

Asthma Burden Among Children in Harris County, Texas, 2007 to 2012

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Table 1. Lifetime Asthma Prevalence Among Children (0-17 years) in Harris County and Texas, 2007 to 2010

Characteristics	Harris County		Texas	
	Sample Size	Prevalence (95% CI)	Sample Size	Prevalence (95% CI)
Total	1,237	11.9 (9.7-14.0)	14,459	13.2 (12.3-14.0)
Sex				
Boy	643	15.4 (12.1-18.8)	7,355	15.6 (14.3-17.0)
Girl	579	7.7 (5.1-10.3)	6,935	10.7 (9.6-11.8)
Race/Ethnicity				
Non-Hispanic White	511	11.8 (8.3-15.3)	6,282	13.6 (12.4-14.9)
Non-Hispanic Black	203	18.2 (11.7-24.8)	1,150	17.5 (14.1-20.8)
Hispanic	428	10.1 (7.0-13.3)	6,295	12.0 (10.6-13.3)
Other Non-Hispanic	--	--	551	8.3 (5.1-11.4)
Age Group (years)				
0-14	892	11.7 (9.2-14.3)	10,411	12.9 (11.8-13.9)
0-4	293	5.4 (2.4-8.3)	3,271	8.6 (6.9-10.3)
5-9	303	11.4 (7.1-15.7)	3,380	14.7 (12.9-16.5)
10-14	296	19.1 (13.6-24.5)	3,760	16.0 (14.2-17.8)
15-17	233	12.8 (7.5-18.0)	2,791	14.8 (12.8-16.8)

Data Source: Texas Behavioral Risk Factor Surveillance System (BRFSS), 2007-2010.

-- Estimate suppressed for small sample size (if numerator is < 5 or denominator is < 50) or is unreliable because the relative standard error is > 30%, calculated as standard error divided by the mean.

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

Denominator: All respondents excluding refusals and unknowns.

Interpretations for Table 1:

- According to the 2007 to 2010 Texas Behavioral Risk Factor Surveillance System (BRFSS), prevalence of lifetime asthma among children in Texas was 13.2 percent. In Harris County, the prevalence of lifetime asthma among children was 11.9 percent and was not statistically significantly lower than Texas.
- In Harris County, lifetime asthma prevalence among children was statistically significantly higher among boys (15.4 percent; 95% Confidence Interval (CI): 12.1-18.8) than among girls (7.7 percent; 95% CI: 5.1-10.3).
- In Harris County, lifetime asthma prevalence among children was not statistically significantly different by race/ethnicity.
- In Texas, lifetime asthma prevalence among children was statistically significantly higher among non-Hispanic blacks (17.5 percent; 95% CI: 14.1-20.8) compared to Hispanics (12.0 percent; 95% CI: 10.6-13.3) and other non-Hispanics (8.3 percent; 95% CI: 5.1-11.4).
- In Harris County, lifetime asthma prevalence was statistically significantly higher among children age 10 to 14 year (19.1 percent; 95% CI: 13.6-24.5) compared to children age 0 to 4 year (5.4 percent; 95% CI: 2.4-8.3).
- In Texas, lifetime asthma prevalence was statistically significantly higher among children age 10 to 14 years (16.0 percent; 95% CI: 14.2-17.8) compared to children age 0 to 4 years (8.6 percent; 95% CI: 6.9-10.3).

Table 2. Current Asthma Prevalence Among Children (0-17 years) in Harris County and Texas, 2007 to 2010

Characteristics	Harris County		Texas	
	Sample Size	Prevalence (95% CI)	Sample Size	Prevalence (95% CI)
Total	1230	6.9 (5.2-8.7)	14,403	8.5 (7.8-9.2)
Sex				
Boy	639	8.9 (6.3-11.6)	7,316	10.1 (8.9-11.2)
Girl	576	4.8 (2.5-7.1)	6,918	7.0 (6.0-8.0)
Race/Ethnicity				
Non-Hispanic White	507	5.9 (3.5-8.3)	6,256	8.9 (7.9-10.0)
Non-Hispanic Black	202	14.4 (8.2-20.6)	1,147	14.3 (11.1-17.5)
Hispanic	426	5.2 (2.8-7.5)	6,273	7.0 (6.0-8.0)
Other Non-Hispanic	--	--	547	3.1 (1.5-4.8)
Age Group (years)				
0-14	887	7.4 (5.2-9.5)	10,375	8.5 (7.7-9.4)
0-4	--	--	3,267	6.3 (4.8-7.8)
5-9	301	8.1 (4.2-12.1)	3,366	10.1 (8.5-11.7)
10-14	295	9.7 (5.4-14.0)	3,742	9.5 (8.1-10.1)
15-17	231	5.6 (2.4-8.8)	2,780	8.6 (7.0-10.2)

Data Source: Texas Behavioral Risk Factor Surveillance System (BRFSS), 2007-2010.

-- Estimate suppressed for small sample size (if numerator is < 5 or denominator is < 50) or is unreliable because the relative standard error is > 30%, calculated as standard error divided by the mean.

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?"

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

Denominator: All respondents excluding refusals and unknowns.

Interpretations for Table 2:

- From 2007 to 2010, current asthma prevalence among children in Texas was 8.5 percent. In Harris County, the prevalence of current among children was 6.9 percent and was not statistically lower than Texas.
- In Harris County, current asthma prevalence among children was not statistically significantly different by sex, race/ethnicity, or age group.
- In Texas, current asthma prevalence was statistically significantly higher among boys (10.1 percent; 95% CI: 8.9-11.2) compared to girls (7.0 percent; 95% CI: 6.0-8.0).
- In Texas, current asthma prevalence among children was statistically significantly higher among non-Hispanic blacks (14.3 percent; 95% CI: 11.1-17.5) compared to non-Hispanic whites (8.9 percent; 95% CI: 7.9-10.0), Hispanics (7.0 percent; 95% CI: 6.0-8.0); and other non-Hispanics (3.1 percent; 95% CI: 1.5-4.8).
- In Texas, current asthma prevalence was statistically significantly higher among children age 10 to 14 years (10.1 percent; 95% CI: 8.5-11.7) compared to children age 0 to 4 years (6.3 percent; 95% CI: 4.8-7.8).

Table 3. Crude and Age-Adjusted Asthma* Hospital Discharge Rates Per 10,000 for Children (0-17 years), Harris County, Texas, 2011

Demographics	Discharges	Population	Crude Discharge Rate	95% Confidence Interval		Age-Adjusted Discharge Rate†	95% Confidence Interval	
				Lower	Upper		Lower	Upper
Overall Rate	1,103	1,117,039	9.9	9.3	10.5	9.4	8.9	10.0
Gender								
Boy	694	572,131	12.1	11.2	13.0	11.6	10.7	12.4
Girl	409	544,908	7.5	6.8	8.2	7.2	6.5	7.9
Race/Ethnicity								
Non-Hispanic White	189	264,752	7.1	6.1	8.2	7.1	6.1	8.2
Non-Hispanic Black	491	204,360	24.0	21.9	26.2	24.0	21.9	26.1
Hispanic	349	582,875	6.0	5.4	6.6	5.5	4.9	6.1
Other Non-Hispanic	63	65,052	9.7	7.3	12.1	9.3	7.0	11.6
Age (years)								
0-4	435	348,419	12.5	11.3	13.7	.	.	.
5-9	458	327,710	14.0	12.7	15.3	.	.	.
10-14	168	278,568	6.0	5.1	6.9	.	.	.
15-17	42	162,342	2.6	1.8	3.4	.	.	.

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.

† Age-adjusted to the 2000 US Census population. Discharge rates by age group cannot be age-adjusted.

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

Results do not include HIV and drug/alcohol use patients.

Interpretations for Table 3:

- According to 2011 Texas Inpatient Hospital Discharge data, there were 1,103 asthma hospitalizations reported among Harris County child residents age 0 to 17 years.
- The crude asthma hospitalization rate among children in Harris County was 9.9 per 10,000 people.
- The asthma hospitalization rate among children was statistically significantly higher among boys (12.1 per 10,000 people; 95% CI: 11.2-13.0) than among girls (7.5 per 10,000 people; 95% CI: 6.8-8.2).
- The asthma hospitalization rate among children was statistically significantly higher among non-Hispanic blacks (24.0 per 10,000 people; 95% CI: 21.9-26.2) compared to non-Hispanic whites (7.1 per 10,000 people; 95% CI: 6.1-8.2), Hispanics (6.0 per 10,000 people; 95% CI: 5.4-6.6), and other non-Hispanics (9.7 per 10,000 people; 95% CI: 7.3-12.1). Notably, the asthma hospitalization rate among non-Hispanic blacks was four times higher than among Hispanics, more than three times higher than among non-Hispanic whites, and more than two times higher than among other non-Hispanics.
- The asthma hospitalization rate was statistically significantly higher among children age 5 to 9 years (14.0 per 10,000 people; 95% CI: 12.7-15.3) compared to children age 10 to 14 years (6.0 per 10,000 people; 95% CI: 5.1-6.9) and children age 15 to 17 years (2.6 per 10,000 people; 95% CI: 1.8-3.4).

Table 4. Crude and Age-Adjusted Asthma* Hospital Discharge Rates Per 10,000 for Children (0-17 years), Texas, 2011

Demographics	Discharges	Population	Crude Discharge Rate	95% Confidence Interval		Age-Adjusted Discharge Rate†	95% Confidence Interval	
				Lower	Upper		Lower	Upper
Overall Rate	9,280	6,663,942	13.9	13.6	14.2	13.4	13.2	13.7
Gender								
Boy	5,957	3,400,887	17.5	17.1	18.0	16.9	16.5	17.3
Girl	3,322	3,263,055	10.2	9.8	10.5	9.8	9.5	10.2
Race/Ethnicity								
Non-Hispanic White	2,369	2,418,551	9.8	9.4	10.2	9.7	9.3	10.1
Non-Hispanic Black	2,559	805,252	31.8	30.5	33.0	32.1	30.9	33.4
Hispanic	3,646	3,188,151	11.4	11.1	11.8	10.7	10.3	11.0
Other Non-Hispanic	637	251,988	25.3	23.3	27.2	24.3	22.4	26.2
Age (years)								
0-4	4,171	2,008,007	20.8	20.1	21.4	.	.	.
5-9	3,421	1,894,786	18.1	17.4	18.7	.	.	.
10-14	1,385	1,705,351	8.1	7.7	8.5	.	.	.
15-17	303	1,055,798	2.9	2.5	3.2	.	.	.

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.

† Age-adjusted to the 2000 US Census population. Discharge rates by age group cannot be age-adjusted.

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

Results do not include HIV and drug/alcohol use patients.

Interpretations for Table 4:

- According to 2011 Texas Inpatient Hospital Discharge data, there were 9,280 asthma hospitalizations reported among Texas children ages 0 to 17 years.
- The asthma hospitalization rate among children in Texas was 13.9 per 10,000 persons (95% CI: 13.6-14.2).
- The asthma hospitalization rate among children was statistically significantly higher among boys (17.5 per 10,000 people; 95% CI: 17.1-18.0) than among girls (10.2 per 10,000 people; 95% CI: 9.8-10.5).
- The asthma hospitalization rate among children was statistically significantly higher among non-Hispanic blacks (31.8 per 10,000 people; 95% CI: 30.5-33.0) compared to non-Hispanic whites (9.8 per 10,000 people; 95% CI: 9.4-10.2), Hispanics (11.4 per 10,000 people; 95% CI: 11.1-11.8), and other non-Hispanics (25.3 per 10,000 people; 95% CI: 23.3-27.2). Notably, the asthma hospitalization rate among children was more than three times higher among non-Hispanic blacks than among non-Hispanic whites and more than two and a half times higher than among Hispanics.
- The asthma hospitalization rate was statistically significantly different by age group and decreased with increasing age category.
- The asthma hospitalization rate was highest among children age 0 to 4 years (20.8 per 10,000 people; 95% CI: 20.1-21.4) and lowest among children age 15 to 17 years (2.9 per 10,000 people; 95% CI: 2.5-3.2).

Table 5. Crude and Age-Adjusted Asthma* Hospital Discharge Rates Per 10,000 for Children (0-17 years), Harris County, Texas, 2012

Demographics	Discharges	Population	Crude Discharge Rate	95% Confidence Interval		Age-Adjusted Discharge Rate†	95% Confidence Interval	
				Lower	Upper		Lower	Upper
Overall Rate	1,173	1,131,404	10.4	9.8	11.0	9.9	9.3	10.4
Gender								
Boy	770	579,672	13.3	12.3	14.2	12.7	11.8	13.6
Girl	403	551,732	7.3	6.6	8.0	7.0	6.3	7.6
Race/Ethnicity								
Non-Hispanic White	211	259,041	8.1	7.0	9.2	8.2	7.1	9.3
Non-Hispanic Black	496	204,167	24.3	22.2	26.4	24.2	22.1	26.4
Hispanic	389	601,671	6.5	5.8	7.1	5.9	5.3	6.4
Other Non-Hispanic	77	66,525	11.6	9.0	14.2	10.9	8.4	13.3
Age (years)								
0-4	470	350,989	13.4	12.2	14.6	.	.	.
5-9	477	332,601	14.3	13.1	15.6	.	.	.
10-14	188	286,496	6.6	5.6	7.5	.	.	.
15-17	38	161,318	2.4	1.6	3.1	.	.	.

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2012.

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.

† Age-adjusted to the 2000 US Census population. Discharge rates by age group cannot be age-adjusted.

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

Results do not include HIV and drug/alcohol use patients.

Interpretations for Table 5:

- According to 2012 Texas Inpatient Hospital Discharge data, there were 1,173 asthma hospitalizations reported among Harris County child residents age 0 to 17 years.
- The crude asthma hospitalization rate among children in Harris County was 10.4 per 10,000 people.
- The asthma hospitalization rate among children was statistically significantly higher among boys (13.3 per 10,000 people; 95% CI: 12.3-14.2) than among girls (7.3 per 10,000 people; 95% CI: 6.6-8.0).
- The asthma hospitalization rate among children was statistically significantly higher among non-Hispanic blacks (24.3 per 10,000 people; 95% CI: 22.2-26.4) compared to non-Hispanic whites (8.1 per 10,000 people; 95% CI: 7.0-9.2), Hispanics (6.5 per 10,000 people; 95% CI: 5.8-7.1), and other non-Hispanics (11.6 per 10,000 people; 95% CI: 9.0-14.2). Notably, the asthma hospitalization rate among non-Hispanic blacks was more than three times higher than among Hispanics, three times higher than among non-Hispanic whites, and more than two times higher than among other non-Hispanics.
- The asthma hospitalization rate was statistically significantly higher among children age 5 to 9 years (14.3 per 10,000 people; 95% CI: 13.1-15.6) compared to children age 10 to 14 years (6.6 per 10,000 people; 95% CI: 5.6-7.5) and children age 15 to 17 years (2.4 per 10,000 people; 95% CI: 1.6-3.1).

Table 6. Crude and Age-Adjusted Asthma* Hospital Discharge Rates Per 10,000 for Children (0-17 years), Texas, 2012

Demographics	Discharges	Population	Crude Discharge Rate	95% Confidence Interval		Age-Adjusted Discharge Rate†	95% Confidence Interval	
				Lower	Upper		Lower	Upper
Overall Rate	10,075	6,750,917	14.9	14.6	15.2	14.4	14.2	14.7
Gender								
Boy	6,386	3,445,111	18.5	18.1	19.0	17.9	17.5	18.4
Girl	3,685	3,305,806	11.1	10.8	11.5	10.8	10.4	11.1
Race/Ethnicity								
Non-Hispanic White	2,620	2,411,648	10.9	10.4	11.3	10.8	10.4	11.2
Non-Hispanic Black	2,761	808,037	34.2	32.9	35.4	34.4	33.1	35.7
Hispanic	3,838	3,272,680	11.7	11.4	12.1	11.0	10.7	11.4
Other Non-Hispanic	725	258,552	28.0	26.0	30.1	27.1	25.1	29.1
Age (years)								
0-4	4,263	2,028,073	21.0	20.4	21.7	.	.	.
5-9	3,876	1,924,161	20.1	19.5	20.8	.	.	.
10-14	1,607	1,747,985	9.2	8.7	9.6	.	.	.
15-17	329	1,050,698	3.1	2.8	3.5	.	.	.

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.

† Age-adjusted to the 2000 US Census population. Discharge rates by age group cannot be age-adjusted.

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

Results do not include HIV and drug/alcohol use patients.

Interpretations for Table 6:

- According to 2012 Texas Inpatient Hospital Discharge data, there were 10,075 asthma hospitalizations reported among Texas children ages 0 to 17 years.
- The asthma hospitalization rate among children in Texas was 14.9 per 10,000 persons (95% CI: 14.6-15.2).
- The asthma hospitalization rate among children was statistically significantly higher among boys (18.5 per 10,000 people; 95% CI: 18.1-19.0) than among girls (11.1 per 10,000 people; 95% CI: 10.8-11.5).
- The asthma hospitalization rate among children was statistically significantly higher among non-Hispanic blacks (34.2 per 10,000 people; 95% CI: 32.9-35.4) compared to non-Hispanic whites (10.9 per 10,000 people; 95% CI: 10.4-11.3), Hispanics (11.7 per 10,000 people; 95% CI: 11.4-12.1), and other non-Hispanics (28.0 per 10,000 people; 95% CI: 26.0-30.1). Notably, the asthma hospitalization rate among children was more than three times higher among non-Hispanic blacks than among non-Hispanic whites and more than two and a half times higher than among Hispanics.
- The asthma hospitalization rate was statistically significantly different by age group and decreased with increasing age category.
- The asthma hospitalization rate was highest among children age 0 to 4 years (21.0 per 10,000 people; 95% CI: 20.4-21.7) and lowest among children age 15 to 17 years (3.1 per 10,000 people; 95% CI: 2.8-3.5).

Table 7. Medicaid Utilization Among Children With Asthma By Claim Type, Harris County and Texas, 2011

Demographic	Number of Children (Percent)					
	Harris County			Texas		
	Inpatient Hospital	Outpatient Hospital	Professional	Inpatient Hospital	Outpatient Hospital	Professional
Unduplicated Total	621 (100)	5,881 (100)	41,625 (100)	5,071 (100)	54,109 (100)	233,251 (100)
Gender						
Boy	393 (63.3)	3,659 (62.2)	23,913 (57.4)	3,235 (63.8)	33,043 (61.1)	136,271 (58.4)
Girl	228 (36.7)	2,223 (37.8)	17,717 (42.6)	1,836 (36.2)	21,070 (38.9)	96,973 (41.6)
Unknown	0 (0.0)	2 (0.0)	1 (0.0)	1 (0.0)	2 (0.0)	64 (0.0)
Race/Ethnicity						
White	48 (7.7)	472 (8.0)	2,875 (6.9)	708 (14.0)	9,396 (17.3)	32,088 (13.7)
Black	239 (38.5)	2,136 (36.3)	10,018 (24.0)	1,274 (25.1)	12,955 (23.9)	40,186 (17.2)
Hispanic	261 (42.0)	2,516 (42.7)	24,305 (58.3)	2,387 (47.1)	25,332 (46.8)	136,521 (58.4)
Other*	14 (2.3)	104 (1.8)	1,006 (2.4)	49 (1.0)	554 (1.0)	3,198 (1.4)
Unknown/ Not Reported	59 (9.5)	659 (11.2)	3,509 (8.4)	653 (12.9)	5,928 (10.9)	21,605 (9.2)
Age Group (years)						
0-4	287 (46.1)	2,428 (40.6)	20,570 (48.2)	2,068 (40.5)	16,646 (30.0)	82,042 (33.8)
5-9	231 (37.1)	2,015 (33.7)	13,363 (31.3)	1,709 (33.5)	18,814 (33.9)	78,609 (32.4)
10-14	89 (14.3)	1,150 (19.2)	6,715 (15.7)	650 (12.7)	11,166 (20.1)	44,062 (18.1)
15-17	15 (2.4)	384 (6.4)	1,994 (4.7)	146 (2.9)	3,792 (6.8)	14,259 (5.9)
Unknown	0 (0.0)	0 (0.0)	0 (0.0)	530 (10.4)	5,124 (9.2)	23,850 (9.8)

Data Source: Research Team, Strategic Decision Support, Texas Health and Human Services Commission, 2011.

Data are from Fee For Service and Managed Care Organizations (Star and StarPlus).

Source: Paid and partially paid Medicaid Fee-for-Service and Managed Care Organizations (Star and StarPlus) claims for fiscal year 2011 for children (0 to 17 years) with a primary diagnosis of asthma (ICD-9: 493.0 – 493.9).

* American Indian, Alaskan, or Asian.

Type of care:

Inpatient Hospital Claims (Claim Types 040 and 050). A person admitted to an inpatient bed at a hospital.

Outpatient Hospital (Claim Types 023 and 031). A person who was not admitted as an inpatient but who is registered on a hospital or critical access hospital (CAH) records as an outpatient and received services directly from the hospital or CAH.

Professional Claims (Claim Types 020 and 030). A person who received services from a physician.

Interpretations for Table 7:

- According to 2011 Medicaid data, in Harris County there were 621 children with an inpatient hospital claim, 5,881 children with an outpatient hospital claim, and 41,625 children with a professional (physician) claim for asthma.
- In Harris County, the majority of child asthma clients were boys, blacks or Hispanics, and children age 0 to 4 or 5 to 9 years, regardless of the type of claim.
- In Texas, there were 5,071 children with an inpatient hospital claims, 54,109 children with an outpatient hospital claims, and 233,251 children with a professional claims for asthma.
- In Texas, the majority of child asthma claims were among boys, blacks or Hispanics, and children age 0 to 4 or 5 to 9 years, regardless of the type of claim.

Table 8. Medicaid Expenditures For Children With Asthma By Claim Type, Harris County and Texas, 2011

Type of Care	Total Expenditures (\$)	Average Expenditure Per Claim (\$)	Number of Claims	Number of Clients
Harris County				
All Types of Care	11,937,554.62	122.97	97,079	42,765
Inpatient Hospital	2,570,926.98	3,651.88	704	621
Outpatient Hospital	3,760,849.86	397.01	9,473	5,881
Professional	5,605,777.78	64.51	86,902	41,625
Texas				
All Types of Care	87,556,878.32	140.15	624,748	247,156
Inpatient Hospital	23,905,834.68	4,142.41	5,771	5,071
Outpatient Hospital	29,912,126.83	290.10	103,110	54,109
Professional	33,738,916.81	65.40	515,867	233,251

Data Source: Research Team, Strategic Decision Support, Texas Health and Human Services Commission, 2011.

Source: Paid and partially paid Medicaid Fee-for-Service and Managed Care Organizations (Star and StarPlus) claims for fiscal year 2011 for children (0 to 17 years) with a primary diagnosis of asthma (ICD-9: 493.0 – 493.9).

Note: Paid amounts for Star and StarPlus (MCOs) are amounts reported as paid by the health plan. MCOs are paid on a capitation basis and Texas Medicaid does not reimburse individual providers under contract with the health plans.

Type of care:

Inpatient Hospital Claims (Claim Types 040 and 050). A person admitted to an inpatient bed at a hospital.

Outpatient Hospital (Claim Types 023 and 031). A person who was not admitted as an inpatient but who is registered on a hospital or critical access hospital (CAH) records as an outpatient and received services directly from the hospital or CAH.

Professional Claims (Claim Types 020 and 030). A person who received services from a physician.

Interpretations for Table 8:

- According to 2011 Medicaid data, in Harris County there were 42,765 children with an asthma claim and 97,079 total claims.
- In Harris County, total expenditures for inpatient hospital claims, outpatient hospital claims, and professional claims among children with asthma were nearly \$12.0 million.
- In Harris County, total expenditures were highest for professional claims (\$5.6 million) compared to inpatient hospital claims or outpatient hospital claims for children with asthma.
- In Harris County, the average expenditure per claim was highest for inpatient hospital claims (\$3,651.88) compared to outpatient hospital claims or professional claims for children with asthma.
- In Texas, there were 247,156 children with an asthma claim and 624,748 total claims.
- In Texas, total expenditures for inpatient hospital claims, outpatient hospital claims, and professional claims among children with asthma were nearly \$87.6 million.
- In Texas, total expenditures were highest for professional claims (\$33.7 million) compared to inpatient hospital claims or outpatient hospital claims for children with asthma.
- In Texas, the average expenditure per claim was highest for inpatient hospital claims (\$4,142.41) compared to outpatient hospital claims or professional claims for children with asthma.

Table 9. Medicaid Utilization Among Children With Asthma By Claim Type, Harris County and Texas, 2012

Demographic	Number of Children (Percent)					
	Harris County			Texas		
	Inpatient Hospital	Outpatient Hospital	Professional	Inpatient Hospital	Outpatient Hospital	Professional
Unduplicated Total	703 (100)	6,905 (100)	44,797 (100)	5,313 (100)	58,005 (100)	239,989 (100)
Gender						
Boy	438 (62.3)	4,301 (62.3)	26,146 (58.4)	3,352 (63.1)	35,454 (61.1)	140,082 (58.3)
Girl	265 (37.7)	2,603 (37.7)	18,648 (41.6)	1,954 (36.8)	22,504 (38.8)	99,57 (41.4)
Unknown	0 (0.0)			7 (0.1)	72 (0.1)	654 (0.3)
Race/Ethnicity						
White	52 (7.4)	486 (7.0)	2,990 (6.7)	1,360 (25.5)	13,657 (23.4)	40,975 (16.9)
Black	262 (37.3)	2,416 (34.9)	10,552 (23.5)	2,290 (43.0)	25,801 (44.2)	130,876 (54.1)
Hispanic	264 (37.6)	2,784 (40.2)	23,748 (52.8)	45 (0.8)	585 (1.0)	3,062 (1.3)
Other*	12 (1.7)	103 (1.5)	955 (2.1)	911 (17.1)	9,095 (15.6)	36,463 (15.1)
Unknown/Not Reported	113 (16.1)	1,131 (16.3)	6,708 (14.9)			
Age Group (years)						
0-4	300 (42.6)	2,812 (40.2)	21,487 (46.8)	2,460 (46.1)	22,061 (37.4)	101,236 (41.1)
5-9	282 (40.0)	2,460 (35.1)	14,939 (32.6)	1,944 (36.4)	20,828 (35.3)	84,036 (34.1)
10-14	103 (14.6)	1,349 (19.3)	7,302 (15.9)	775 (14.5)	12,119 (20.5)	46,424 (18.8)
15-17	20 (2.8)	380 (5.4)	2,144 (4.7)	159 (3.0)	4,018 (6.8)	14,798 (6.0)
Unknown				0 (0.0)	0 (0.0)	0 (0.0)

Data Source: Research Team, Strategic Decision Support, Texas Health and Human Services Commission, Fiscal Year 2012.

Source: Paid and partially paid Medicaid Fee-for-Service and Managed Care Organizations (Star and StarPlus) claims for fiscal year 2012 for children (0 to 17 years) with a primary diagnosis of asthma (ICD-9: 493.0 – 493.9).

* American Indian, Alaskan, or Asian.

Type of care:

Inpatient Hospital Claims (Claim Types 040 and 050). A person admitted to an inpatient bed at a hospital.

Outpatient Hospital (Claim Types 023 and 031). A person who was not admitted as an inpatient but who is registered on a hospital or critical access hospital (CAH) records as an outpatient and received services directly from the hospital or CAH.

Professional Claims (Claim Types 020 and 030). A person who received services from a physician.

Interpretations for Table 9:

- According to 2012 Medicaid data, in Harris County there were 703 children with an inpatient hospital claim, 6,905 children with an outpatient hospital claim, and 44,797 children with a professional (physician) claim for asthma.
- In Harris County, the majority of child asthma clients were boys, blacks or Hispanics, and children age 0 to 4 or 5 to 9 years, regardless of the type of claim.
- In Texas, there were 5,313 children with an inpatient hospital claims, 58,005 children with an outpatient hospital claims, and 239,989 children with a professional claims for asthma.
- In Texas, the majority of child asthma claims were among boys, blacks or Hispanics, and children age 0 to 4 or 5 to 9 years, regardless of the type of claim.

Table 10. Medicaid Expenditures For Children With Asthma By Claim Type, Harris County and Texas, 2012

Type of Care	Total Expenditures (\$)	Average Expenditure Per Claim (\$)	Number of Claims	Number of Clients
Harris County				
All Types of Care	13,672,426.35	125.96	108,543	46,128
Inpatient Hospital	3,002,883.03	3,805.94	789	703
Outpatient Hospital	4,142,805.54	368.94	11,229	6,905
Professional	6,526,737.78	67.62	96,525	44,797
Texas				
All Types of Care	97,357,201.71	148.21	656,892	253,812
Inpatient Hospital	26,670,093.42	4,475.60	5,959	5,313
Outpatient Hospital	34,770,266.78	303.18	114,686	58,005
Professional	35,916,841.51	66.98	536,247	239,989

Data Source: Research Team, Strategic Decision Support, Texas Health and Human Services Commission, 2012.

Source: Paid and partially paid Medicaid Fee-for-Service and Managed Care Organizations (Star and StarPlus) claims for fiscal year 2012 for children (0 to 17 years) with a primary diagnosis of asthma (ICD-9: 493.0 – 493.9).

Note: Paid amounts for Star and StarPlus (MCOs) are amounts reported as paid by the health plan. MCOs are paid on a capitation basis and Texas Medicaid does not reimburse individual providers under contract with the health plans.

Type of care:

Inpatient Hospital Claims (Claim Types 040 and 050). A person admitted to an inpatient bed at a hospital.

Outpatient Hospital (Claim Types 023 and 031). A person who was not admitted as an inpatient but who is registered on a hospital or critical access hospital (CAH) records as an outpatient and received services directly from the hospital or CAH.

Professional Claims (Claim Types 020 and 030). A person who received services from a physician.

Interpretations for Table 10:

- According to 2012 Medicaid data, in Harris County there were 46,128 children with an asthma claim and 108,543 total claims.
- In Harris County, total expenditures for inpatient hospital claims, outpatient hospital claims, and professional claims among children with asthma were nearly \$13.7 million.
- In Harris County, total expenditures were highest for professional claims (\$6.5 million) compared to inpatient hospital claims or outpatient hospital claims for children with asthma.
- In Harris County, the average expenditure per claim was highest for inpatient hospital claims (\$3,805.94) compared to outpatient hospital claims or professional claims for children with asthma.
- In Texas, there were 253,812 children with an asthma claim and 656,892 total claims.
- In Texas, total expenditures for inpatient hospital claims, outpatient hospital claims, and professional claims among children with asthma were nearly \$97.4 million.
- In Texas, total expenditures were highest for professional claims (\$35.9 million) compared to inpatient hospital claims or outpatient hospital claims for children with asthma.
- In Texas, the average expenditure per claim was highest for inpatient hospital claims (\$4,475.60) compared to outpatient hospital claims or professional claims for children with asthma.

Limitations of the data used in this report:

BRFSS Prevalence Data

- Prevalence estimates from BRFSS may underestimate the true prevalence of asthma among children because the survey does not identify undiagnosed cases of asthma.
- For Harris County, lifetime asthma and current asthma prevalence estimates could not be reported for other non-Hispanics due to small sample size (numerator less than 5 or denominator less than 50) or large relative standard error (greater than 30%).
- For Harris County, a current asthma prevalence estimate could not be reported for children age 0 to 4 years due to small sample size (numerator less than 5 or denominator less than 50) or large relative standard error (greater than 30%).
- 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.

Hospitalization Data

- Hospitalization data are based on inpatient hospitalization 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.

Medicaid Data

- Paid or partially paid amounts for Fee For Service claims are amounts paid by Medicaid to the individual provider for specific services.
- Paid amounts for Star and StarPlus (MCOs) are amounts reported as paid by the health plan. MCOs are paid on a capitation basis and Texas Medicaid does not reimburse individual providers under contract with the health plans.