

**Prevalence of Asthma-Related Health Conditions Among Michigan Adults with Current Asthma  
Estimates from the Michigan Asthma Call-Back Survey  
2017-2021 Combined**

**Standard Tables**

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## **Introduction**

The Michigan Asthma Call-Back Survey has been conducted annually since 2005 in conjunction with the Michigan Behavioral Risk Factor Survey (MiBRFS), an annual, statewide landline and cellular telephone survey of Michigan adults aged 18 years and older. Both of these surveys are conducted through a collaborative effort among the Population Health Surveillance Branch (PHSB) at the Centers for Disease Control and Prevention (CDC), the Office for Survey Research at Michigan State University's Institute for Public Policy and Social Research, the ICF Macro Inc., and the Michigan Department of Health and Human Services. The MiBRFS participates in the national [Behavioral Risk Factor Surveillance System](#) that is coordinated by PHSB.

Landline and cell phone respondents to the MiBRFS who had ever been diagnosed with asthma or whose randomly selected child had ever been diagnosed with asthma were asked at the end of the MiBRFS interview if they would be willing to participate in an additional interview focused on asthma. Those who agreed were called back within two weeks of the MiBRFS interview and administered a comprehensive, standardized questionnaire on asthma-related symptoms, health care, medication, and management. Two separate, but very similar, questionnaires were used: one with questions about the adult respondent with asthma and the other with questions about the selected child with asthma.

This report presents the results for adults from the 2017-2021 Michigan Asthma Call-Back Surveys combined. The total 5-year sample size of completed interviews for adults was 3,077, with 660 from 2017, 657 from 2018, 637 from 2019, 416 from 2020, and 707 from 2021. Estimates were weighted to adjust for the probabilities of selection and a raking adjustment factor that adjusted for the distribution of Michigan adults by telephone source, detailed race/ethnicity, education level, marital status, age by gender, gender by race/ethnicity, age by race/ethnicity, and renter/owner status all at the state level. Analyses were performed in SAS-Callable SUDAAN®, a statistical computing program that was designed for complex sample surveys.

The prevalence estimates and 95% confidence intervals, included within the tables that follow, were restricted to adults with current asthma (n=2,300). Current asthma was defined as a “yes” response to both of the following questions: “Have you ever been told by a doctor or other health professional that you had asthma?” and “Do you still have asthma?”

Michigan Asthma Call-Back Survey, 2017-2021 (combined) Adult Estimates

<b>Table 1. Prevalence of Asthma Symptoms, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>				
	<b>n<sup>a</sup></b>	<b>Had Asthma Symptoms on ≥ 9 Days in Past Month<sup>b</sup></b>	<b>Difficulty Sleeping Due to Asthma Symptoms on ≥ 2 Days in Past Month<sup>c</sup></b>	<b>Usual Activities Limited at Least a Little During Past 12 Months<sup>d</sup></b>
<b>Total</b>	<b>2,300</b>	<b>39.0 (36.1-41.9)</b>	<b>23.9 (21.5-26.5)</b>	<b>47.9 (45.0-50.8)</b>
<b>Age</b>				
18-34	343	34.7 (28.7-41.4)	19.7 (15.0-25.5)	45.4 (38.9-52.1)
35-44	221	35.2 (27.8-43.5)	21.1 (15.0-28.7)	42.7 (34.8-50.9)
45-54	376	41.6 (35.3-48.1)	27.4 (21.9-33.6)	50.0 (43.7-56.3)
55-64	558	40.7 (35.5-46.1)	29.3 (24.5-34.5)	52.6 (47.3-57.9)
65-74	550	44.3 (38.9-49.8)	25.4 (21.2-30.2)	52.2 (46.8-57.6)
≥ 75	252	45.2 (36.5-54.3)	23.3 (16.8-31.4)	44.0 (35.8-52.6)
<b>Gender</b>				
Male	704	37.3 (32.4-42.5)	20.7 (17.0-24.9)	42.7 (37.7-47.9)
Female	1,596	39.9 (36.4-43.4)	25.6 (22.6-28.9)	50.7 (47.2-54.2)
<b>Race</b>				
White	1,894	38.0 (34.9-41.2)	21.5 (19.0-24.2)	46.3 (43.1-49.5)
Black	222	37.8 (29.8-46.4)	32.7 (25.1-41.2)	53.7 (45.1-62.1)
<b>Household Income</b>				
< \$20,000	385	56.1 (48.9-63.1)	41.0 (34.2-48.1)	67.2 (60.0-73.6)
\$20,000-34,999	403	44.3 (37.4-51.5)	31.0 (24.3-38.5)	54.7 (47.6-61.5)
\$35,000-49,999	266	37.4 (28.6-47.2)	19.2 (13.1-27.2)	39.3 (30.8-48.6)
\$50,000-74,999	302	34.0 (27.2-41.5)	20.1 (14.7-26.9)	45.7 (38.4-53.2)
≥ \$75,000	626	28.6 (24.0-33.7)	15.0 (11.5-19.3)	34.9 (29.8-40.3)
<b>Education</b>				
< HS graduate	115	62.4 (50.6-73.0)	43.5 (32.5-55.1)	64.4 (52.5-74.7)
HS graduate	481	40.1 (34.3-46.3)	25.8 (20.8-31.5)	51.0 (44.7-57.3)
Some college	778	39.0 (34.5-43.6)	23.0 (19.5-26.9)	49.0 (44.3-53.8)
College graduate	918	28.7 (25.0-32.8)	15.6 (12.8-18.9)	36.0 (31.8-40.4)
<sup>a</sup> Sample size (unweighted) for demographic subpopulations. Cell sample sizes for prevalence estimates will vary due to missing values. <sup>b</sup> Reported ≥ 9 days to the following question, "During the past 30 days, on how many days did you have any symptoms of asthma?" <sup>c</sup> Reported ≥ 2 days to the following question, "During the past 30 days, on how many days did symptoms of asthma make it difficult for you to stay asleep?" <sup>d</sup> Reported "a little," "a moderate amount," or "a lot" to the following question, "During the past 12 months, would you say you limited your usual activities due to asthma not at all, a little, a moderate amount, or a lot?"				

Michigan Asthma Call-Back Survey, 2017-2021 (combined) Adult Estimates

<b>Table 2. Percent Distribution of Number of Asthma Symptom-Free Days<sup>a</sup> in Past 2 Weeks, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>				
	<b>None</b>	<b>1-6 Days</b>	<b>7-13 Days</b>	<b>14 Days</b>
<b>Total</b>	<b>25.0 (22.6-27.7)</b>	<b>12.9 (11.1-15.0)</b>	<b>24.3 (21.8-27.0)</b>	<b>37.8 (34.9-40.7)</b>
<b>Age</b>				
18-34	16.3 (11.8-22.1)	14.0 (10.0-19.3)	28.9 (23.0-35.6)	40.8 (34.6-47.4)
35-44	22.1 (16.0-29.8)	14.2 (9.4-20.9)	21.6 (16.0-28.6)	42.0 (34.1-50.4)
45-54	29.0 (23.1-35.6)	11.7 (8.5-15.8)	22.0 (17.6-27.3)	37.3 (31.5-43.6)
55-64	29.6 (24.8-34.8)	13.4 (10.0-17.7)	21.6 (17.6-26.2)	35.5 (30.6-40.7)
65-74	32.4 (27.4-37.8)	12.4 (9.3-16.4)	23.5 (19.2-28.5)	31.6 (26.9-36.8)
≥ 75	36.2 (28.7-44.3)	7.6 (4.8-11.9)	23.6 (16.4-32.7)	32.6 (24.9-41.4)
<b>Gender</b>				
Male	23.5 (19.5-28.1)	12.0 (9.0-15.8)	24.3 (19.8-29.5)	40.2 (35.2-45.4)
Female	25.9 (22.9-29.1)	13.4 (11.2-16.0)	24.3 (21.4-27.4)	36.4 (33.1-39.9)
<b>Race</b>				
White	24.9 (22.2-27.8)	12.3 (10.4-14.6)	24.8 (22.0-27.9)	37.9 (34.8-41.2)
Black	22.8 (16.7-30.4)	13.7 (8.4-21.5)	22.3 (16.0-30.2)	41.2 (33.1-49.9)
<b>Household Income</b>				
< \$20,000	34.6 (28.3-41.4)	18.4 (13.2-25.0)	25.3 (19.3-32.3)	21.8 (16.4-28.3)
\$20,000-34,999	31.3 (24.7-38.7)	11.9 (8.3-16.7)	22.7 (17.6-28.7)	34.1 (27.9-41.0)
\$35,000-49,999	26.0 (18.8-34.7)	17.7 (11.2-26.9)	25.6 (16.5-37.4)	30.7 (22.9-39.8)
\$50,000-74,999	21.6 (15.8-28.8)	11.4 (7.8-16.4)	25.5 (19.5-32.5)	41.5 (34.4-49.0)
≥ \$75,000	16.0 (12.2-20.7)	9.8 (7.3-13.0)	26.2 (21.8-31.1)	48.0 (42.6-53.4)
<b>Education</b>				
< HS graduate	44.4 (33.1-56.2)	12.1 (6.5-21.4)	14.5 (8.3-24.1)	29.1 (19.3-41.4)
HS graduate	25.8 (20.9-31.2)	16.2 (12.1-21.4)	24.1 (18.5-30.7)	33.9 (28.3-40.0)
Some college	24.7 (21.0-28.7)	12.5 (9.6-16.1)	26.8 (22.7-31.3)	36.1 (31.5-40.8)
College graduate	17.2 (14.1-20.9)	10.5 (8.3-13.3)	25.3 (21.6-29.4)	47.0 (42.5-51.4)
<sup>a</sup> Response to the following question, "During the past two weeks, on how many days were you completely symptom-free, that is no coughing, wheezing, or other symptoms of asthma?"				

Michigan Asthma Call-Back Survey, 2017-2021 (combined) Adult Estimates

<b>Table 3. Prevalence of Asthma-Related Health Care Utilization in the Past 12 Months, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>					
	<b>ER/Urgent Care Visits for Asthma<sup>a</sup></b>		<b>≥ 1 Hospital Stays for Asthma<sup>b</sup></b>	<b>≥ 2 Routine Asthma Care Visits<sup>c</sup></b>	<b>Received Flu Vaccine<sup>d</sup></b>
	<b>≥ 1 Visit</b>	<b>≥ 2 Visits</b>			
<b>Total</b>	<b>13.4 (11.4-15.6)</b>	<b>6.4 (5.0-8.1)</b>	<b>2.5 (1.6-3.7)</b>	<b>29.7 (27.2-32.4)</b>	<b>43.0 (38.8-47.3)</b>
<b>Age</b>					
18-34	14.1 (9.8-19.7)	7.0 (4.2-11.5)	--†	18.8 (14.1-24.7)	37.8 (28.7-47.8)
35-44	17.6 (12.4-24.5)	7.2 (4.0-12.8) ~	--†	23.5 (17.6-30.8)	29.0 (19.3-41.2)
45-54	14.0 (9.7-19.7)	7.3 (4.3-12.0)	2.3 (0.9-5.6) ~	36.7 (30.8-43.1)	35.6 (27.5-44.5)
55-64	11.7 (8.6-15.6)	7.2 (4.7-10.8)	3.3 (2.0-5.4)	36.5 (31.6-41.7)	51.3 (43.3-59.1)
65-74	11.6 (8.5-15.7)	4.1 (2.4-6.7)	4.9 (2.9-8.4)	43.3 (38.0-48.8)	61.7 (53.7-69.2)
75+	6.8 (3.7-12.2) ~	--†	1.5 (0.6-3.9) ~	32.4 (25.1-40.8)	59.6 (43.4-74.0)
<b>Gender</b>					
Male	7.1 (5.0-10.0)	3.6 (2.2-5.6)	1.5 (0.9-2.4)	22.8 (19.0-27.2)	42.8 (35.6-50.3)
Female	16.9 (14.2-20.0)	7.9 (6.0-10.4)	3.0 (1.8-5.0)	33.6 (30.4-37.0)	43.1 (38.0-48.4)
<b>Race</b>					
White	11.7 (9.6-14.1)	5.7 (4.2-7.6)	2.2 (1.3-3.8)	28.0 (25.3-30.9)	46.5 (41.8-51.3)
Black	20.3 (14.2-28.1)	9.8 (5.8-16.2)	4.3 (2.2-8.1) ~	39.0 (31.3-47.3)	32.3 (22.0-44.5)
<b>Household Income</b>					
< \$20,000	20.7 (15.5-27.2)	11.1 (7.3-16.6)	3.4 (2.1-5.6)	40.2 (33.7-47.1)	44.2 (34.9-53.9)
\$20,000-34,999	18.6 (12.7-26.4)	9.6 (5.8-15.4)	6.2 (2.7-13.6) ~	35.1 (28.8-41.9)	34.7 (26.5-44.0)
\$35,000-49,999	14.9 (9.0-23.6)	6.3 (2.6-14.7) ~	3.2 (1.2-8.1) ~	28.8 (21.1-38.0)	48.5 (33.9-63.5)
\$50,000-74,999	8.9 (5.6-13.9)	3.1 (1.3-6.9) ~	--†	25.3 (19.5-32.0)	42.2 (31.1-54.3)
≥ \$75,000	8.1 (5.7-11.5)	3.8 (2.2-6.6)	0.2 (0.0-0.8) ~	26.8 (22.2-32.0)	43.7 (35.8-51.9)
<b>Education</b>					
< HS graduate	19.9 (12.0-31.1)	13.1 (7.3-22.5)	--†	36.7 (26.3-48.5)	29.2 (17.5-44.4)
HS graduate	14.2 (10.2-19.4)	5.4 (3.2-9.0)	3.0 (1.6-5.5)	33.1 (27.8-38.8)	39.4 (31.1-48.4)
Some college	12.5 (9.7-16.0)	6.5 (4.5-9.5)	2.6 (1.7-4.0)	28.8 (24.8-33.1)	42.2 (35.4-49.3)
College graduate	10.9 (8.3-14.4)	4.4 (2.7-7.2)	0.6 (0.3-1.3) ~	25.3 (21.8-29.2)	53.4 (46.6-60.0)
<sup>a</sup> Response to the question, "During the past 12 months, how many times did you visit an emergency room or urgent care center because of your asthma?" <sup>b</sup> Responded at least one time to the question, "During the past 12 months, how many different times did you stay in any hospital overnight or longer because of your asthma?" <sup>c</sup> Reported ≥ 2 times to the question, "During the past 12 months, how many times did you see a doctor or other health professional for a routine checkup for your asthma?" <sup>d</sup> Responded "yes" to either of the following questions, "A flu shot is an influenza vaccine injected in your arm. During the past 12 months, have you had a flu shot?" or "During the past 12 months, have you had a flu vaccine that was sprayed in your nose? The flu vaccine sprayed in the nose is also called FluMist." † This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%. ~ This estimate should be used with caution due to its low reliability and precision (relative standard error 31%-50%).					

<b>Table 4. Prevalence of Any Asthma Control Medication Use in Past 3 Months, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>	
	<b>Used <math>\geq</math> 1 Asthma Control Medication in Past 3 Months<sup>a</sup></b>
<b>Total</b>	<b>38.3 (35.6-41.0)</b>
<b>Age</b>	
18-34	20.7 (15.9-26.5)
35-44	30.8 (24.2-38.4)
45-54	49.5 (43.2-55.8)
55-64	45.9 (40.6-51.2)
65-74	58.3 (52.8-63.6)
$\geq$ 75	47.4 (38.7-56.2)
<b>Gender</b>	
Male	33.4 (29.0-38.2)
Female	41.0 (37.6-44.3)
<b>Race</b>	
White	38.8 (35.8-41.8)
Black	36.2 (28.7-44.4)
<b>Household Income</b>	
< \$20,000	39.2 (32.6-46.2)
\$20,000-34,999	38.1 (31.8-44.9)
\$35,000-49,999	40.4 (31.5-50.0)
\$50,000-74,999	34.4 (28.0-41.4)
$\geq$ \$75,000	41.7 (36.7-46.8)
<b>Education</b>	
< HS graduate	30.1 (21.1-41.1)
HS graduate	34.2 (28.9-40.0)
Some college	39.9 (35.5-44.4)
College graduate	43.5 (39.2-47.8)
<sup>a</sup> Respondent reported they had taken at least one asthma control medication in the past 3 months, as defined by the CDC national Asthma Call-Back Survey Analysis Workgroup on Medications.	

<b>Table 5. Prevalence of Comorbid Conditions, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>		
	<b>Ever Diagnosed with COPD, Emphysema, or Chronic Bronchitis<sup>a</sup></b>	<b>Ever Diagnosed with Depression<sup>b</sup></b>
<b>Total</b>	<b>33.4 (30.4-36.5)</b>	<b>44.8 (41.4-48.2)</b>
<b>Age</b>		
18-34	9.4 (5.9-14.6)	44.4 (36.8-52.2)
35-44	29.8 (21.7-39.3)	52.6 (43.2-61.9)
45-54	43.0 (35.8-50.6)	46.4 (39.1-53.7)
55-64	49.8 (43.9-55.8)	48.3 (42.2-54.4)
65-74	46.8 (40.6-53.0)	37.5 (31.9-43.5)
≥ 75	57.4 (47.6-66.7)	29.4 (21.4-38.8)
<b>Gender</b>		
Male	31.5 (26.5-37.0)	40.3 (34.5-46.4)
Female	34.4 (30.7-38.3)	47.4 (43.3-51.5)
<b>Race</b>		
White	32.5 (29.2-35.9)	44.7 (40.9-48.5)
Black	35.9 (27.4-45.4)	42.6 (33.4-52.2)
<b>Household Income</b>		
< \$20,000	59.0 (51.3-66.4)	63.1 (55.5-70.2)
\$20,000-34,999	40.1 (32.7-48.0)	53.3 (45.4-61.1)
\$35,000-49,999	28.9 (20.5-39.1)	45.2 (33.8-57.2)
\$50,000-74,999	23.4 (17.4-30.6)	40.6 (32.3-49.4)
≥ \$75,000	17.9 (13.8-22.8)	30.0 (24.7-35.8)
<b>Education</b>		
< HS graduate	57.6 (43.6-70.5)	58.0 (44.4-70.4)
HS graduate	34.1 (28.1-40.7)	52.5 (45.3-59.6)
Some college	36.6 (31.8-41.8)	41.9 (36.7-47.4)
College graduate	18.5 (15.1-22.4)	36.2 (31.6-41.1)
<sup>a</sup> Replied “yes” to at least one of the following questions: “Have you ever been told by a doctor or health professional that you have chronic obstructive pulmonary disease also known as COPD?” “Have you ever been told by a doctor or other health professional that you have emphysema?” “Have you ever been told by a doctor or other health professional that you have chronic bronchitis?” <sup>b</sup> Replied “yes” to the following question, “Have you ever been told by a doctor or other health professional that you were depressed?”		



<b>Table 6. Prevalence of Experiencing Cost Barriers to Asthma Care in Past 12 Months, Among Adults with Current Asthma</b>				
<b>Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>				
	<b>Cost Barrier to Primary Care Doctor<sup>a</sup></b>	<b>Cost Barrier to Asthma Specialist<sup>b</sup></b>	<b>Cost Barrier to Obtaining Medication<sup>c</sup></b>	<b>Cost Barrier to Primary Care, Specialist, or Medication<sup>d</sup></b>
<b>Total</b>	<b>7.1 (5.6-8.9)</b>	<b>3.3 (2.4-4.7)</b>	<b>13.7 (11.7-15.9)</b>	<b>16.7 (14.5-19.1)</b>
<b>Age</b>				
18-34	9.7 (6.2-14.8)	3.4 (1.5-7.7) ~	17.0 (12.5-22.7)	20.9 (15.9-27.0)
35-44	7.3 (3.9-13.0)	2.3 (0.9-5.7) ~	9.7 (6.2-15.1)	12.7 (8.3-19.0)
45-54	6.2 (3.6-10.3)	4.2 (2.1-8.1) ~	17.4 (12.9-23.0)	19.2 (14.6-24.9)
55-64	7.8 (5.2-11.5)	4.3 (2.6-7.0)	13.0 (9.8-17.0)	16.5 (12.8-20.9)
65-74	2.5 (1.2-5.0) ~	2.8 (1.5-5.3) ~	9.8 (7.2-13.3)	12.0 (8.9-15.9)
≥ 75	3.6 (1.7-7.6) ~	--†	6.1 (3.4-10.6)	8.6 (5.3-13.6)
<b>Gender</b>				
Male	6.2 (4.3-8.8)	2.6 (1.5-4.3)	10.3 (7.9-13.3)	13.8 (10.9-17.3)
Female	7.5 (5.5-10.2)	3.8 (2.4-5.8)	15.6 (13.0-18.6)	18.3 (15.4-21.5)
<b>Race</b>				
White	5.8 (4.3-7.8)	2.9 (1.9-4.5)	13.2 (11.1-15.7)	15.3 (13.0-18.0)
Black	13.6 (8.6-20.9)	5.3 (2.7-10.2) ~	17.5 (12.1-24.7)	25.3 (18.7-33.4)
<b>Household Income</b>				
< \$20,000	13.1 (8.7-19.3)	7.0 (4.2-11.6)	20.1 (15.1-26.3)	27.9 (21.9-34.8)
\$20,000-34,999	10.8 (6.5-17.5)	5.7 (2.5-12.6) ~	19.1 (13.9-25.8)	22.1 (16.5-28.9)
\$35,000-49,999	8.3 (4.1-16.1) ~	--†	14.2 (9.2-21.5)	17.6 (11.4-26.2)
\$50,000-74,999	4.7 (2.2-9.5) ~	--†	10.5 (6.8-16.0)	13.2 (9.0-19.1)
≥ \$75,000	1.0 (0.4-2.2) ~	1.1 (0.5-2.3) ~	5.6 (3.6-8.6)	6.7 (4.5-9.7)
<b>Education</b>				
< HS graduate	14.8 (7.9-26.0)	--†	17.3 (9.6-29.2)	24.1 (15.2-36.0)
HS graduate	7.0 (4.5-10.6)	4.8 (2.9-7.9)	12.8 (9.3-17.4)	16.1 (12.2-20.9)
Some college	7.6 (5.3-10.8)	2.5 (1.5-4.1)	16.5 (13.3-20.2)	19.1 (15.6-23.2)
College graduate	2.9 (1.7-4.9)	1.7 (0.9-2.9)	9.4 (7.1-12.3)	10.8 (8.4-13.9)
<sup>a</sup> Responded “yes” to, “Was there a time in the past 12 months when you needed to see your primary care doctor for your asthma but could not because of the cost?” <sup>b</sup> Responded “yes” to, “Was there a time in the past 12 months when you were referred to a specialist for asthma care but could not go because of the cost?” <sup>c</sup> Responded “yes” to, “Was there a time in the past 12 months when you needed to buy medication for your asthma but could not because of the cost?” <sup>d</sup> Responded “yes” to at least one of the above 3 questions. † This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%. ~ This estimate should be used with caution due to its low reliability and precision (relative standard error 31%-50%).				

<b>Table 7. Prevalence of Knowledge Indicators Related to Asthma Management, Among Adults with Current Asthma</b>			
<b>Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>			
	<b>Ever Taught to Recognize Early Signs of Asthma Episode<sup>a</sup></b>	<b>Ever Taught What to Do During Asthma Episode<sup>b</sup></b>	<b>Ever Taught How to Use Peak Flow Meter<sup>c</sup></b>
<b>Total</b>	<b>68.0 (65.2-70.7)</b>	<b>77.9 (75.4-80.2)</b>	<b>44.5 (41.6-47.5)</b>
<b>Age</b>			
18-34	71.4 (64.9-77.1)	79.0 (73.1-83.8)	44.1 (37.5-50.9)
35-44	71.6 (63.7-78.3)	82.1 (75.1-87.4)	46.0 (37.8-54.4)
45-54	69.9 (63.7-75.5)	77.2 (70.9-82.4)	42.4 (36.4-48.6)
55-64	64.1 (58.7-69.2)	78.3 (73.6-82.3)	42.7 (37.6-47.9)
65-74	65.2 (59.9-70.1)	77.3 (72.5-81.5)	50.6 (45.1-56.0)
≥ 75	53.7 (44.6-62.5)	65.3 (56.3-73.3)	41.8 (33.6-50.6)
<b>Gender</b>			
Male	66.0 (60.9-70.7)	74.6 (69.8-78.9)	43.5 (38.3-48.8)
Female	69.1 (65.7-72.3)	79.7 (76.8-82.4)	45.1 (41.6-48.6)
<b>Race</b>			
White	67.1 (64.0-70.1)	77.9 (75.1-80.5)	41.4 (38.3-44.7)
Black	70.7 (62.2-77.9)	76.1 (67.6-83.0)	63.5 (55.0-71.2)
<b>Household Income</b>			
< \$20,000	63.4 (56.4-69.9)	68.0 (60.9-74.4)	49.7 (42.6-56.8)
\$20,000-34,999	66.3 (58.9-73.0)	79.8 (73.8-84.7)	48.7 (41.7-55.8)
\$35,000-49,999	74.7 (66.6-81.3)	78.9 (70.9-85.1)	51.7 (41.5-61.7)
\$50,000-74,999	66.2 (58.8-72.9)	84.8 (78.7-89.3)	37.0 (30.2-44.3)
≥ \$75,000	73.6 (68.7-77.9)	80.2 (75.2-84.3)	40.9 (35.8-46.2)
<b>Education</b>			
< HS graduate	53.1 (41.6-64.3)	63.0 (51.6-73.1)	42.3 (31.6-53.8)
HS graduate	67.8 (62.0-73.2)	77.6 (72.5-82.0)	44.7 (38.4-51.1)
Some college	71.7 (67.2-75.8)	79.6 (75.3-83.4)	46.2 (41.5-50.9)
College graduate	69.4 (65.1-73.3)	82.0 (78.2-85.3)	42.6 (38.3-47.0)
<sup>a</sup> Responded “yes” to the question, “Has a doctor or other health professional ever taught you .....how to recognize early signs or symptoms of an asthma episode?” <sup>b</sup> Responded “yes” to the question, “.....what to do during an asthma episode or attack?” <sup>c</sup> Responded “yes” to the question, “.....how to use a peak flow meter to adjust your daily medications?”			

<b>Table 7 (continued). Prevalence of Knowledge Indicators Related to Asthma Management, Among Adults with Current Asthma</b>			
<b>Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>			
	<b>Ever Received Asthma Action Plan<sup>d</sup></b>	<b>Ever Taken Asthma Management Class<sup>e</sup></b>	<b>Received ≥ 3 Types of Asthma Education<sup>f</sup></b>
<b>Total</b>	<b>32.5 (29.8-35.3)</b>	<b>7.2 (6.0-8.6)</b>	<b>44.0 (41.1-46.9)</b>
<b>Age</b>			
18-34	26.8 (21.2-33.2)	5.7 (3.5-9.3)	43.4 (36.9-50.1)
35-44	45.3 (37.1-53.8)	6.6 (3.7-11.5)	51.1 (43.0-59.1)
45-54	33.3 (27.7-39.4)	5.6 (3.5-8.8)	44.9 (38.8-51.2)
55-64	28.3 (23.9-33.2)	9.4 (6.9-12.7)	38.4 (33.5-43.5)
65-74	40.0 (34.8-45.5)	9.8 (7.0-13.7)	47.8 (42.5-53.2)
≥ 75	23.8 (17.5-31.3)	8.6 (5.6-13.1)	35.2 (27.5-43.9)
<b>Gender</b>			
Male	25.3 (20.8-30.4)	6.1 (4.4-8.5)	38.4 (33.3-43.6)
Female	36.5 (33.2-40.0)	7.8 (6.2-9.7)	47.1 (43.6-50.6)
<b>Race</b>			
White	31.1 (28.2-34.3)	5.6 (4.5-7.0)	41.2 (38.1-44.5)
Black	37.8 (30.0-46.3)	15.1 (10.4-21.4)	58.3 (49.7-66.4)
<b>Household Income</b>			
< \$20,000	30.5 (24.3-37.5)	10.1 (6.7-15.0)	44.5 (37.6-51.7)
\$20,000-34,999	32.3 (26.2-39.0)	7.5 (4.8-11.5)	43.9 (37.1-50.9)
\$35,000-49,999	41.9 (32.0-52.4)	6.1 (3.5-10.5)	54.8 (45.0-64.3)
\$50,000-74,999	31.0 (24.6-38.3)	7.3 (4.3-11.9)	39.3 (32.4-46.6)
≥ \$75,000	33.8 (29.1-39.0)	5.8 (4.2-8.0)	44.4 (39.2-49.8)
<b>Education</b>			
< HS graduate	21.1 (13.2-32.1)	5.8 (2.6-12.3) ~	31.6 (22.1-43.1)
HS graduate	34.5 (28.5-41.0)	8.0 (5.5-11.6)	45.5 (39.3-51.9)
Some college	33.7 (29.4-38.2)	6.7 (4.9-9.2)	47.1 (42.4-51.8)
College graduate	33.6 (29.5-37.9)	7.6 (5.8-10.0)	43.3 (39.1-47.7)
<sup>d</sup> Responded “yes” to the question, “An asthma action plan, or asthma management plan, is a form with instructions about when to change the amount or type of medicine, when to call the doctor for advice, and when to go to the emergency room. Has a doctor or other health professional ever given you an asthma action plan?” <sup>e</sup> Responded “yes” to the question, “Have you ever taken a course or class on how to manage your asthma?” <sup>f</sup> Responded “yes” to ≥ 3 of the 5 questions above (b-f). ~ This estimate should be used with caution due to its low reliability and precision (relative standard error 31%-50%).			

<b>Table 8. Prevalence of Asthma Triggers in Home Environment, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>				
	<b>Cigarettes Smoked in Home<sup>a</sup></b>	<b>Mold Seen/Smelled in Home<sup>b</sup></b>	<b>Saw Cockroaches in Home<sup>c</sup></b>	<b>Saw Mice/Rat in Home<sup>d</sup></b>
<b>Total</b>	<b>16.0 (13.8-18.4)</b>	<b>11.0 (9.3-13.0)</b>	<b>2.5 (1.7-3.8)</b>	<b>7.9 (6.5-9.5)</b>
<b>Age</b>				
18-34	17.3 (12.7-23.1)	12.0 (8.3-17.0)	3.2 (1.5-6.5) ~	7.0 (4.1-11.6)
35-44	18.5 (13.1-25.6)	12.3 (7.9-18.5)	--†	6.1 (3.2-11.3) ~
45-54	18.9 (13.9-25.1)	12.6 (8.7-17.7)	--†	11.0 (7.8-15.2)
55-64	17.2 (13.3-21.9)	11.3 (8.5-14.7)	4.6 (2.6-8.0) ~	6.9 (5.0-9.5)
65-74	9.6 (6.8-13.4)	7.6 (5.5-10.5)	--†	9.4 (6.8-12.9)
≥ 75	5.8 (3.1-10.6) ~	4.7 (2.4-8.8) ~	0.2 (0.0-0.5) ~	7.0 (3.9-12.2)
<b>Gender</b>				
Male	17.7 (14.0-22.2)	12.1 (9.2-15.8)	3.9 (2.1-7.0) ~	8.8 (6.3-12.2)
Female	15.1 (12.5-18.0)	10.4 (8.4-12.8)	1.7 (1.0-3.0)	7.3 (5.8-9.3)
<b>Race</b>				
White	13.9 (11.6-16.5)	10.0 (8.3-12.0)	0.5 (0.3-1.0) ~	7.8 (6.2-9.8)
Black	24.1 (17.6-32.0)	15.5 (9.9-23.4)	10.8 (6.3-17.9)	6.9 (3.9-11.8)
<b>Household Income</b>				
< \$20,000	30.9 (24.6-38.0)	16.2 (11.2-22.7)	7.0 (3.9-12.2)	9.8 (6.6-14.4)
\$20,000-34,999	25.4 (19.0-33.1)	13.9 (9.8-19.4)	5.1 (2.2-11.3) ~	11.6 (7.9-16.7)
\$35,000-49,999	12.9 (8.5-19.0)	6.8 (3.7-12.1)	--†	13.4 (7.4-23.0)
\$50,000-74,999	7.5 (4.1-13.2)	12.7 (8.6-18.4)	--e	4.9 (2.8-8.4)
≥ \$75,000	4.1 (2.2-7.3)	6.5 (4.6-8.9)	0.2 (0.0-0.7) ~	4.8 (3.2-7.0)
<b>Education</b>				
< HS graduate	37.2 (26.8-48.9)	13.7 (7.1-24.6) ~	8.9 (4.5-16.7) ~	7.5 (3.0-17.5) ~
HS graduate	20.6 (16.1-25.9)	11.5 (8.0-16.1)	3.4 (1.5-7.4) ~	10.0 (7.2-13.7)
Some college	13.7 (10.8-17.4)	10.2 (7.8-13.2)	1.3 (0.7-2.7) ~	8.5 (6.1-11.6)
College graduate	6.1 (4.3-8.6)	10.6 (8.2-13.5)	--†	5.3 (4.0-7.0)
<sup>a</sup> Responded "yes" to the question, "In the past week, has anyone smoked inside your home?" <sup>b</sup> Responded "yes" to the question, "In the past 30 days, has anyone seen or smelled mold or a musty odor inside your home? Do not include mold on food." <sup>c</sup> Responded "yes" to the question, "In the past 30 days, has anyone seen a cockroach inside your home?" <sup>d</sup> Responded "yes" to the question, "In the past 30 days, has anyone seen mice or rats inside your home? Do not include mice or rats kept as pets." <sup>e</sup> No positive responses in this cell. † This estimate was suppressed due to it having a denominator of less than 50 and/or a relative standard error of greater than 50%. ~ This estimate should be used with caution due to its low reliability and precision (relative standard error 31%-50%).				

<b>Table 8 (continued). Prevalence of Asthma Triggers in Home Environment, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>					
	<b>Inside Pets<sup>f</sup></b>	<b>Pets Allowed in Bedroom<sup>g</sup></b>	<b>Wood Burning Stove/Fireplace Used<sup>h</sup></b>	<b>Unvented Gas Logs, Stoves, or Fireplaces Used<sup>i</sup></b>	<b>Gas Used for Cooking<sup>j</sup></b>
<b>Total</b>	<b>66.5 (63.7-69.1)</b>	<b>52.4 (49.5-55.3)</b>	<b>11.7 (10.0-13.6)</b>	<b>8.2 (6.4-10.5)</b>	<b>56.0 (53.1-58.8)</b>
<b>Age</b>					
18-34	71.0 (64.6-76.6)	56.4 (49.7-62.9)	10.8 (7.4-15.6)	11.5 (7.0-18.2)	59.8 (53.3-66.0)
35-44	74.7 (67.1-81.0)	57.8 (49.4-65.7)	12.1 (7.8-18.4)	5.1 (2.7-9.4) ~	54.2 (46.0-62.1)
45-54	71.7 (65.7-77.0)	56.2 (49.9-62.4)	10.5 (7.4-14.8)	7.9 (4.9-12.4)	59.8 (53.6-65.7)
55-64	67.5 (62.4-72.3)	55.3 (49.9-60.5)	13.7 (10.6-17.6)	4.5 (2.9-7.0)	54.5 (49.2-59.7)
65-74	49.0 (43.6-54.4)	36.1 (31.0-41.4)	14.5 (10.6-19.5)	7.1 (4.8-10.4)	52.3 (46.9-57.6)
≥ 75	43.7 (35.1-52.8)	35.2 (27.0-44.4)	6.7 (3.8-11.7)	13.3 (7.9-21.5)	42.9 (34.9-51.4)
<b>Gender</b>					
Male	62.4 (57.2-67.3)	48.6 (43.4-53.8)	11.1 (8.4-14.6)	12.0 (8.3-17.2)	55.4 (50.2-60.4)
Female	68.8 (65.6-71.7)	54.5 (51.0-58.0)	12.0 (9.9-14.4)	6.1 (4.5-8.2)	56.3 (52.8-59.7)
<b>Race</b>					
White	72.3 (69.4-75.0)	58.7 (55.4-61.8)	12.8 (10.8-15.1)	7.3 (5.4-9.7)	54.6 (51.3-57.7)
Black	35.2 (27.1-44.2)	20.7 (14.2-29.1)	4.7 (2.4-9.0)	13.3 (7.9-21.6)	62.8 (54.4-70.4)
<b>Household Income</b>					
< \$20,000	60.1 (53.0-66.8)	41.2 (34.6-48.2)	4.7 (2.8-7.8)	9.2 (5.5-15.0)	51.5 (44.4-58.5)
\$20,000-34,999	65.6 (58.9-71.8)	53.2 (46.2-60.1)	12.4 (8.6-17.5)	6.0 (3.2-10.9) ~	59.4 (52.6-65.8)
\$35,000-49,999	66.0 (55.6-75.1)	50.0 (40.0-60.0)	10.8 (5.7-19.5) ~	12.9 (5.8-26.1) ~	60.3 (50.8-69.1)
\$50,000-74,999	65.9 (58.8-72.4)	55.5 (48.1-62.6)	10.3 (7.0-15.0)	5.0 (2.9-8.4)	48.6 (41.2-56.1)
≥ \$75,000	71.3 (66.6-75.6)	58.4 (53.1-63.5)	15.6 (12.4-19.5)	8.8 (5.6-13.4)	56.7 (51.4-61.9)
<b>Education</b>					
< HS graduate	73.4 (63.6-81.4)	49.8 (38.4-61.2)	6.7 (3.1-13.8) ~	13.6 (7.2-24.4) ~	59.8 (48.4-70.2)
HS graduate	66.8 (60.5-72.6)	52.1 (45.8-58.3)	9.5 (6.4-13.7)	9.7 (5.5-16.7)	61.6 (55.7-67.2)
Some college	65.7 (61.2-69.9)	53.1 (48.4-57.8)	12.9 (9.9-16.6)	6.6 (4.7-9.3)	56.7 (52.0-61.3)
College graduate	64.1 (59.9-68.1)	53.4 (49.0-57.7)	13.8 (11.2-17.0)	6.8 (4.6-9.8)	48.4 (44.0-52.9)
<sup>f</sup> Responded “yes” to the question, “Does your household have pets, such as dogs, cats, hamsters, birds, or other feathered or furry pets that spend time indoors?” <sup>g</sup> Responded “yes” to the question, “Are pets allowed in your bedroom?” (Among all respondents). <sup>h</sup> Responded “yes” to the question, “Is a wood burning fireplace or wood burning stove used in your home?” <sup>i</sup> Responded “yes” to the question, “Are unvented gas logs, unvented gas fireplaces, or unvented gas stoves used in your home?” <sup>j</sup> Responded “yes” to the question, “Is gas used for cooking?” ~ This estimate should be used with caution due to its low reliability and precision (relative standard error 31%-50%).					

<b>Table 9. Prevalence of Asthma Trigger Avoidance Behaviors in Home Environment, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>				
	<b>Kitchen Fan Used When Cooking<sup>a</sup></b>	<b>Bathroom Exhaust Fan Used<sup>b</sup></b>	<b>Sheets Washed in Hot Water<sup>c</sup></b>	<b>Air Cleaner Used in Home<sup>d</sup></b>
<b>Total</b>	<b>52.2 (49.3-55.1)</b>	<b>61.3 (58.4-64.1)</b>	<b>37.1 (34.3-40.0)</b>	<b>35.0 (32.2-37.8)</b>
<b>Age</b>				
18-34	53.7 (47.0-60.3)	57.7 (51.0-64.1)	31.6 (25.4-38.5)	38.4 (32.2-45.0)
35-44	45.0 (37.1-53.1)	60.6 (52.3-68.4)	38.5 (30.7-47.0)	33.7 (26.4-41.7)
45-54	54.3 (48.0-60.5)	62.8 (56.4-68.8)	39.4 (33.4-45.8)	33.6 (27.9-39.8)
55-64	52.8 (47.4-58.1)	61.5 (56.3-66.5)	39.6 (34.5-44.9)	26.9 (22.5-31.8)
65-74	49.4 (44.0-54.8)	65.2 (59.5-70.5)	35.8 (31.0-41.0)	40.0 (34.9-45.5)
≥ 75	60.4 (51.8-68.3)	67.8 (59.9-74.7)	49.1 (40.1-58.2)	37.8 (29.3-47.1)
<b>Gender</b>				
Male	49.5 (44.3-54.7)	62.0 (57.0-66.8)	34.8 (29.7-40.4)	34.8 (30.0-39.8)
Female	53.7 (50.2-57.2)	60.9 (57.4-64.4)	38.3 (35.0-41.7)	35.1 (31.8-38.5)
<b>Race</b>				
White	53.1 (49.9-56.4)	66.1 (63.0-69.2)	37.6 (34.5-40.9)	34.4 (31.4-37.5)
Black	48.6 (40.1-57.2)	36.9 (29.1-45.5)	35.7 (28.1-44.1)	38.0 (29.9-46.8)
<b>Household Income</b>				
< \$20,000	43.0 (36.1-50.1)	42.6 (35.9-49.6)	38.9 (32.2-46.1)	29.0 (22.9-36.0)
\$20,000-34,999	53.4 (46.3-60.2)	54.1 (47.1-61.0)	36.7 (30.3-43.5)	29.4 (23.5-36.1)
\$35,000-49,999	57.9 (48.1-67.1)	60.6 (50.8-69.7)	37.4 (27.5-48.5)	36.8 (28.1-46.4)
\$50,000-74,999	50.6 (43.1-58.0)	70.2 (62.8-76.6)	36.5 (29.6-44.1)	32.1 (25.7-39.3)
≥ \$75,000	58.1 (52.7-63.2)	77.2 (72.5-81.3)	39.0 (33.9-44.3)	39.8 (34.6-45.2)
<b>Education</b>				
< HS graduate	47.0 (35.7-58.7)	54.1 (42.6-65.2)	51.3 (39.5-62.9)	29.6 (20.1-41.3)
HS graduate	52.6 (46.3-58.8)	58.8 (52.5-64.7)	32.5 (26.5-39.0)	31.4 (26.1-37.3)
Some college	54.2 (49.5-58.9)	58.5 (53.7-63.2)	35.3 (30.9-39.8)	38.1 (33.5-42.8)
College graduate	51.4 (47.0-55.9)	71.3 (67.1-75.1)	38.6 (34.5-42.9)	36.7 (32.6-41.0)
<sup>a</sup> Responded “yes” to the question, “Is an exhaust fan that vents to the outside used regularly when cooking in your kitchen?” <sup>b</sup> Responded “yes” to the question, “In your bathroom, do you regularly use an exhaust fan that vents to the outside?” <sup>c</sup> Responded “hot” to the question, “Are your sheets and pillowcases washed in cold, warm, or hot water?” <sup>d</sup> Responded “yes” to the question, “An air cleaner or air purifier can filter out pollutants like dust, pollen, mold and chemicals. It can be attached to the furnace or free standing. It is not, however, the same as a normal furnace filter. Is an air cleaner or purifier regularly used inside your home?”				

<b>Table 9 (continued). Prevalence of Asthma Trigger Avoidance Behaviors in Home Environment, Among Adults with Current Asthma</b>				
<b>Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>				
	<b>Dehumidifier Used Regularly in Home<sup>e</sup></b>	<b>No Carpeting in Bedroom<sup>f</sup></b>	<b>Uses Mattress Cover<sup>g</sup></b>	<b>Uses Pillow Cover<sup>h</sup></b>
<b>Total</b>	<b>39.0 (36.2-41.9)</b>	<b>37.0 (34.2-39.8)</b>	<b>40.2 (37.4-43.1)</b>	<b>30.6 (28.1-33.2)</b>
<b>Age</b>				
18-34	34.2 (28.2-40.6)	34.9 (28.9-41.5)	32.5 (26.8-38.8)	23.4 (18.6-29.0)
35-44	45.1 (37.1-53.4)	44.6 (36.6-52.8)	41.1 (33.3-49.4)	26.6 (20.2-34.1)
45-54	38.5 (32.5-44.8)	38.4 (32.5-44.7)	42.6 (36.4-49.0)	37.5 (31.7-43.8)
55-64	37.6 (32.7-42.9)	34.1 (29.2-39.3)	46.7 (41.4-52.1)	35.0 (30.1-40.2)
65-74	43.1 (38.0-48.4)	38.1 (33.0-43.5)	45.5 (40.1-50.9)	37.8 (32.8-43.1)
≥ 75	45.4 (36.7-54.4)	30.8 (23.0-39.9)	40.6 (32.6-49.2)	28.2 (21.7-35.7)
<b>Gender</b>				
Male	37.1 (32.3-42.1)	37.7 (32.8-42.8)	28.6 (24.4-33.3)	21.4 (17.7-25.7)
Female	40.1 (36.7-43.6)	36.6 (33.3-40.0)	46.5 (43.0-50.1)	35.7 (32.5-38.9)
<b>Race</b>				
White	42.3 (39.1-45.5)	35.9 (32.9-39.1)	40.9 (37.7-44.1)	31.4 (28.7-34.3)
Black	26.9 (19.7-35.6)	41.2 (33.2-49.7)	36.9 (29.3-45.2)	25.3 (19.2-32.6)
<b>Household Income</b>				
< \$20,000	24.1 (18.6-30.6)	34.9 (28.3-42.0)	28.6 (22.9-35.0)	24.1 (19.0-30.1)
\$20,000-34,999	30.8 (25.0-37.3)	40.9 (34.2-47.9)	45.5 (38.5-52.7)	34.4 (28.1-41.4)
\$35,000-49,999	37.3 (28.8-46.6)	38.3 (29.2-48.4)	40.7 (31.7-50.3)	28.3 (21.4-36.4)
\$50,000-74,999	49.5 (42.1-56.9)	38.7 (31.7-46.1)	47.0 (39.6-54.6)	32.5 (25.9-39.8)
≥ \$75,000	49.6 (44.2-55.0)	32.9 (28.1-38.1)	45.7 (40.4-51.1)	35.3 (30.6-40.3)
<b>Education</b>				
< HS graduate	23.5 (14.9-35.0)	40.4 (29.5-52.3)	20.6 (12.8-31.4)	11.1 (6.4-18.4)
HS graduate	36.8 (31.1-43.0)	37.4 (31.7-43.5)	33.2 (27.9-39.0)	26.9 (22.0-32.5)
Some college	41.8 (37.3-46.5)	37.0 (32.5-41.7)	42.6 (37.9-47.4)	32.7 (28.5-37.1)
College graduate	43.4 (39.0-47.9)	34.8 (30.8-39.1)	52.2 (47.7-56.7)	39.9 (35.8-44.3)
<sup>e</sup> Responded “yes” to the question, “Is a dehumidifier regularly used to reduce moisture inside your home?” <sup>f</sup> Responded “no” to the question, “Do you have carpeting or rugs in your bedroom? This does not include throw rugs small enough to be laundered.” <sup>g</sup> Responded “yes” to the question, “Do you use a mattress cover that is made especially for controlling dust mites?” <sup>h</sup> Responded “yes” to the question, “Do you use a pillow cover that is made especially for controlling dust mites?”				

<b>Table 10. Prevalence of Ever Being Advised to Modify Environment to Improve Asthma, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>	
	<b>Ever Advised to Modify Environment to Improve Asthma<sup>a</sup></b>
<b>Total</b>	<b>39.8 (37.0-42.7)</b>
<b>Age</b>	
18-34	41.0 (34.7-47.6)
35-44	40.6 (33.0-48.8)
45-54	41.0 (35.0-47.4)
55-64	44.5 (39.2-49.8)
65-74	34.9 (29.8-40.3)
≥ 75	26.4 (19.9-34.1)
<b>Gender</b>	
Male	33.7 (29.2-38.5)
Female	43.2 (39.7-46.8)
<b>Race</b>	
White	41.0 (37.9-44.2)
Black	33.4 (26.1-41.6)
<b>Household Income</b>	
< \$20,000	34.0 (27.6-41.0)
\$20,000-34,999	41.8 (34.9-49.1)
\$35,000-49,999	37.7 (29.2-47.0)
\$50,000-74,999	37.0 (30.1-44.4)
≥ \$75,000	43.4 (38.3-48.8)
<b>Education</b>	
< HS graduate	27.7 (18.2-39.8)
HS graduate	37.7 (31.9-43.9)
Some college	41.4 (36.8-46.1)
College graduate	44.7 (40.4-49.0)
<sup>a</sup> Responded “yes” to the question, “Has a health professional ever advised you to change things in your home, school, or work to improve your asthma?”	



<b>Table 11. Percent Distribution of Number Days Unable to Work or Carry Out Usual Activities Because of Asthma,<sup>a</sup> Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>			
	<b>None</b>	<b>1-5 Days</b>	<b>≥ 6 Days</b>
<b>Total</b>	<b>72.6 (70.0-75.1)</b>	<b>15.3 (13.3-17.4)</b>	<b>12.1 (10.4-14.1)</b>
<b>Age</b>			
18-34	78.2 (72.3-83.1)	15.5 (11.4-20.8)	6.3 (3.8-10.2)
35-44	68.3 (60.1-75.5)	21.1 (15.1-28.7)	10.6 (6.4-17.0)
45-54	70.2 (64.2-75.7)	12.1 (8.9-16.2)	17.7 (13.2-23.3)
55-64	68.1 (63.0-72.8)	15.5 (12.1-19.5)	16.4 (12.8-20.8)
65-74	70.8 (65.5-75.6)	13.0 (9.9-16.7)	16.2 (12.4-20.9)
≥ 75	77.4 (70.2-83.2)	13.3 (9.0-19.2)	9.3 (5.7-14.9)
<b>Gender</b>			
Male	81.2 (77.3-84.6)	9.6 (7.3-12.6)	9.2 (6.8-12.2)
Female	67.7 (64.3-71.0)	18.5 (15.8-21.5)	13.8 (11.6-16.4)
<b>Race</b>			
White	73.5 (70.5-76.2)	15.0 (12.8-17.4)	11.6 (9.7-13.7)
Black	70.0 (61.7-77.2)	14.9 (10.1-21.4)	15.1 (9.9-22.4)
<b>Household Income</b>			
< \$20,000	59.5 (52.2-66.3)	18.1 (13.3-24.2)	22.4 (17.3-28.6)
\$20,000-34,999	68.6 (61.9-74.6)	16.5 (12.2-22.1)	14.8 (10.7-20.2)
\$35,000-49,999	77.8 (69.2-84.5)	12.8 (7.8-20.2)	9.4 (5.4-16.1)
\$50,000-74,999	74.4 (67.2-80.4)	16.6 (11.5-23.3)	9.0 (5.7-14.0)
≥ \$75,000	78.3 (73.3-82.5)	14.6 (11.1-19.0)	7.1 (4.7-10.7)
<b>Education</b>			
< HS graduate	69.1 (57.3-78.8)	14.1 (7.3-25.5)	16.8 (10.3-26.2)
HS graduate	74.7 (69.3-79.4)	11.1 (8.1-15.1)	14.2 (10.6-18.7)
Some college	68.5 (63.9-72.7)	18.7 (15.2-22.8)	12.9 (10.2-16.1)
College graduate	77.1 (73.2-80.6)	17.3 (12.3-23.9)	7.7 (5.6-10.4)
<sup>a</sup> Response to the following question, "During the past 12 months, how many days were you unable to work or carry out your usual activities because of your asthma?"			

<b>Table 12. Prevalence of Work-Related Asthma Using 3 Definitions, Among Adults with Current Asthma Michigan Asthma Call-Back Survey, 2017-2021 Combined</b>			
	<b>Asthma Caused or Aggravated by Current or Previous Job<sup>a</sup></b>	<b>Ever Told or Told by Doctor That Asthma Was Work-Related<sup>b</sup></b>	<b>Any Indication of Work-Related Asthma<sup>c</sup></b>
<b>Total</b>	<b>56.7 (53.7-59.6)</b>	<b>23.7 (21.2-26.5)</b>	<b>58.2 (55.2-61.1)</b>
<b>Age</b>			
18-34	49.3 (42.6-56.0)	18.7 (13.5-25.4)	50.6 (43.9-57.3)
35-44	54.6 (46.4-62.6)	23.4 (17.2-30.9)	55.3 (47.1-63.2)
45-54	62.4 (56.2-68.3)	24.6 (19.2-30.8)	64.4 (58.1-70.2)
55-64	61.9 (56.6-66.9)	30.2 (25.3-35.7)	63.7 (58.5-68.7)
65-74	62.6 (57.3-67.7)	27.8 (23.3-32.9)	64.6 (59.4-69.6)
≥ 75	49.3 (42.6-56.0)	20.7 (13.7-30.0)	57.9 (48.5-66.6)
<b>Gender</b>			
Male	59.6 (54.3-64.7)	26.6 (21.9-31.9)	61.5 (56.2-66.4)
Female	55.1 (51.5-58.7)	22.1 (19.3-25.2)	56.4 (52.8-59.9)
<b>Race</b>			
White	55.4 (52.1-58.6)	22.8 (20.0-25.9)	56.8 (53.5-60.1)
Black	59.6 (50.8-67.8)	26.0 (19.3-34.1)	61.6 (52.8-69.8)
<b>Household Income</b>			
< \$20,000	65.0 (58.0-71.3)	32.1 (25.6-39.4)	67.1 (60.2-73.3)
\$20,000-34,999	64.7 (57.7-71.1)	31.4 (25.0-38.6)	66.9 (59.9-73.1)
\$35,000-49,999	61.9 (52.0-70.9)	29.8 (20.5-41.1)	62.5 (52.7-71.4)
\$50,000-74,999	54.7 (47.0-62.2)	17.8 (12.9-24.0)	56.3 (48.7-63.7)
≥ \$75,000	46.4 (40.9-51.9)	16.7 (13.2-20.9)	47.7 (42.3-53.2)
<b>Education</b>			
< HS graduate	70.9 (59.1-80.4)	29.1 (19.5-41.1)	71.0 (59.2-80.4)
HS graduate	58.2 (51.8-64.4)	24.6 (19.2-31.0)	60.3 (53.9-66.3)
Some college	60.1 (55.3-64.7)	25.3 (21.4-29.6)	61.9 (57.2-66.5)
College graduate	45.1 (40.7-49.5)	18.8 (15.7-22.4)	46.2 (41.9-50.6)
<sup>a</sup> Responded “yes” to one or more of the following 4 questions: “Was your asthma caused by chemicals, smoke, fumes, or dust in your current job?” “Is your asthma made worse by chemicals, smoke, fumes, or dust in your current job?” “Was your asthma caused by chemicals, smoke, fumes, or dust in any previous job you ever had?” “Was your asthma made worse by chemicals, smoke, fumes, or dust in any previous job you ever had?”			
<sup>b</sup> Responded “yes” to one or more of the following 2 questions: “Were you ever told by a doctor or other health professional that your asthma was related to any job you ever had?” “Did you ever tell a doctor or other health professional that your asthma was related to any job you ever had?”			
<sup>c</sup> Responded “yes” to at least one of the above 6 questions (a and b).			