

**Adult and Child Asthma Hospitalization Rates, Selected Border Counties, Texas, 2010 & 2011**

**and**

**Asthma Medicaid Utilization and Reimbursement Claims, Selected Border Counties, Texas, 2011  
& 2012**

**Data Requested by**

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Table 1. Crude and Age-Adjusted Asthma\* Hospital Discharge Rates Per 10,000 for Adults (18+ years), Selected Border Counties, Texas, 2010

Geographic Location	Discharges	Population	Crude Discharge Rate	Age-Adjusted Discharge Rate†
			(95% Confidence Interval)	(95% Confidence Interval)
Texas	16,280	18,279,737	8.9 (8.8-9.0)	9.3 (9.1-9.4)
Cameron County	278	272,021	10.2 (9.0-11.4)	10.3 (9.1-11.5)
Hidalgo County	434	506,285	8.6 (7.8-9.4)	9.5 (8.6-10.4)
Starr County	28	40,290	6.9 (4.4-9.5)	7.2 (4.5-9.9)
Webb County	182	162,146	11.2 (9.6-12.9)	13.7 (11.7-15.8)
Zapata County	--	9,213	--	--

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2010.

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.

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

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

### Interpretations for Table 1:

- According to the 2010 Texas Inpatient Hospital Discharge Public Use Data File, there were 16,280 asthma hospital discharges reported among adults in Texas. The asthma hospital discharge rate among adults in Texas was 8.9 per 10,000 persons per year (95% Confidence Interval: 8.8-9.0).
- Of the five selected border counties, the highest number of asthma hospital discharges occurred among adult residents of Hidalgo County (n = 434).
- In 2010, the asthma hospital discharge rate among adults was significantly higher in Webb County (11.2 per 10,000 persons per year; 95% CI: 9.6-12.9) compared to Hidalgo County (8.6 per 10,000 persons per year), Starr County (6.9 per 10,000 persons per year), and Texas (8.9 per 10,000 persons per year).
- There was no statistically significant difference in asthma hospital discharge rates among adults for Webb County compared to Cameron County (10.2 per 10,000 persons per year).

Table 2. Crude and Age-Adjusted Asthma\* Hospital Discharge Rates Per 10,000 for Adults (18+ years), Selected Border Counties Texas, 2011

Geographic Location	Discharges	Population	Crude Discharge Rate	Age-Adjusted Discharge Rate†
			(95% Confidence Interval)	(95% Confidence Interval)
Texas	15,125	19,220,057	7.9 (7.7-8.0)	8.4 (8.3-8.5)
Cameron County	247	289,523	8.5 (7.5-9.6)	8.9 (7.8-10.0)
Hidalgo County	348	558,054	6.2 (5.6-6.9)	7.2 (6.4-7.9)
Starr County	27	44,421	6.1 (3.8-8.4)	6.7 (4.1-9.3)
Webb County	122	172,452	7.1 (5.8-8.3)	9.2 (7.5-10.8)
Zapata County	--	10,872	--	--

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.

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

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

### Interpretations for Table 2:

- According to the 2011 Texas Inpatient Hospital Discharge Public Use Data File, there were 15,125 asthma hospital discharges reported among adults in Texas. The asthma hospital discharge rate among adults in Texas was 7.9 per 10,000 persons per year (95% CI: 7.7-8.0).
- Of the five selected border counties, the highest number of asthma hospital discharges occurred among adult residents of Hidalgo County (n = 348).
- In 2011, the asthma hospital discharge rate among adults was significantly higher in Cameron County (8.5 per 10,000 persons per year; 95% CI: 7.5-9.6) compared to Hidalgo County (6.2 per 10,000 persons per year)
- There was no statistically significant difference in asthma hospital discharge rates among adults for Cameron County compared to Starr County (6.1 per 10,000 persons per year), Webb County (7.1 per 10,000 persons per year), or Texas (7.9 per 10,000 persons per year).

Table 3. Crude and Age-Adjusted Asthma\* Hospital Discharge Rates Per 10,000 for Children (0-17 years), Selected Border Counties Texas, 2010

Geographic Location	Discharges	Population	Crude Discharge Rate	Age-Adjusted Discharge Rate†
			(95% Confidence Interval)	(95% Confidence Interval)
Texas	9,307	6,865,824	13.6 (13.3-13.8)	13.4 (13.1-13.6)
Cameron County	149	134,199	11.1 (9.3-12.9)	11.1 (9.3-12.9)
Hidalgo County	460	268,484	17.1 (15.6-18.7)	16.8 (15.3-18.4)
Starr County	20	20,678	9.7 (5.4-13.9)	9.7 (5.5-14.0)
Webb County	126	88,158	14.3 (11.8-16.8)	14.2 (11.7-16.7)
Zapata County	--	4,805	--	--

Data Source: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2010.

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.

'--' 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 the 2010 Texas Inpatient Hospital Discharge Public Use Data File, there were 9,307 asthma hospital discharges reported among children in Texas. The asthma hospital discharge rate among children in Texas was 13.6 per 10,000 persons per year (95% CI: 13.3-13.8).
- Of the five selected border counties, the highest number of asthma hospital discharges occurred among children residents of Hidalgo County (n = 460).
- In 2010, the asthma hospital discharge rate among children was significantly higher in Hidalgo County (17.1 per 10,000 persons per year; 95% CI: 15.6-18.7) compared to Cameron County (11.1 per 10,000 persons per year), Starr County (9.7 per 10,000 persons per year), and Texas (13.6 per 10,000 persons per year).
- There was no statistically significant difference in asthma hospital discharge rates among children for Hidalgo County compared to Webb County (14.3 per 10,000 persons per year).

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

Geographic Location	Discharges	Population	Crude Discharge Rate	Age-Adjusted Discharge Rate†
			(95% Confidence Interval)	(95% Confidence Interval)
Texas	9,280	6,663,942	13.9 (13.6-14.2)	13.4 (13.2-13.7)
Cameron County	172	136,046	12.6 (10.8-14.5)	11.3 (9.6-13.0)
Hidalgo County	450	259,479	17.3 (15.7-18.9)	16.2 (14.7-17.7)
Starr County	26	24,328	10.7 (6.6-14.8)	9.2 (5.6-12.8)
Webb County	95	91,533	10.4 (8.3-12.5)	10.1 (8.0-12.1)
Zapata County	--	4,736	--	--

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.

'--' 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 the 2011 Texas Inpatient Hospital Discharge Public Use Data File, there were 9,280 asthma hospital discharges reported among children in Texas. The asthma hospital discharge rate among children in Texas was 13.9 per 10,000 persons per year (95% CI: 13.6-14.2).
- Of the five selected border counties, the highest number of asthma hospital discharges occurred among children residents of Hidalgo County (n = 450).
- In 2011, the asthma hospital discharge rate among children was significantly higher in Hidalgo County (17.3 per 10,000 persons per year; 95% CI: 15.7-18.9) compared to Cameron County (12.6 per 10,000 persons per year), Starr County (10.7 per 10,000 persons per year), Webb County (10.4 per 10,000 persons per year), and Texas (13.6 per 10,000 persons per year).

Table 5. Crude and Age-Adjusted Asthma\* Hospital Discharge Rates Per 10,000 for Children (0-17 years), Cameron County, Texas, 2011

Demographics	Discharges	Population	Crude Discharge Rate	Age-Adjusted Discharge Rate†
			(95% Confidence Interval)	(95% Confidence Interval)
Overall Rate	172	136,046	12.6 (10.8-14.5)	11.3 (9.6-13.0)
Gender				
Boy	101	69,383	14.6 (11.7-17.4)	13.2 (10.6-15.9)
Girl	71	66,663	10.7 (8.2-13.1)	9.3 (7.1-11.5)
Race/Ethnicity				
Non-Hispanic White	--	9,665	--	--
Non-Hispanic Black	--	306	--	--
Hispanic	153	124,999	12.2 (10.3-14.2)	11.0 (9.2-12.7)
Other Non-Hispanic	14	1,076	130.1 (62.0-198.3)	111.0 (52.2-169.8)
Age (years)				
0-4	98	46,204	21.2 (17.0-25.4)	.
5-9	50	41,750	12.0 (8.7-15.3)	.
10-14	21	30,213	7.0 (4.0-9.9)	.
15-17	--	17,879	--	.

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. Rates for specific age groups 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:**

- In 2011, there were 172 asthma hospital discharges reported among children in Cameron County with a rate of 12.6 per 10,000 persons per year (95% CI: 10.8-14.5).
- The asthma discharge rate among children in Cameron County was not statistically significantly different by sex.
- In Cameron County, the asthma discharge rate was significantly higher among other non-Hispanic children (130.1 per 10,000 persons per year; 95% CI: 62.0-198.3) compared to Hispanic children (12.2 per 10,000 persons per year; 95% CI: 10.3-14.2).
- The asthma discharge rate was significantly higher among children age 0-4 years (21.2 per 10,000 persons per year; 95% CI: 17.0-25.4) compared to children age 5-9 years (12.0 per 10,000 persons per year) or age 10-14 years (7.0 per 10,000 persons per year).

Table 6. Crude and Age-Adjusted Asthma\* Hospital Discharge Rates Per 10,000 for Children (0-17 years), Hidalgo County, Texas, 2011

Demographics	Discharges	Population	Crude Discharge Rate	Age-Adjusted Discharge Rate†
			(95% Confidence Interval)	(95% Confidence Interval)
Overall Rate	450	259,479	17.3 (15.7-18.9)	16.2 (14.7-17.7)
Gender				
Boy	285	132,008	21.6 (19.1-24.1)	20.2 (17.8-22.6)
Girl	165	127,471	12.9 (11.0-14.9)	12.1 (10.2-14.0)
Race/Ethnicity				
Non-Hispanic White	23	11,649	19.7 (11.7-27.8)	19.0 (11.1-26.9)
Non-Hispanic Black	--	332	--	--
Hispanic	418	244,956	17.1 (15.4-18.7)	15.9 (14.4-17.5)
Other Non-Hispanic	--	2,542	--	--
Age (years)				
0-4	211	88,955	23.7 (20.5-26.9)	.
5-9	156	75,641	20.6 (17.4-23.9)	.
10-14	71	57,135	12.4 (9.5-15.3)	.
15-17	12	37,748	3.2 (1.4-5.0)	.

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. Rates for specific age groups 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:

- In 2011, there were 450 asthma hospital discharges reported among children in Hidalgo County with a rate of 17.3 per 10,000 persons per year (95% CI: 15.7-18.9).
- The asthma discharge rate among children in Hidalgo County was significantly higher among boys (21.6 per 10,000 persons per year; 95% CI: 19.1-24.1) than among girls (12.9 per 10,000 persons per year; 95% CI: 11.0-14.9).
- In Hidalgo County, the asthma discharge rate among children was not statistically significantly different by race/ethnicity.
- The asthma discharge rate was significantly higher among children age 0-4 years (23.7 per 10,000 persons per year; 95% CI: 20.5-26.9) compared to children age 10-14 years (12.4 per 10,000 persons per year) or age 15-17 years (3.2 per 10,000 persons per year).

Table 7. Crude and Age-Adjusted Asthma\* Hospital Discharge Rates Per 10,000 for Children (0-17 years), Webb County, Texas, 2011

Demographics	Discharges	Population	Crude Discharge Rate	Age-Adjusted Discharge Rate†
			(95% Confidence Interval)	(95% Confidence Interval)
Overall Rate	95	91,533	10.4 (8.3-12.5)	10.1 (8.0-12.1)
Gender				
Boy	66	46,323	14.2 (10.8-17.7)	14.2 (10.7-17.7)
Girl	29	45,210	6.4 (4.1-8.7)	5.9 (3.7-8.1)
Race/Ethnicity				
Non-Hispanic White	--	1,960	--	--
Non-Hispanic Black	--	53	--	--
Hispanic	88	88,901	9.9 (7.8-12.0)	9.6 (7.6-11.7)
Other Non-Hispanic	--	619	--	--
Age (years)				
0-4	31	32,884	9.4 (6.1-12.7)	.
5-9	40	28,559	14.0 (9.7-18.3)	.
10-14	21	18,928	11.1 (6.3-15.8)	.
15-17	--	11,162	--	.

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. Rates for specific age groups 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 7:

- In 2011, there were 95 asthma hospital discharges reported among children in Webb County with a rate of 10.4 per 10,000 persons per year (95% CI: 8.3-12.5).
- The asthma discharge rate among children in Webb County was significantly higher among boys (14.2 per 10,000 persons per year; 95% CI: 10.8-17.7) than among girls (6.4 per 10,000 persons per year; 95% CI: 4.1-8.7).
- In Webb County, the asthma discharge rate among children could not be compared by race/ethnicity.
- The asthma discharge rate did not differ significantly by age group among children in Webb County.



Table 8. Medicaid Utilization and Reimbursements for Asthma in Texas 2011 – Fee-for-Service and Patient Care Case Management only

Geographic Location	Inpatient Hospital Claims			Outpatient Hospital Claims			Physician Claims		
	Total Reimbursement Amount (\$)	Number of Claims	Number of Recipient	Total Reimbursement Amount (\$)	Number of Claims	Number of Recipient	Total Reimbursement Amount (\$)	Number of Claims	Number of Recipient
Texas	20,541,802.39	7,462	6,210	16,665,348.07	82,258	41,880	20,133,168.43	358,990	141,692
Cameron County	569,881.93	238	201	667,230.68	3,942	1,513	1,813,189.25	34,547	13,415
Hidalgo County	992,917.18	571	513	939,507.45	10,228	1,290	2,553,063.93	47,790	18,672
Starr County	79,771.28	39	36	246,581.51	2,520	485	221,724.11	3,947	1,459
Webb County	249,287.96	146	122	163,909.83	1,499	411	1,110,838.01	20,940	6,511
Zapata County	7,674.80	4	4	4,330.34	57	44	20,913.64	476	170

**Source:** Paid and partially paid Medicaid Fee-for-Service and Patient Care Case Management claims for fiscal year 2011 for persons with a primary diagnosis of asthma (ICD-9: 493).

**Data Source:** FFS and PCCM data were selected from the Texas Medicaid and Health Partnership (TMHP) Ad Hoc Query Platform (AHQP) Claims Universe.

**Episode of care:**

1. Inpatient Hospital Claims (Claim Types 040 and 050) from the AHQP Claims. A person admitted to an inpatient bed at a hospital.
2. Outpatient Hospital (Claim Types 023 and 031) from the AHQP Claims. 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.
3. Physician Claims (Claim Types 020 and 030) from the AHQP Claims. A person who received services from a physician.

**Interpretations for Table 8:**

- According to the 2011 Medicaid Fee-for-Service and Patient Care Case Management claims data for asthma diagnoses in Texas, there were 7,462 inpatient hospital claims for 6,210 recipients for a total reimbursement amount of \$20,541,802.39. There were 82,258 outpatient hospital claims for 41,880 recipients for a total reimbursement amount of \$16,665,348.07. There were 358,990 physician claims for 141,692 recipients for a total reimbursement amount of \$20,133,168.43.
- Hidalgo County had the greatest number of asthma inpatient hospital claims (571) and recipients (513) and the highest total reimbursement amount for asthma inpatient hospital claims (\$992,917.18) compared to the other four border counties.
- Cameron County had 3,942 asthma outpatient hospital claims and the greatest number of asthma outpatient hospital recipients (1,513). However, Hidalgo County had the greatest number of asthma outpatient hospital claims (10,228) but fewer recipients (1,290) than Cameron County. Hidalgo County had the highest total reimbursement for asthma outpatient hospital claims (939,507.45) compared to the other four border counties.
- Hidalgo County had the greatest number of asthma physician claims (47,790) and recipients (18,672) and the highest total reimbursement amount of asthma physician claims (\$2,553,063.93) compared to the other four border counties.

Table 9. Medicaid Utilization and Reimbursements for Asthma in Texas 2012 – Fee-for-Service and Patient Care Case Management only

Geographic Location	Inpatient Hospital Claims			Outpatient Hospital Claims			Physician Claims		
	Total Reimbursement Amount (\$)	Number of Claims	Number of Recipient	Total Reimbursement Amount (\$)	Number of Claims	Number of Recipient	Total Reimbursement Amount (\$)	Number of Claims	Number of Recipient
Texas	17,130,935.00	5,459	4,710	14,147,977.05	76,345	33,168	13,782,912.14	272,374	109,404
Cameron	353,408.07	191	158	495,366.08	5,147	1,151	1,196,140.56	24,848	11,043
Hidalgo	576,128.79	386	350	738,881.18	10,318	1,192	1,588,134.75	32,465	14,095
Starr	65,302.22	26	24	119,578.02	1,561	391	117,041.62	2,325	994
Webb	128,689.84	100	91	108,264.62	1,051	319	726,392.41	14,785	5,346
Zapata	1,550.54	3	2	2,424.52	42	28	13,229.71	343	128

**Source:** Paid and partially paid Medicaid Fee-for-Service and Patient Care Case Management claims for fiscal year 2011 for persons with a primary diagnosis of asthma (ICD-9: 493).

**Data Source:** FFS and PCCM data were selected from the Texas Medicaid and Health Partnership (TMHP) Ad Hoc Query Platform (AHQP) Claims Universe.

**Episode of care:**

1. Inpatient Hospital Claims (Claim Types 040 and 050) from the AHQP Claims. A person admitted to an inpatient bed at a hospital.
2. Outpatient Hospital (Claim Types 023 and 031) from the AHQP Claims. 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.
3. Physician Claims (Claim Types 020 and 030) from the AHQP Claims. A person who received services from a physician.

**Interpretations for Table 9:**

- According to the 2012 Medicaid Fee-for-Service and Patient Care Case Management claims data for asthma diagnoses in Texas, there were 5,459 inpatient hospital claims for 4,710 recipients for a total reimbursement amount of \$17,130,935.00. There were 76,345 outpatient hospital claims for 33,168 recipients for a total reimbursement amount of \$14,147,977.05. There were 272,374 physician claims for 109,404 recipients for a total reimbursement amount of \$13,782,912.14.
- Hidalgo County had the greatest number of asthma inpatient hospital claims (386) and recipients (350) and the highest total reimbursement amount for asthma inpatient hospital claims (\$576,128.79) compared to the other four border counties.
- Hidalgo County had the greatest number of asthma outpatient hospital claims (10,318) and recipients (1,192) and the highest total reimbursement amount for asthma outpatient hospital claims (\$738,881.18) compared to the other four border counties.
- Hidalgo County had the greatest number of asthma physician claims (32,465) and recipients (14,095) and the highest total reimbursement amount of asthma physician claims (\$1,588,134.75) compared to the other four border counties.

## Limitations of the data used in this report:

### Hospitalization Data

- Hospital discharge data could not be reported for adults or children in Zapata County because there were fewer than 12 asthma hospitalizations reported in 2010 and 2011.
- Hospital discharge data could not be reported for children in Cameron County among non-Hispanic whites, non-Hispanic blacks, or children age 15-17 because there were fewer than 12 asthma hospitalizations reported in 2011.
- Hospital discharge data could not be reported for children in Hidalgo County among non-Hispanic blacks or other non-Hispanics because there were fewer than 12 asthma hospitalizations reported in 2011.
- Hospital discharge data could not be reported for children in Webb County among non-Hispanic whites, non-Hispanic blacks, other non-Hispanics, or children age 15-17 because there were fewer than 12 asthma hospitalizations reported in 2011.
- 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 Reimbursement Claims Data

- Please note that in 2012 there was a large expansion in the number of managed care health plans in Texas. This means that some Medicaid clients who were in Fee-for-Service or Patient Care Case Management in 2011 are now in managed care (STAR and STAR PLUS) in 2012. This may explain the decrease in number of clients in Fee-for-Service or Patient Care Case Management and increase in the number of clients in STAR or STAR PLUS from 2011 to 2012.