvania Asthma Burden Report Survey suggests that future analysis of data needs to be comprised of broader age-specific rates in demographic subgroups, including local levels by county, presented in charts and tables and reported annually. The preferred format for updates of asthma surveillance data was through fact sheets.

According to most of the respondents, the PA Asthma Burden Report was clear, easy to understand and well organized.

Recommendations

- Enhance and increase efforts to build and establish asthma data from emergency room visits, insurance data and work-related asthma data.
- Interpret asthma data annually.
- Update asthma data (with different types of statistics) in the format of fact sheets.
- Expand and improve the quality of the asthma prevalence data (available from the Division of School Health) among school students.

Next Steps

- Generate a 2008 annual Asthma Focus Report that reflects asthma hospitalization data using the most recent years of data including, but not limited to, county level data to fulfill the requests of PAP.
- Produce the 2009 PA Asthma Burden Report to document asthma prevalence, mortality and hospitalizations by demographic subgroups, including children (0-17) and adults (18 and older).
- Create an asthma fact sheet annually and place it on the PA DOH and PAP asthma websites.
- Determine new ways to access asthma data from emergency room visits, insurance companies and work-related asthma.
- Analyze and disseminate the asthma prevalence data among school students (as new data becomes available), currently collected by the Division of School Health.
- Determine additional sources of asthma data, such as those offered by respondents.

The Asthma Control Program wants to acknowledge and express appreciation to the Bureau of Health Statistics and Research, PA DOH for great technical assistance and advice during the preparation of the assessment.

If you have any questions or comments please let us know.

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Appendix

The 2006 Pennsylvania Asthma Burden Report Evaluation Form.

1. What type of organization do you represent? (Check all that apply):

Local Health Department

State or Local Coalition

Community Health Organization

Hospital, Clinic, Practice, or Medical Facility

Academic Institution (College, University)

Elementary/Secondary School

Medical/Health Professional Association

OTHER

2. What is your position in the organization? (Check all that apply):

Physician

Nurse

Health Educator

Epidemiologist

Researcher

Faculty

Community Leader

Government Official

Legislator

Administrator

OTHER

3. For which of the following activities/products do use this report? (Check all that apply):

Grant-writing Priority-setting/ Targeting Programs Research Education

Presentations Program Evaluation Program Planning

OTHER

4. For each statement below, please select the choice that best reflects your opinion:

This report is clear and easy to understand.

Strongly Agree; Agree; Disagree; Strongly Disagree; Not Sure

This report is well organized.

Strongly Agree; Agree; Disagree; Strongly Disagree; Not Sure

This report has improved my understanding of asthma in Pennsylvania.

Strongly Agree; Agree; Disagree; Strongly Disagree; Not Sure

This report was useful to me in my work.

Strongly Agree; Agree; Disagree; Strongly Disagree; Not Sure

5. What types of statistics in the report did you find the most useful? (Check all that apply):

Counts (numbers) Age-specific rates (< 5, 5-9, 10-14 etc)
 Crude rates (number of events divided by population) Age-adjusted rates (adjusted to the US population distribution by age)
 Annual rates 3-year average rates 10-year rate trend
 OTHER

6. What geographical level of statistics did you find the most useful? (Check all that apply):

County Health Districts State

7. What types of data presentation methods did you find the most helpful or useful? (Check all that apply):

Tables Charts Graphs GIS Maps (geographical representation of distributions)
 Written reports/summaries of analyzed data
 OTHER

8. In what types of formats would you prefer to receive an update of asthma surveillance data? (Check all that apply):

Fact sheets (~4 per year) Individual request Website Surveillance reports (every 3 years)
 Training / conference
 OTHER

9. What types of data that are in the report do you use? (Check all that apply):

- Adult asthma prevalence data
- Asthma and smoking
- Asthma and obesity
- Asthma and Health coverage
- Asthma prevalence among school students
- Asthma hospitalization data
- Cost of asthma
- Asthma mortality data
- Comparison of Pennsylvania asthma data to Healthy People 2010 goal
- Comments

10. What additional types of data would you like to see in the next PA Asthma Burden Report? (Check all that apply):

- Childhood asthma prevalence data
- Asthma hospitalization data among children (0-17)
- Asthma hospitalization data among adults (18 and older)
- Asthma and influenza
- Asthma-related emergency department visits
- Asthma Medicaid data
- Work-related asthma data
- Asthma management and control (including, but not limited to: treatment and care, sleep disturbances, activity or work limitations, frequency of asthma attacks, medication use, health care access, etc.)
- Asthma and environment
- Comments

11. Do you have any asthma data available (now or in a few months) that we should consider including in the future report?

Yes No

If yes, please describe

12. Are you member of Pennsylvania Asthma Partnership?

Yes No

If yes, in which of the following work groups are you a member?

- Surveillance /Evaluation
- Awareness and Education
- Environment and Workplace
- Provider
- Disparities
- Public Policy

If no, would you like to be a member of any Pennsylvania Asthma Partnership work groups?

Comments

Additional comments/questions/suggestions: