

Asthma Burden Among Adults and Children in Public Health Region 3 and Texas, 2011

Data Requested by

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Table 1. Current Asthma Prevalence Among Children (0-17 years) and Adults (18+ years), Texas, BRFSS 2011

Characteristics	Children		Adults	
	Sample Size	Prevalence (95% CI)	Sample Size	Prevalence (95% CI)
Total	3,695	8.0 (6.7, 9.3)	14,863	7.4 (6.7, 8.1)
Gender				
Boy	1,915	8.6 (6.8, 10.4)	5,646	5.1 (4.2, 6.0)
Girl	1,744	7.4 (5.6, 9.3)	9,217	9.7 (8.6, 10.7)
Race/Ethnicity				
White Non-Hispanic	1,619	8.2 (6.3, 10.1)	9,636	9.2 (8.2, 10.2)
Black Non-Hispanic	321	11.5 (7.1, 15.8)	1,081	10.2 (7.5, 13.0)
Hispanic	1,530	6.6 (4.8, 8.5)	3,456	4.2 (3.2, 5.2)
Other Non-Hispanic	179	7.1 (2.0, 12.1)	497	5.2 (2.8, 7.5)
Age Group (years)				
0-4	787	5.3 (3.1, 7.6)		
5-9	878	10.3 (7.3, 13.3)		
10-14	958	8.6 (6.2, 11.1)		
15-17	697	9.4 (6.3, 12.6)		
18-29			1,221	4.9 (3.4, 6.3)
30-44			2,815	7.7 (6.3, 9.0)
45-64			5,699	8.5 (7.3, 9.7)
65+			4,994	8.1 (6.8, 9.3)

Data Source: Texas Behavioral Risk Factor Surveillance System (BRFSS), 2011.

- Estimate is be unreliable because confidence interval half-width is > 10

-- Estimate suppressed for small sample size (if numerator is < 5 or denominator is < 50).

Note: Data for children are based on information provided by an adult respondent about a child living in the home.

Survey question for children: "Has a doctor, nurse or other health professional ever said that the child has asthma?" and "Does the child still have asthma?"

Survey question for adults: "Have you ever been told by a doctor, nurse or other health professional that you had asthma?" and "Do you still have asthma?"

Numerator: Respondents who answered "Yes" to the previous survey questions.

Denominator: All respondents excluding refusals and unknowns.

Table 2. Current Asthma Prevalence Among Children (0-17 years) and Adults (18+ years) by Public Health Region, Texas, BRFSS 2011

Geographic Location	Children		Adults	
	Sample Size	Prevalence (95% CI)	Sample Size	Prevalence (95% CI)
PHR 1	244	7.0 (3.1, 11.0)	1,194	8.6 (5.3, 11.9)
PHR 2	203	5.2 (2.0, 8.5)	1,277	8.1 (4.3, 11.9)
PHR 3	401	10.0 (6.6, 13.3)	1,596	6.7 (5.3, 8.1)
PHR 4	271	6.9 (2.4, 11.5)	1,286	11.0 (7.7, 14.3)
PHR 5	63	7.8 (1.3, 14.3)	320	8.6 (4.4, 12.9)
PHR 6	816	6.9 (4.2, 9.6)	2,749	7.0 (5.7, 8.4)
PHR 7	442	4.4 (1.8, 6.9)	1,690	7.7 (5.8, 9.6)
PHR 8	423	9.5 (5.6, 13.3)	1,646	7.7 (5.4, 9.9)
PHR 9	252	10.1 (2.6, 17.5)	1,216	7.6 (4.8, 10.3)
PHR 10	167	6.3 (1.0, 11.7)	621	4.7 (2.5, 6.8)
PHR 11	308	11.4 (6.1, 16.6)	849	6.6 (4.3, 9.0)
Texas	3,695	8.0 (6.7, 9.3)	14,863	7.4 (6.7, 8.1)

PHR = Public Health Region

Data Source: Texas Behavioral Risk Factor Surveillance System (BRFSS), 2011.

- Estimate is be unreliable because confidence interval half-width is > 10

-- Estimate suppressed for small sample size (if numerator is < 5 or denominator is < 50).

Note: Data for children are based on information provided by an adult respondent about a child living in the home.

Survey question for children: “Has a doctor, nurse or other health professional ever said that the child has asthma?” and “Does the child still have asthma?”

Survey question for adults: “Have you ever been told by a doctor, nurse or other health professional that you had asthma?” and “Do you still have asthma?”

Numerator: Respondents who answered “Yes” to the previous survey questions.

Denominator: All respondents excluding refusals and unknowns.

Table 3. Current Asthma Prevalence Among Children (0-17 years) and Adults (18+ years), Public Health Region 3, Texas, BRFSS 2011

Characteristics	Children		Adults	
	Sample Size	Prevalence (95% CI)	Sample Size	Prevalence (95% CI)
Total	401	10.0 (6.6, 13.3)	1,596	6.7 (5.3, 8.1)
Gender				
Boy	200	11.2 (6.1, 16.4)	668	4.1 (2.4, 5.7)
Girl	198	8.9 (4.5, 13.4)	928	9.2 (7.0, 11.4)
Race/Ethnicity				
White Non-Hispanic	201	11.7 (6.6, 16.7)	1,126	8.2 (6.3, 10.1)
Black Non-Hispanic	--	--	159	7.0 (2.6, 11.3)
Hispanic	123	7.3 (2.0, 12.7)	224	2.3 (0.5, 4.1)
Other Non-Hispanic	--	--	69	7.4 (1.4, 13.3)
Age Group (years)				
0-4	91	5.4 (0.5, 10.2)		
5-9	100	13.1 (5.2, 21.1)		
10-14	105	10.3 (3.6, 17.1)		
15-17	72	15.9 (6.3, 25.5)		
18-29			179	2.2 (0.5, 3.9)
30-44			350	7.5 (4.7, 10.3)
45-64			579	7.7 (5.3, 10.2)
65+			469	7.2 (4.4, 9.9)

Data Source: Texas Behavioral Risk Factor Surveillance System (BRFSS), 2011.

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Note: Data for children are based on information provided by an adult respondent about a child living in the home.

Survey question for children: "Has a doctor, nurse or other health professional ever said that the child has asthma?" and "Does the child still have asthma?"

Survey question for adults: "Have you ever been told by a doctor, nurse or other health professional that you had asthma?" and "Do you still have asthma?"

Numerator: Respondents who answered "Yes" to the previous survey questions.

Denominator: All respondents excluding refusals and unknowns.

Table 4. Current Asthma Prevalence Among Children (0-17 years) and Adults (18+ years) by Public Health Region, Texas, BRFSS 2011

Geographic Location	Children		Adults	
	Sample Size	Prevalence (95% CI)	Sample Size	Prevalence (95% CI)
PHR 1	244	7.0 (3.1, 11.0)	1,194	8.6 (5.3, 11.9)
PHR 2	203	5.2 (2.0, 8.5)	1,277	8.1 (4.3, 11.9)
PHR 3	401	10.0 (6.6, 13.3)	1,596	6.7 (5.3, 8.1)
PHR 4	271	6.9 (2.4, 11.5)	1,286	11.0 (7.7, 14.3)
PHR 5	63	7.8 (1.3, 14.3)	320	8.6 (4.4, 12.9)
PHR 6	816	6.9 (4.2, 9.6)	2,749	7.0 (5.7, 8.4)
PHR 7	442	4.4 (1.8, 6.9)	1,690	7.7 (5.8, 9.6)
PHR 8	423	9.5 (5.6, 13.3)	1,646	7.7 (5.4, 9.9)
PHR 9	252	10.1 (2.6, 17.5)	1,216	7.6 (4.8, 10.3)
PHR 10	167	6.3 (1.0, 11.7)	621	4.7 (2.5, 6.8)
PHR 11	308	11.4 (6.1, 16.6)	849	6.6 (4.3, 9.0)
Texas	3,695	8.0 (6.7, 9.3)	14,863	7.4 (6.7, 8.1)

PHR = Public Health Region

Data Source: Texas Behavioral Risk Factor Surveillance System (BRFSS), 2011.

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-- Estimate suppressed for small sample size (if numerator is < 5 or denominator is < 50).

Note: Data for children are based on information provided by an adult respondent about a child living in the home.

Survey question for children: “Has a doctor, nurse or other health professional ever said that the child has asthma?” and “Does the child still have asthma?”

Survey question for adults: “Have you ever been told by a doctor, nurse or other health professional that you had asthma?” and “Do you still have asthma?”

Numerator: Respondents who answered “Yes” to the previous survey questions.

Denominator: All respondents excluding refusals and unknowns.

Table 5. Crude and Age-Adjusted Asthma* Hospital Discharge Rates per 10,000 Texas Residents Among Children (0-17 years) and Adults (18+ years), Texas, 2011

Characteristics	Children						Adults					
	Discharges	Population	Crude Rate	Age-adjusted discharge rate†	95% CI		Discharges	Population	Crude Rate	Age-adjusted discharge rate†	95% CI	
					Lower Limit	Upper Limit					Lower Limit	Upper Limit
Total	9,280	6,663,942	13.9	13.4	13.2	13.7	15,125	19,220,057	7.9	8.4	8.3	8.5
Sex												
Boy	5,957	3,400,887	17.5	16.9	16.5	17.3	3,722	9,613,350	3.9	4.4	4.2	4.5
Girl	3,322	3,263,055	10.2	9.8	9.5	10.2	11,403	9,606,707	11.9	12.1	11.9	12.3
Race/Ethnicity												
White Non-Hispanic	2,369	2,418,551	9.8	9.7	9.3	10.1	7,769	9,049,665	8.6	7.9	7.8	8.1
Black Non-Hispanic	3,646	3,188,151	11.4	10.7	10.3	11.0	3,127	7,031,523	4.4	6.5	6.3	6.8
Hispanic	2,559	805,252	31.8	32.1	30.9	33.4	3,239	2,173,561	14.9	16.4	15.8	16.9
Other Non-Hispanic	637	251,988	25.3	24.3	22.4	26.2	755	965,308	7.8	9.2	8.5	9.9
Age Group (years)												
0-4	4,171	2,008,007	20.8	20.8	20.6	20.9						
5-9	3,421	1,894,786	18.1	18.1	17.9	18.2						
10-14	1,385	1,705,351	8.1	8.1	8.0	8.2						
15-17	303	1,055,798	2.9	2.9	2.8	2.9						
18-24							554	2,673,386	2.1	2.1	2.1	2.1
25-34							1,182	3,988,349	3.0	3.0	2.9	3.0
35-44							1,784	3,791,888	4.7	4.7	4.7	4.8
45-64							6,276	6,185,264	10.1	10.1	10.1	10.2
65+							5,329	2,581,170	20.6	20.6	20.6	20.7

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2011.

Population Data Source: Center for Health Statistics, Texas Department of State Health Services.

* Hospital records listing ICD-9 codes 493.0-493.9 as the principal diagnosis.

† Total rates, and rates by sex and race/ethnicity are age-adjusted to the 2000 U.S. Census population. Discharge rates by age group cannot be age-adjusted.

‘--’ Value suppressed if number of discharges is less than 12.

Table 6. Crude and Age-Adjusted Asthma* Hospital Discharge Rates per 10,000 Texas Residents Among Children (0-17 years) and Adults (18+ years), Public Health Region 3, Texas, 2011

Characteristics	Children						Adults					
	Discharges	Population	Crude Rate	Age-adjusted discharge rate†	95% CI		Discharges	Population	Crude Rate	Age-adjusted discharge rate†	95% CI	
					Lower Limit	Upper Limit					Lower Limit	Upper Limit
Total	2,286	1,822,868	12.5	12.3	11.8	12.8	4,337	5,336,157	8.1	9.2	8.9	9.4
Sex												
Boy	1,497	928,014	16.1	15.8	15.0	16.6	1,052	2,686,322	3.9	4.8	4.5	5.1
Girl	789	894,854	8.8	8.7	8.0	9.3	3,285	2,649,835	12.4	13.3	12.8	13.7
Race/Ethnicity												
White Non-Hispanic	616	798,480	7.7	7.7	7.1	8.3	2,675	2,882,188	9.3	9.0	8.7	9.3
Black Non-Hispanic	535	673,436	7.9	7.6	6.9	8.2	297	1,443,983	2.1	4.3	3.7	4.9
Hispanic	992	255,119	38.9	39.4	37.0	41.9	1,109	669,639	16.6	18.6	17.4	19.7
Other Non-Hispanic	141	95,833	14.7	14.2	11.8	16.5	227	340,347	6.7	8.3	7.2	9.5
Age Group (years)												
0-4	929	534,932	17.4	17.4	17.1	17.7						
5-9	900	508,738	17.7	17.7	17.4	18.0						
10-14	369	479,818	7.7	7.7	7.5	7.9						
15-17	88	299,380	2.9	2.9	2.8	3.0						
18-24							148	688,075	2.2	2.2	2.1	2.2
25-34							295	1,077,280	2.7	2.7	2.7	2.8
35-44							492	1,208,191	4.1	4.1	4.0	4.2
45-64							1,891	1,762,719	10.7	10.7	10.6	10.9
65+							1,511	599,892	25.2	25.2	25.0	25.4
County												
Collin	205	204,247	10.0	10.9	9.4	12.3	363	680,070	5.3	6.8	6.0	7.6
Dallas	1,230	678,936	18.1	17.3	16.4	18.3	1,661	1,781,341	9.3	10.8	10.2	11.3
Denton	172	162,374	10.6	10.4	8.8	11.9	361	575,480	6.3	8.7	7.7	9.7

Characteristics	Children						Adults					
	Discharges	Population	Crude Rate	Age-adjusted discharge rate†	95% CI		Discharges	Population	Crude Rate	Age-adjusted discharge rate†	95% CI	
					Lower Limit	Upper Limit					Lower Limit	Upper Limit
County (continued)												
Ellis	63	42,250	14.9	14.9	11.2	18.6	115	122,845	9.4	10.1	8.2	12.0
Hood	--	10,577	--	--	--	--	20	45,574	4.4	4.3	2.3	6.3
Hunt	12	21,239	5.6	5.6	2.4	8.7	74	70,011	10.6	10.4	8.0	12.7
Johnson	25	44,740	5.6	5.8	3.5	8.0	186	129,809	14.3	14.2	12.1	16.2
Kaufman	63	26,938	23.4	23.4	17.6	29.3	109	85,017	12.8	13.5	10.9	16.0
Parker	20	27,403	7.3	7.5	4.2	10.8	91	94,369	9.6	9.6	7.6	11.6
Rockwall	22	20,662	10.6	11.2	6.5	15.9	25	70,407	3.6	3.9	2.3	5.4
Tarrant	371	491,551	7.5	7.3	6.6	8.0	1,072	1,380,544	7.8	9.1	8.5	9.6

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2011.

Population Data Source: Center for Health Statistics, Texas Department of State Health Services.

* Hospital records listing ICD-9 codes 493.0-493.9 as the principal diagnosis.

† Total rates, and rates by sex and race/ethnicity are age-adjusted to the 2000 U.S. Census population. Discharge rates by age group cannot be age-adjusted.

'--' Value suppressed if number of discharges is less than 12.

Limitations of the data used in this report:

Hospitalization Data

- Fewer than 12 asthma hospital discharges were reported in 2011 among children (0-17 years) in Hood County, therefore the number and rate of asthma hospitalizations cannot be reported.
- Hospitalization data are based on inpatient hospitalizations and do not include emergency department (ED) visits which did not result in hospital admission. By not including these ED asthma visits, the burden of serious asthma episodes is not fully captured.
- The Texas Hospital Inpatient Discharge Public Use Data represent the number of inpatient hospitalizations. Since the data have been de-identified and an individual can be hospitalized more than once for the same condition during the data collection period, multiple hospitalizations for the same individual and the same diagnosis cannot be distinguished.
- Texas Hospital Inpatient Discharge Public Use Data is not a complete source of information on asthma-related discharges because some hospitals in Texas are exempt from reporting requirements. This may result in an underestimation of the number of related discharges.
- Incidence rates and patterns of newly diagnosed asthma cases are not captured by the data in this report. Using hospitalization data, we cannot determine if a hospitalization serves as an initial diagnosis of asthma.
- The Texas Hospital Inpatient Discharge Public Use Data results do not include HIV and drug/alcohol use patients.

BRFSS Prevalence Data

- Prevalence estimates from BRFSS may underestimate the true prevalence of asthma among Texas children because the survey does not identify undiagnosed cases of asthma.
- Due to the improvements in BRFSS sampling methodology and a change in weighting procedures used for the survey data, 2011 BRFSS data cannot be compared to survey data from previous years, such as combined 2007-2010 BRFSS, in order to assess trends. Shifts in prevalence estimates for 2011 might not represent trends in prevalence in the population but instead merely reflect improved methods of measuring disease and risk factors.