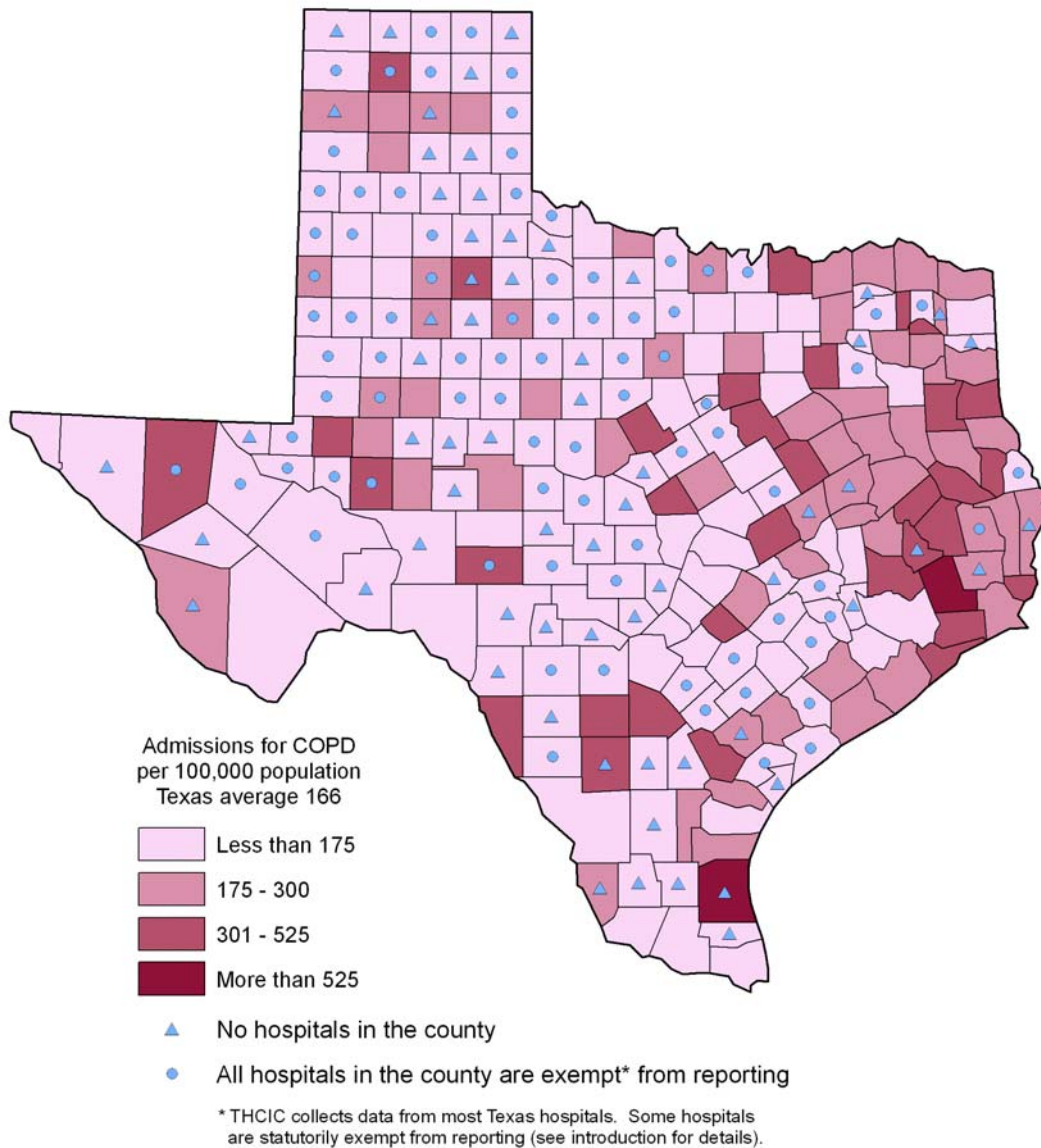


## 10. Chronic Obstructive Pulmonary Disease (COPD)

As defined by the American Thoracic Society and the European Respiratory Society, COPD is a disorder that is characterized by decreased expiratory flow in the airways of the lungs. It consists of three related diseases: asthma, chronic bronchitis and emphysema. COPD is one of the leading causes of illness and death in the U.S. causing substantial economic burden on individuals and society. Because existing medications cannot modify the progressive decline in lung function, the goal of drug therapy is to lessen symptoms and/or decrease complications. Patient education on smoking cessation, minimizing shortness of breath, and seeking medical attention can improve quality of life.



Source: Department of State Health Services, Center for Health Statistics. *Texas Hospital Inpatient Discharge Public Use Data File, 2005.*

**Table 10. Chronic Obstruction Pulmonary Disease (COPD) Admission Rate**

Includes data from most Texas hospitals. Some hospitals are statutorily exempt from reporting to Department of State Health Services.

County	Admissions	Population	Observed Admissions per 100,000 Population	Expected Admissions per 100,000 Population	Risk-Adjusted Admissions per 100,000 Population	99% Confidence Interval for Risk-Adjusted Admissions
State Total	26,718	16,501,931	161.91	216.37	166.21	
Anderson	78	45,261	172.33	218.13	175.48	(131.8, 219.1)
Andrews	6	9,300	64.52	262.26	54.64*	(0.00, 142.4)
Angelina	214	60,254	355.16	261.37	301.83**	(267.3, 336.4)
Aransas	44	19,078	230.63	362.67	141.25	(89.14, 193.4)
Archer	7	7,091	98.72	271.97	80.62	(0.00, 179.4)
Armstrong	Less Than 5					
Atascosa	104	30,686	338.92	236.05	318.92**	(268.0, 369.9)
Austin	19	19,570	97.09	285.78	75.46*	(17.48, 133.4)
Bailey	6	4,758	126.10	295.07	94.93	(0.00, 210.6)
Bandera	35	15,486	226.01	308.02	162.98	(100.2, 225.8)
Bastrop	103	51,151	201.36	216.61	206.48	(165.3, 247.7)
Baylor	Less Than 5					
Bee	80	26,360	303.49	196.09	343.78**	(283.5, 404.1)
Bell	218	175,017	124.56	204.81	135.08*	(112.2, 158.0)
Bexar	1,127	1,092,266	103.18	223.19	102.69*	(93.90, 111.5)
Blanco	5	7,051	70.91	270.46	58.24*	(0.00, 157.5)
Borden	Less Than 5					
Bosque	29	14,055	206.33	348.16	131.63	(69.67, 193.6)
Bowie	194	69,675	278.44	262.12	235.94**	(203.9, 268.0)
Brazoria	445	199,288	223.29	201.33	246.35**	(224.7, 268.0)
Brazos	128	124,256	103.01	144.49	158.36	(126.0, 190.7)
Brewster	13	7,357	176.70	264.85	148.20	(49.97, 246.4)
Briscoe	Less Than 5					
Brooks	10	5,509	181.52	310.35	129.92	(25.07, 234.8)
Brown	118	29,107	405.40	301.04	299.12**	(252.8, 345.4)
Burleson	52	13,003	399.91	305.32	290.94**	(222.1, 359.7)
Burnet	52	31,775	163.65	348.04	104.44*	(63.22, 145.7)
Caldwell	103	26,939	382.35	235.79	360.18**	(305.8, 414.6)
Calhoun	7	15,022	46.60	287.43	36.01*	(0.00, 102.0)
Callahan	22	10,446	210.61	321.40	145.55	(70.73, 220.4)
Cameron	387	249,884	154.87	238.63	144.15*	(126.4, 161.9)
Camp	39	8,877	439.34	308.37	316.46**	(233.6, 399.3)
Carson	14	4,904	285.48	306.59	206.82	(95.01, 318.6)
Cass	48	23,437	204.80	331.52	137.22	(88.03, 186.4)
Castro	Less Than 5					
Chambers	63	21,167	297.63	204.60	323.12**	(257.2, 389.0)
Cherokee	93	36,027	258.14	280.85	204.16	(161.1, 247.3)
Childress	Less Than 5					
Clay	6	8,887	67.51	292.10	51.34*	(0.00, 136.4)
Cochran	8	2,392	334.45	311.80	238.26	(79.50, 397.0)
Coke	Less Than 5					
Coleman	8	6,904	115.87	390.89	65.85*	(0.00, 149.3)
Collin	438	460,207	95.17	158.15	133.67*	(117.6, 149.8)
Collingsworth	Less Than 5					
Colorado	6	16,002	37.50	327.38	25.44*	(0.00, 85.33)
Comal	109	71,006	153.51	274.82	124.07*	(93.03, 155.1)

\* Risk adjusted admission rate is significantly LOWER (based on 99% confidence interval) than Texas average.

\*\* Risk adjusted admission rate is significantly HIGHER (based on 99% confidence interval) than Texas average.

**Table 10. COPD Admission Rate (cont'd)**

County	Admissions	Population	Observed Admissions per 100,000 Population	Expected Admissions per 100,000 Population	Risk-Adjusted Admissions per 100,000 Population	99% Confidence Interval for Risk-Adjusted Admissions
State Total	26,718	16,501,931	161.91	216.37	166.21	
Comanche	80	10,508	761.32	361.06	468.35**	(398.0, 538.7)
Concho	Less Than 5					
Cooke	56	29,069	192.65	284.13	150.60	(102.9, 198.3)
Coryell	91	56,205	161.91	142.89	251.69**	(203.3, 300.1)
Cottle	Less Than 5					
Crane	Less Than 5					
Crockett	Less Than 5					
Crosby	16	4,815	332.29	324.92	227.16	(117.6, 336.8)
Culberson	8	1,953	409.63	281.40	323.33	(138.4, 508.3)
Dallam	Less Than 5					
Dallas	1,952	1,666,566	117.13	190.93	136.26*	(128.6, 143.9)
Dawson	Less Than 5					
Deaf Smith	Less Than 5					
Delta	10	4,279	233.70	303.00	171.32	(50.90, 291.7)
Denton	430	391,729	109.77	143.29	170.16	(151.8, 188.5)
De Witt	8	16,112	49.65	316.68	34.83*	(0.00, 95.51)
Dickens	9	2,253	399.47	289.35	306.66	(136.9, 476.4)
Dimmit	8	7,162	111.70	265.04	93.61	(0.00, 193.1)
Donley	Less Than 5					
Duval	20	9,317	214.66	281.98	169.09	(84.51, 253.7)
Eastland	26	14,523	179.03	352.05	112.95	(52.33, 173.6)
Ector	347	89,041	389.71	238.32	363.21**	(333.4, 393.0)
Edwards	Less Than 5					
Ellis	119	94,353	126.12	207.82	134.80*	(103.8, 165.8)
El Paso	484	496,822	97.42	225.52	95.95*	(83.00, 108.9)
Erath	48	26,212	183.12	250.30	162.50	(109.0, 216.0)
Falls	21	13,251	158.48	308.78	114.00	(46.23, 181.8)
Fannin	93	25,857	359.67	290.00	275.48**	(225.4, 325.5)
Fayette	6	17,871	33.57	361.50	20.63*	(0.00, 74.55)
Fisher	Less Than 5					
Floyd	6	5,215	115.05	323.18	79.08	(0.00, 184.7)
Foard	Less Than 5					
Fort Bend	206	323,125	63.75	164.68	85.99*	(67.18, 104.8)
Franklin	36	7,985	450.85	325.84	307.33**	(222.3, 392.3)
Freestone	53	14,739	359.59	283.37	281.86**	(214.8, 349.0)
Frio	46	12,097	380.26	235.06	359.33**	(278.0, 440.6)
Gaines	Less Than 5					
Galveston	673	204,871	328.50	234.24	311.50**	(291.7, 331.3)
Garza	10	3,689	271.08	266.66	225.79	(87.55, 364.0)
Gillespie	15	18,299	81.97	414.60	43.92**	(0.00, 93.67)
Glasscock	Less Than 5					
Goliad	24	5,559	431.73	321.02	298.72**	(196.1, 401.3)
Gonzales	10	14,299	69.93	305.26	50.89*	(0.00, 116.5)
Gray	64	16,764	381.77	324.10	261.65**	(202.8, 320.5)
Grayson	343	89,043	385.21	283.38	301.93**	(274.6, 329.2)
Gregg	244	85,788	284.42	262.74	240.45**	(211.6, 269.3)

\* Risk adjusted admission rate is significantly LOWER (based on 99% confidence interval) than Texas average.

\*\* Risk adjusted admission rate is significantly HIGHER (based on 99% confidence interval) than Texas average.

**Table 10. COPD Admission Rate (cont'd)**

County	Admissions	Population	Observed Admissions per 100,000 Population	Expected Admissions per 100,000 Population	Risk-Adjusted Admissions per 100,000 Population	99% Confidence Interval for Risk-Adjusted Admissions
State Total	26,718	16,501,931	161.91	216.37	166.21	
Grimes	37	19,655	188.25	258.22	161.93	(101.1, 222.8)
Guadalupe	91	74,721	121.79	242.16	111.71*	(79.47, 143.9)
Hale	34	25,744	132.07	262.88	111.59	(58.89, 164.3)
Hall	Less Than 5					
Hamilton	Less Than 5					
Hansford	Less Than 5					
Hardeman	Less Than 5					
Hardin	132	38,176	345.77	257.03	298.80**	(255.0, 342.6)
Harris	3,263	2,632,813	123.94	185.23	148.62*	(142.4, 154.8)
Harrison	107	47,735	224.15	261.35	190.50	(151.7, 229.3)
Hartley	Less Than 5					
Haskell	Less Than 5					
Hays	78	92,698	84.14	168.10	111.19*	(76.44, 145.9)
Hemphill	Less Than 5					
Henderson	236	61,565	383.33	317.23	268.40**	(237.4, 299.4)
Hidalgo	703	433,294	162.25	215.20	167.47	(153.3, 181.7)
Hill	147	26,862	547.24	308.62	393.86**	(346.2, 441.5)
Hockley	31	16,910	183.32	253.28	160.77	(94.51, 227.0)
Hood	45	36,742	122.48	328.08	82.92*	(43.43, 122.4)
Hopkins	18	25,281	71.20	282.34	56.01*	(4.69, 107.3)
Houston	77	18,513	415.92	316.84	291.58**	(235.0, 348.2)
Howard	86	25,582	336.17	270.99	275.55**	(223.5, 327.6)
Hudspeth	Less Than 5					
Hunt	165	62,074	265.81	249.50	236.64**	(201.8, 271.5)
Hutchinson	17	17,004	99.98	303.05	73.28*	(12.88, 133.7)
Irion	Less Than 5					
Jack	5	7,157	69.86	266.96	58.13*	(0.00, 157.3)
Jackson	17	10,866	156.45	294.30	118.08	(41.41, 194.7)
Jasper	76	26,996	281.52	294.77	212.14	(163.5, 260.7)
Jeff Davis	Less Than 5					
Jefferson	486	188,775	257.45	262.66	217.71**	(198.2, 237.2)
Jim Hogg	6	3,654	164.20	314.51	115.97	(0.00, 243.8)
Jim Wells	79	29,243	270.15	253.51	236.70**	(186.3, 287.1)
Johnson	392	106,780	367.11	215.76	377.93**	(349.4, 406.5)
Jones	17	16,216	104.83	247.04	94.26*	(25.76, 162.8)
Karnes	9	12,461	72.23	248.66	64.52*	(0.00, 142.4)
Kaufman	214	63,271	338.23	216.41	347.15**	(310.1, 384.2)
Kendall	21	20,816	100.88	275.60	81.31*	(24.05, 138.6)
Kenedy	6	296	2027.03	274.50	1640.24**	(1159, 2121)
Kent	Less Than 5					
Kerr	76	36,392	208.84	405.91	114.28*	(78.62, 149.9)
Kimble	Less Than 5					
King	Less Than 5					
Kinney	Less Than 5					
Kleberg	53	23,524	225.30	224.69	222.72	(163.1, 282.4)
Knox	Less Than 5					

\* Risk adjusted admission rate is significantly LOWER (based on 99% confidence interval) than Texas average.

\*\* Risk adjusted admission rate is significantly HIGHER (based on 99% confidence interval) than Texas average.

**Table 10. COPD Admission Rate (cont'd)**

County	Admissions	Population	Observed Admissions per 100,000 Population	Expected Admissions per 100,000 Population	Risk-Adjusted Admissions per 100,000 Population	99% Confidence Interval for Risk-Adjusted Admissions
State Total	26,718	16,501,931	161.91	216.37	166.21	
Lamar	101	37,728	267.71	300.70	197.75	(157.0, 238.5)
Lamb	14	10,634	131.65	317.89	91.99	(17.43, 166.6)
Lampasas	56	15,662	357.55	261.57	303.62**	(235.9, 371.4)
La Salle	16	4,355	367.39	248.05	328.99**	(197.1, 460.9)
Lavaca	39	14,852	262.59	372.78	156.46	(98.21, 214.7)
Lee	17	12,291	138.31	283.37	108.42	(34.95, 181.9)
Leon	60	12,690	472.81	351.63	298.67**	(233.8, 363.6)
Liberty	348	55,891	622.64	220.80	626.36**	(587.3, 665.4)
Limestone	111	17,400	637.93	286.65	494.32**	(432.9, 555.7)
Lipscomb	Less Than 5					
Live Oak	19	9,489	200.23	305.20	145.72	(65.16, 226.3)
Llano	31	15,496	200.05	475.50	93.45*	(42.96, 143.9)
Loving	Less Than 5					
Lubbock	310	190,605	162.64	223.35	161.75	(140.7, 182.8)
Lynn	Less Than 5	4,441				(0.00, 154.1)
McCulloch	9	6,165	145.99	349.97	92.66	(0.00, 186.0)
McClennan	161	167,237	96.27	245.74	87.02*	(65.63, 108.4)
McMullen	Less Than 5					
Madison	24	10,658	225.18	244.15	204.86	(119.9, 289.9)
Marion	22	8,869	248.06	351.06	156.95	(79.25, 234.6)
Martin	8	3,086	259.24	284.10	202.68	(56.25, 349.1)
Mason	Less Than 5					
Matagorda	67	27,739	241.54	263.61	203.52	(152.8, 254.2)
Maverick	180	33,257	541.24	232.64	516.77**	(467.5, 566.1)
Medina	48	31,593	151.93	254.65	132.52	(84.18, 180.9)
Menard	Less Than 5					
Midland	214	87,632	244.20	249.30	217.58**	(188.2, 246.9)
Milam	86	18,833	456.65	310.83	326.32**	(269.7, 383.0)
Mills	9	4,025	223.60	391.06	127.01	(17.76, 236.3)
Mitchell	14	7,780	179.95	245.26	162.97	(63.72, 262.2)
Montague	61	15,260	399.74	351.79	252.39**	(193.2, 311.6)
Montgomery	756	267,434	282.69	204.68	306.77**	(288.2, 325.3)
Moore	43	13,806	311.46	229.89	300.93**	(224.0, 377.9)
Morris	32	10,212	313.36	336.70	206.72	(132.8, 280.7)
Motley	Less Than 5					
Nacogdoches	116	46,556	249.16	234.10	236.41**	(194.9, 277.9)
Navarro	77	35,982	214.00	265.16	179.26	(134.9, 223.7)
Newton	38	11,138	341.17	286.44	264.56**	(187.8, 341.3)
Nolan	5	11,298	44.26	318.62	30.85*	(0.00, 103.1)
Nueces	350	233,894	149.64	241.43	137.67*	(119.4, 155.9)
Ochiltree	Less Than 5					
Oldham	5	1,457	343.17	272.33	279.90	(62.17, 497.6)
Orange	266	64,242	414.06	266.79	344.72**	(311.6, 377.8)
Palo Pinto	56	20,846	268.64	306.59	194.63	(140.4, 248.9)
Panola	76	17,781	427.42	302.68	313.66**	(254.6, 372.8)
Parker	135	76,555	176.34	229.72	170.51	(137.8, 203.2)

\* Risk adjusted admission rate is significantly LOWER (based on 99% confidence interval) than Texas average.

\*\* Risk adjusted admission rate is significantly HIGHER (based on 99% confidence interval) than Texas average.

**Table 10. COPD Admission Rate (cont'd)**

County	Admissions	Population	Observed Admissions per 100,000 Population	Expected Admissions per 100,000 Population	Risk-Adjusted Admissions per 100,000 Population	99% Confidence Interval for Risk-Adjusted Admissions
State Total	26,718	16,501,931	161.91	216.37	166.21	
Parmer	6	6,881	87.20	272.34	71.12	(0.00, 171.3)
Pecos	Less Than 5					
Polk	238	36,956	644.01	335.70	426.11**	(387.2, 465.0)
Potter	200	85,892	232.85	236.81	218.40**	(188.0, 248.8)
Presidio	15	5,325	281.69	314.89	198.70	(92.84, 304.6)
Rains	11	8,875	123.94	304.72	90.35	(6.97, 173.7)
Randall	157	83,576	187.85	238.10	175.25	(144.5, 206.0)
Reagan	6	2,189	274.10	249.01	244.49	(58.76, 430.2)
Real	Less Than 5					
Red River	43	10,730	400.75	346.30	257.04**	(185.9, 328.2)
Reeves	Less Than 5					
Refugio	Less Than 5					
Roberts	Less Than 5					
Robertson	32	11,902	268.86	321.72	185.63	(115.6, 255.7)
Rockwall	58	43,146	134.43	197.77	150.98	(104.0, 197.9)
Runnels	17	8,273	205.49	355.81	128.28	(48.38, 208.2)
Rusk	147	37,363	393.44	284.12	307.59**	(265.5, 349.7)
Sabine	26	8,437	308.17	419.96	162.99	(90.18, 235.8)
San Augustine	39	7,035	554.37	384.18	320.52**	(237.1, 403.9)
San Jacinto	87	19,192	453.31	299.46	336.24**	(279.0, 393.4)
San Patricio	103	48,607	211.90	239.37	196.63	(156.4, 236.8)
San Saba	7	4,590	152.51	346.67	97.71	(0.00, 206.4)
Schleicher	Less Than 5					
Scurry	Less Than 5					
Shackelford	Less Than 5					
Shelby	75	19,651	381.66	297.12	285.32**	(228.6, 342.1)
Sherman	Less Than 5					
Smith	212	140,371	151.03	273.74	122.55*	(100.4, 144.7)
Somervell	Less Than 5					
Starr	58	38,568	150.38	222.45	150.16	(103.3, 197.0)
Stephens	7	7,501	93.32	323.10	64.16*	(0.00, 152.2)
Sterling	Less Than 5					
Stonewall	5	1,156	432.53	421.70	227.82	(31.51, 424.1)
Sutton	13	3,043	427.21	254.85	372.35**	(216.6, 528.1)
Swisher	10	5,825	171.67	314.74	121.16	(19.92, 222.4)
Tarrant	1,791	1,160,170	154.37	194.79	176.04**	(166.9, 185.2)
Taylor	235	93,623	251.01	252.29	220.99**	(192.8, 249.2)
Terrell	Less Than 5					
Terry	17	9,336	182.09	288.52	140.19	(56.65, 223.7)
Throckmorton	Less Than 5					
Titus	29	20,654	140.41	250.47	124.52	(64.23, 184.8)
Tom Green	197	78,631	250.54	267.76	207.83**	(178.0, 237.7)
Travis	515	665,736	77.36	160.79	106.86*	(93.61, 120.1)
Trinity	74	11,378	650.38	382.88	377.30**	(311.6, 443.0)
Tyler	66	16,610	397.35	319.74	276.03**	(216.5, 335.5)
Upshur	101	28,614	352.97	289.94	270.41**	(222.8, 318.0)

\* Risk adjusted admission rate is significantly LOWER (based on 99% confidence interval) than Texas average.

\*\* Risk adjusted admission rate is significantly HIGHER (based on 99% confidence interval) than Texas average.

**Table 10. COPD Admission Rate (cont'd)**

County	Admissions	Population	Observed Admissions per 100,000 Population	Expected Admissions per 100,000 Population	Risk-Adjusted Admissions per 100,000 Population	99% Confidence Interval for Risk-Adjusted Admissions
State Total	26,718	16,501,931	161.91	216.37	166.21	
Upton	12	2,356	509.34	306.25	369.41**	(208.0, 530.8)
Uvalde	8	18,912	42.30	277.63	33.84*	(0.00, 93.67)
Val Verde	22	33,245	66.18	274.01	53.64*	(8.22, 99.07)
Van Zandt	78	40,144	194.30	310.05	139.19	(100.3, 178.1)
Victoria	149	62,976	236.60	260.80	201.50**	(167.7, 235.3)
Walker	121	52,064	232.41	178.25	289.60**	(244.6, 334.6)
Waller	31	26,459	117.16	204.15	127.47	(68.46, 186.5)
Ward	10	7,542	132.59	308.30	95.53	(5.62, 185.4)
Washington	15	24,315	61.69	298.15	45.96*	(0.00, 96.87)
Webb	122	140,556	86.80	190.70	101.10*	(74.61, 127.6)
Wharton	84	30,753	273.14	275.42	220.28**	(173.2, 267.4)
Wheeler	Less Than 5					
Wichita	213	96,651	220.38	251.59	194.57**	(166.8, 222.4)
Wilbarger	Less Than 5					
Willacy	20	14,289	139.97	247.14	125.80	(52.84, 198.8)
Williamson	213	230,561	92.38	177.80	115.41*	(93.99, 136.8)
Wilson	28	27,537	101.68	239.35	94.36*	(40.94, 147.8)
Winkler	8	4,993	160.22	291.75	121.98	(8.39, 235.6)
Wise	9	41,790	21.54	227.08	21.07*	(0.00, 65.59)
Wood	99	32,512	304.50	351.28	192.54	(152.0, 233.1)
Yoakum	Less Than 5					
Young	17	13,926	122.07	346.15	78.33*	(15.90, 140.8)
Zapata	24	9,081	264.29	277.97	211.18	(124.9, 297.5)
Zavala	Less Than 5					

Source: *Texas Hospital Inpatient Discharge Public Use Data File, 2005*. Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. 2006.

\* Risk adjusted admission rate is significantly LOWER (based on 99% confidence interval) than Texas average.

\*\* Risk adjusted admission rate is significantly HIGHER (based on 99% confidence interval) than Texas average.