

GCAC

GREATER CLEVELAND ASTHMA COALITION

A Division of the American Lung Association® of Ohio

SUMMARY REPORT ON ASTHMA DATA

May 2004

**Submitted by The Data Committee of the
Greater Cleveland Asthma Coalition**

**Administered by the
American Lung Association of Ohio, Northeast Region**

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

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Summary

Background

Over the last decade, asthma has become more common in both children and adults around the world. To address this concern, the Greater Cleveland Asthma Coalition gathered available local asthma data to determine the extent of the local asthma burden. This report summarizes the local asthma data obtained by the Data Committee, a working group under the auspices of the Greater Cleveland Asthma Coalition. The report includes asthma prevalence data as well as information on asthma-related emergency room visits for several Cleveland areas.

Due to the varying methods used to obtain data, direct comparison among data sources is not appropriate. Although attempts were made to obtain data throughout Cuyahoga County, information could not be uniformly obtained throughout the region, and therefore, the data is incomplete, especially for the west side of Cleveland. This does not imply that the burden of asthma does not exist in any area but simply means that the data could not be obtained at this time. Additional data collection efforts are needed for the complete picture of asthma.

It is important to note that there is currently no nationwide surveillance system in place to monitor where and when chronic diseases, such as asthma, occur. Unlike cases of lead poisoning or salmonella, asthma is currently not a “reportable condition” that is required to be reported to health departments. Tracking chronic diseases would give communities, health care providers, and state and local health officials more of the information they need to help prevent these deadly diseases. Therefore, this report provides an incomplete picture of the local burden of asthma, as is the case nationally.

Findings

Conclusions that may be drawn from the collected data are as follows:

1. Asthma prevalence estimates vary widely throughout Cuyahoga County and according to the methods used to obtain asthma information. Local findings support national statistics that childhood asthma prevalence rates lie somewhere between 5-20%. Local estimates of adult asthma prevalence rates (2.5%) were lower than the national adult rates (5.8% - 11.6%). The difference in rates may be due to limited sample size and/or variances in data collection.
2. Similar to national statistics, during childhood, asthma is more prevalent among boys than girls and during adult years, asthma is more prevalent among women than men.
3. Consistent with national rates, local estimates of self-reported asthma prevalence are generally higher in minorities compared to whites. There are multiple reasons for these findings, including differences in prevalence, risk factors for severe disease, asthma management, and access to medical care.
4. Similar to national statistics, local findings illustrate a discrepancy between the number of children diagnosed with asthma compared to those who report using asthma medications. Specifically, fewer children reported using medications than reported being diagnosed with asthma. This suggests that access to asthma medications may be a problem and/or adequate drug therapy may not be prescribed or adhered to.

5. Similar to national statistics, approximately 14% of children reported missing school “sometimes or more” because of problems breathing, including asthma. This suggests that asthma and/or related respiratory conditions are a key reason for school absenteeism.
6. Consistent with national statistics, discrepancies exist between the prevalence of asthma when self-reported by children and their parents, as compared to data obtained through school emergency form records. Specifically, the asthma prevalence rates obtained from school emergency form records is lower compared to children and parent self-reports. One explanation of these discrepancies may be that a percentage of children experience symptoms of asthma, but are not diagnosed with the disease.
7. Similar to national statistics, symptoms consistent with asthma are reported by a large number of children, between 16% and 32%, with no known asthma diagnosis. Validation work suggests that approximately 50% of children with asthma symptoms and no asthma diagnosis may meet clinical criteria for an asthma diagnosis. This suggests a very high prevalence of children with undiagnosed asthma, at least on Cleveland’s East side where this has been assessed.
8. The marked discrepancies among data sources suggests the need to improve the rigor by which such data are collected.

Questions concerning this report should be directed to the American Lung Association at 1-800-LUNG-USA.

What is Asthma?

According to the American Lung Association, asthma is a life-threatening, chronic lung disease affecting over 20 million men, women and children across the United States. Characterized by episodes of shortness of breath, coughing, wheezing, and chest tightness, asthma is the leading cause of hospitalization among children and missed days from school due to chronic conditions. Asthma attacks can be triggered by infections (colds, viruses), some medications, allergens (pollens, molds, dust, animals, cockroaches), exercise, weather (cold air, changes in temperature), tobacco smoke, air pollution, strong odors, and emotional stress. Asthma symptoms vary over time and also differ in severity from one individual to another. When it is not effectively treated, asthma often leads to hospitalization, missed school and work, limitations on physical activity, sleepless nights, and in some cases, death. Asthma hits hardest and disproportionately among low-income, minority, inner-city populations; tends to run in families; is more common in people who have allergies; and may occur at any age, but the onset is more likely in younger individuals. Asthma costs the U.S. economy billions in medical and indirect expenses and approximately 5,000 Americans die from asthma each year. Most of these deaths are preventable, but due to suboptimal care and a lack of information and awareness, people continue to die needlessly from asthma. Over the last decade, the reported number of new cases and deaths due to asthma has increased significantly, drawing the attention and focus of health officials nationwide. While there is no cure for asthma and the cause of the disease is not known, when properly managed, people with asthma can lead healthy and active lives.

Why is Asthma on the Rise?

Researchers are not sure why there is an increase in asthma. However, it is well documented that the rate of asthma increases as communities adopt western lifestyles and become more urbanized. There are greater prevalence rates of asthma in urban communities versus rural areas. Environmental factors such as indoor and outdoor air pollution, tobacco smoking, and

occupational exposures have all been associated with the increase. The increase in the prevalence of asthma has also been associated with an increase in allergies.

What is the Greater Cleveland Asthma Coalition?

The Greater Cleveland Asthma Coalition (GCAC) is a division of the American Lung Association of Ohio, which consists of over 50 member organizations working to improve the health and quality of life of individuals affected by asthma. Since 1997, the GCAC has provided a central forum for asthma information exchange and collaboration on asthma projects. Current funding support is provided by The Cleveland Foundation and the Mt. Sinai Health Care Foundation. Membership is open to all interested organizations and individuals.

The American Lung Association is the oldest voluntary health organization in the United States, with a national office and constituent and affiliate associations around the country. Founded in 1901, the American Lung Association of Ohio fights all types of lung disease. Supported by contributions from the public, along with gifts and grants from corporations and foundations, the American Lung Association of Ohio achieves its many successes through the work of thousands of committed volunteers. With a special emphasis on asthma, tobacco control and environmental health, the American Lung Association of Ohio works to improve every breath you take.

For additional information, please contact the Greater Cleveland Asthma Coalition at 1-800-LUNG-USA.

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

Type of Data:	Asthma Prevalence Rate
Source:	School Health Program, Division of Nursing at the Cuyahoga County Board of Health.
Time Period:	2001-2002 School Year
Target Population:	Children (grades pre-k to 12) from nine suburban school districts as well as select private schools throughout Northeast, Northwest, Southeast, and Southwest Cuyahoga County
Sample Demographics:	49,635 students representing 91 schools
Outcomes:	
<u>Overall:</u>	6.5% Suburban Cuyahoga County 6.3% Northeast 9.5% Northwest 7.4% Southeast 5.5% Southwest
<u>Gender Specific:</u>	7.6% males; 5.7% females
<u>Age Specific:</u>	6.1% (grades k-6); 6.7% (grades 7-8); 7.7% (grades 9-12)
<u>Race/Ethnicity Specific:</u>	Not available.
Collection Details:	Public Health Nurses and clinic aides reviewed student health history cards and emergency medical authorization forms for every student. If asthma was listed on either form, the student was considered a case.
Limitations/Comments:	Data are limited by parent self-reporting.
Contact:	American Lung Association of Ohio, Northeast Region

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

Type of Data:	Asthma Prevalence Rate
Source:	Ohio Family Health Survey, The Ohio Department of Health and The Federation for Community Planning
Time Period:	1998
Target Population:	Adults and children living in Cuyahoga County.
Sample Demographics:	Data obtained for 484 randomly selected children and 1,489 adults.
Outcomes:	
<u>Overall:</u>	7.2% (children < 18 years old); 2.5% (Adults 18+ years old)
<u>Gender Specific:</u>	10.1% (males < 18 years old); 4.2% (females < 18 years old); 1.2% (males 18+ years old); 3.6% (females 18+ years old)
<u>Age Specific:</u>	5.1% (0-4 years old); 8.3% (5-12 years old); 7.5% (13-17 years old); 3.3% (18-44 years old); 1.8% (45+ years old)
<u>Race/Ethnicity Specific:</u>	4.4% (White, Non-Hispanic, children < 18 years old); 12.1% (All other races, children < 18 years old); 1.6% (White, Non-Hispanic, adults 18+ years old); 4.9% (All other races, adults 18+ years old)
Collection Details:	A random telephone survey was used to obtain information.
Limitations/Comments:	Data are limited by parent self-reporting.
Contact:	American Lung Association of Ohio, Northeast Region

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

Type of Data:	Asthma Prevalence Rate
Source:	Cuyahoga County Family Health Survey, The Federation for Community Planning
Time Period:	2001
Target Population:	Children living in Cuyahoga County
Sample Demographics:	Data obtained for 479 randomly selected children
Outcomes:	
<u>Overall:</u>	5.2% (children < 18 years old)
<u>Gender Specific:</u>	4.9% (males < 18 years old); 5.5% (females < 18 years old);
<u>Age Specific:</u>	3.9% (0-4 years old); 5.5% (5-12 years old); 6.2% (13-17 years old);
<u>Race/Ethnicity Specific:</u>	5.0% (White, Non-Hispanic, children < 18 years old); 5.5% (All other races, children < 18 years old);
Collection Details:	A random telephone survey was used to obtain information.
Limitations/ Comments:	Data are limited by parent self-reporting.
Contact:	American Lung Association of Ohio, Northeast Region

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

Type of Data:	Asthma Prevalence Rate
Source:	Ohio Behavioral Risk Factor Surveillance Survey, The Ohio Department of Health
Time Period:	1999
Target Population:	Children living in Ohio.
Sample Demographics:	Data obtained for 1,597 randomly selected families in Ohio.
Outcomes:	
<u>Overall:</u>	6.2% (children < 18 years old)
<u>Gender Specific:</u>	Unable to obtain.
<u>Age Specific:</u>	7.6% (5-12 years old); 7.5% (13-17 years old)
<u>Race/Ethnicity Specific:</u>	6.0% (White, Non-Hispanic, children < 18 years old); 7.7% (All other races, children < 18 years old)
Collection Details:	A random telephone survey was used to obtain information.
Limitations/Comments:	Data are limited by parent self-reporting.
Contact:	American Lung Association of Ohio, Northeast Region

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

Type of Data:	Asthma Prevalence Rate
Source:	Rainbow Asthma and Allergy Screening Questionnaire, Department of Clinical Epidemiology; Rainbow Babies and Children's Hospital
Time Period:	2000-2001 School Year
Target Population:	Children in grades k-6 attending school in a Northeast Cuyahoga County public school system.
Sample Demographics:	Questionnaire data were available for 2083 of the targeted 2800 children.
Outcomes:	
<u>Overall:</u>	9% "Current diagnosis" of asthma; 12% "Ever" had asthma" (i.e., includes past history of asthma)
<u>Gender Specific:</u>	7% White males; 4% White females; 14% Black/Other males; 8% Black/Other females
<u>Age Specific:</u>	See "Overall"
<u>Race/Ethnicity Specific:</u>	See "Gender Specific"
Collection Details:	Questionnaire Survey completed at home by parents and children (distinct forms). Questions asked: "Have you ever been told by a doctor that your child has asthma? If yes, does your child still have it?" Other questions pertained to symptoms of asthma (cough, wheeze, chest tightness, etc.). A sample of 107 children who had completed the questionnaire that indicated no current asthma also underwent a "gold standard" clinical assessment. These data indicated that an additional approximately 10% of children have symptoms and clinical findings consistent with undiagnosed asthma.
Limitations/Comments:	Validation data (used to estimate prevalence of undiagnosed asthma) were based on a sample of 107 and need to be verified in a larger sample. Data are self/parent-report.
Contact:	American Lung Association of Ohio, Northeast Region

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

Type of Data:	Asthma Prevalence Rate
Source:	Rainbow Asthma and Allergy Screening Questionnaire, Department of Clinical Epidemiology; Rainbow Babies and Children's Hospital
Time Period:	2001-2002 School Year
Target Population:	Children in grades 4-6 attending four public schools on the East side of Cleveland.
Sample Demographics:	Questionnaire data were available for 548 children.
Outcomes:	
<u>Overall:</u>	15% "Diagnosed" by doctor or nurse; 13% "Currently taking asthma medication"; 14% Reported missing school "sometimes" because of asthma
<u>Gender Specific:</u>	Not available.
<u>Age Specific:</u>	Not available.
<u>Race/Ethnicity Specific:</u>	Not available.
Collection Details:	Questionnaire Survey completed at home by parents and children (distinct forms). Questions asked: "Have you ever been told by a doctor that your child has asthma? If yes, does your child still have it?" Other questions pertained to symptoms of asthma (cough, wheeze, chest tightness, etc.).
Limitations/Comments:	Data are self-report and the accuracy of reporting in this specific population has not yet been validated.
Contact:	American Lung Association of Ohio, Northeast Region

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

Type of Data:	Asthma Prevalence Rate
Source:	Rainbow Asthma and Allergy Screening Questionnaire, Department of Clinical Epidemiology; Rainbow Babies and Children's Hospital
Time Period:	2002-2003 School Year
Target Population:	Children in grades 2-5 attending two schools on the East Side of Cleveland (84% African American sample; approximately 50% male)
Sample Demographics:	Questionnaire data were available for 569 children and 190 parents.
Outcomes:	
<u>Overall:</u>	22% of children and 26% of parents reported the child with diagnosed asthma; 8% of children reported having been hospitalized for asthma; 22% of children reported use of medications for asthma; 5 or more asthma symptoms reported by 47% of children (32% of children with no diagnosis and 68% of children with an asthma diagnosis); 5 or more asthma symptoms parent-reported for 36% of children (16% with no asthma diagnosis and 84% with an asthma diagnosis)
<u>Gender Specific:</u>	Not available.
<u>Age Specific:</u>	Not available.
<u>Race/Ethnicity Specific:</u>	Not available.
Collection Details:	Questionnaire Survey completed at home or at a school open house by parents. Children completed surveys in class, with a prompter reading each question out loud.
Limitations/Comments:	Incomplete data by the parents prevent a full comparison of child versus parent responses. Initial validation data suggests that 5 or more symptoms of asthma has a sensitivity of 60% and a specificity of 77% in identifying children without an asthma diagnosis who would meet standard clinical criteria for asthma.
Contact:	American Lung Association of Ohio, Northeast Region

Greater Cleveland Asthma Coalition

SUMMARY OF ASTHMA DATA

Type of Data: Frequency of Asthma-Related Emergency Room Visits

Source: Pediatric Emergency Department
Rainbow Babies and Children's Hospital

Time Period: 1996, 1997, 1998

Target Population: Children living in the Cleveland Area (Eastside)

Sample Demographics: Not available.

Outcomes:

Overall: 1,335 visits (1996);
1,577 visits (1997);
1,399 visits (1998)

Gender Specific: Not available.

Age Specific: Not available.

Race/Ethnicity Specific: Not available.

Collection

Details: Information was obtained from asthma carepath data collection form used in the emergency department.

Limitations/

Comments: Figures are conservative; transported and transferred patients were missed.

Contact: American Lung Association of Ohio, Northeast Region