*Project SENSOR. News

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ASTHMA: THE NUMBERS
646,317 Adults in Michigan Report Currently Having Asthma.

For the year 2001 as part of the Behavioral Risk Factor Surveillance System (BRFSS) an asthma module was included in the Michigan survey. The BRFSS is a random-digit-dialed telephone survey of the civilian, non-institutionalized population ages ≥ 18 years that is administered by states throughout the country. Core questions such as cigarette usage are administered in each state and then states can elect to add modules. Preliminary results from the asthma module from the 2001 BRFSS survey in Michigan are shown in Table I. The results in Table I are based on the response to the following two questions: "Have you ever been told by a doctor, nurse or other health professional that you had asthma?" and "Do you still have asthma?" Almost 9% of adults in Michigan indicate they currently have asthma.

Table II shows the results of two questions about work-related asthma: "Were you ever told by a doctor or other medical person that your asthma was related to any job you ever had?"; and "Did you ever tell a doctor or other medical person that your asthma was related to any job you ever had?" Among individuals who currently have asthma and their asthma began as an adult, 20.1% of the men and 9.9% of the women answered yes to at least one of the two questions about the work-relatedness of asthma. For men the percentage who said they told a health care professional their asthma was related to a job was over twice as high as said that a health care provider said their asthma was work-related (18.0% vs. 7.7%).

The most recent asthma surveillance data for the United States was recently published March 29, 2002 by CDC in the MMWR 51 (SS01): 1-13, or on the web at www.cdc.gov/mmwr_ss.html. This surveillance data is based on reviews of multiple data sources including death certificates, hospital records, emergency department records and surveys. For the most recent years for which data is available, 1997-1999, rates of asthma episode/attacks were down and rates of hospitalizations and deaths were down from previous years. The rate of outpatient and

Table I. Prevalence of Lifetime and Current, Childhood and Adult Onset Asthma by Gender
2001 Michigan BRFS
(percentages with 95% confidence interval limits)

	Total	Males	Females
Lifetime asthma	12.4 ±1.2	10.5 ±1.8	14.1 ±1.6
Lifetime asthma, child onset	5.7 ±0.9	6.5 ±1.5	4.9 ±1.1
Lifetime asthma, adult onset ($16y)	6.2 ±0.8	3.5 ±1.0	8.7 ±1.3
Current asthma	8.8 ±1.0	6.7 ±1.5	10.8 ±1.5
Current asthma, child onset	3.5 ±0.7	3.7 ±1.2	3.4 ±0.9
Current asthma, adult onset ($16y)	5.0 ±0.7	2.9 ±0.9	7.0 ±1.2

Table II. Proportion Whose Asthma May Be Work-Related by Gender
2001 Michigan BRFS
(percentages with 95% confidence interval limits)

	Doctor	Respondent	Either
Lifetime asthma	4.9 ±1.8	5.8 ±2.2	8.1 ±2.5
Lifetime asthma, child onset	2.4 ±1.9	2.5 ±2.1	3.6 ±2.4
Lifetime asthma, adult onset ($16y)	7.3 ±3.1	9.2 ±4.0	12.5 ±4.4
Current asthma	5.8 ±2.3	7.0 ±2.9	9.7 ±3.2
Current asthma, child onset	3.4 ±2.9	4.0 ±3.3	5.3 ±3.7
Current asthma, adult onset ($16y)	7.3 ±3.3	9.3 ±4.6	12.7 ±4.9
Males			
Lifetime asthma	5.4 ±3.2	7.7 ±4.4	9.8 ±4.8
Current asthma	6.1 ±4.0	10.4 ±6.4	12.6 ±6.8
Child onset	3.6	4.9	5.7
Adult onset ($16y)	7.7	18.0	20.1
Females			
Lifetime asthma	4.7 ±2.2	4.6 ±2.3	7.1 ±2.7
Current asthma	5.6 ±2.8	5.1 ±2.8	8.1 ±3.3
Child onset	3.3	3.2	4.9
Adult onset ($16y)	7.1	6.0	9.9

emergency department visits increased from previous years. The proportion of children and adults who report activity limitation remained stable.

The state of Michigan has set up a new web site for both patients with asthma and for health professionals. One can obtain statistics on asthma in Michigan by clicking on Asthma Resources and then clicking on MI Asthma Statistics or by selecting county of interest and clicking on go. The web site address is: www. GetAsthmahelp.org.

Some highlights of the Michigan asthma data are shown in Table III. The 2000 year census counted 9,938,444 people in Michigan of whom 7,344,510 were 18 years or older. Using the most recent BRFSS data, that 8.8% of adults currently have asthma then 646,317 adults in Michigan have asthma. This is greater than the number of adults in Michigan with asthma shown in Table III . The estimate in Table III is based on previously published estimates that approximately 5% of adults have asthma. This new BRFSS survey suggests that there is an association with work in 9.7% (95 %CI 6.7-12.9) of the Michigan adults who currently have asthma (Table II). This means there are 62,693 (95% CI 43,303-83,375) adults with asthma in Michigan where the healthcare provider or the patient report an association with work. If a man develops asthma as an adult, the latest data from BRFSS indicates either he or you will think it is work-related 20% of the time. Estimates from the published literature on the percentage of adult asthma which is work-related range from 2-45% with a median of 9%. Calculation of the estimate using the most methodological sound articles reported an estimate that 15% of adult asthma was work-related (Blanc and Toren, 1999).

Under the Sentinel Event Notification System of Occupational Risks (SENSOR) we receive reports of 150-200 adults a year with work-related asthma. These reports allow us to target investigations at the work place where the individual developed their asthma. During these investigations we administer a questionnaire to

identify other symptomatic individuals and to assess both the type of exposures as well as the air levels. Based on the estimated prevalence of asthma in the state either based on self-reporting by the patient or the doctor told the patient, only a very small percentage of the suspected cases of work-related asthma are being reported. The SENSOR program has proved useful in identifying other symptomatic individuals who need medical assistance, and in reducing exposures in workplaces. No one over the 16 years of SENSOR's existence has lost their job because of a disease report from a health care provider. Michigan law requires health care providers to report and there is a specific provision in the new HIPPA regulations for such required public health reports that exempts health care providers from obtaining permission from the patient (Section 1645.512 (6)i, page 82813 of Federal Register Vo. 65 (No. 250)). *We continue to need your diagnostic acumen and your willingness to take the time to report occupational disease and in particular, work-related asthma to help reduce the burden of asthma in Michigan.*

Reference

Blanc PD, Toren KJ. How much adult asthma can be attributed to occupational factors? Am J Med 1999; 107: 580-587.

Table III. Asthma in the United States and Michigan

Estimated Yearly Impact of Asthma	United States	Michigan
Number of people with asthma in 1994	14.16 million	521,000
Children less than 18 years	4.98 million	185,400
Adults 18 years and older	9.18 million	335,900
Number of people who had an asthma attack in 1998	10.6 million	*
Children less than 18 years	3.8 million	*
Adults 18 years and older	6.8 million	*
Number of visits to a physician office for asthma in 1998	13.9 million	*
Number of visits to an emergency room or urgent care center for asthma in 1998	2 million	*
Number of hospital stays for asthma in 1998	423,000	17,392
Deaths due to asthma in 1998	5,438	185
Cost of asthma in 1994	$10.7 billion	$394 million
Direct medical costs	$6.1 billion	$224 million
Indirect costs	$4.6 billion	$170 million

*=Data are not available

(www.GetAsthmahelp.org)

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*PS *Remember to report all cases of occupational disease!*

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