

Hibbs Newsletter

Hibbs Institute for Business & Economic Research

April 2020



SMITH, GREGG COUNTIES LEAD LARGE TEXAS MSAs IN HEALTHCARE SYSTEM CAPACITY PER CAPITA

In the wake of the COVID-19 pandemic, healthcare systems in areas that have seen dramatic spikes in illness from the novel coronavirus have been significantly strained. How well positioned is the East Texas healthcare infrastructure to handle the pandemic, and how does East Texas compare to the rest of the state? This issue of the **Hibbs Newsletter** discusses the healthcare system capacity in Greater East Texas. The **Hibbs Institute** finds that Smith and Gregg Counties have a robust healthcare system that rivals large Texas MSAs when capacity is evaluated on a per capita basis.

The number of confirmed COVID-19 cases this week in the US has hit 1 million, which is 36 percent of the worldwide cases (2.8 million).¹ Fatality rates caused by COVID-19 itself can increase significantly in any given area if an affected patient with severe symptoms does not have the medical aid required to overcome the illness.

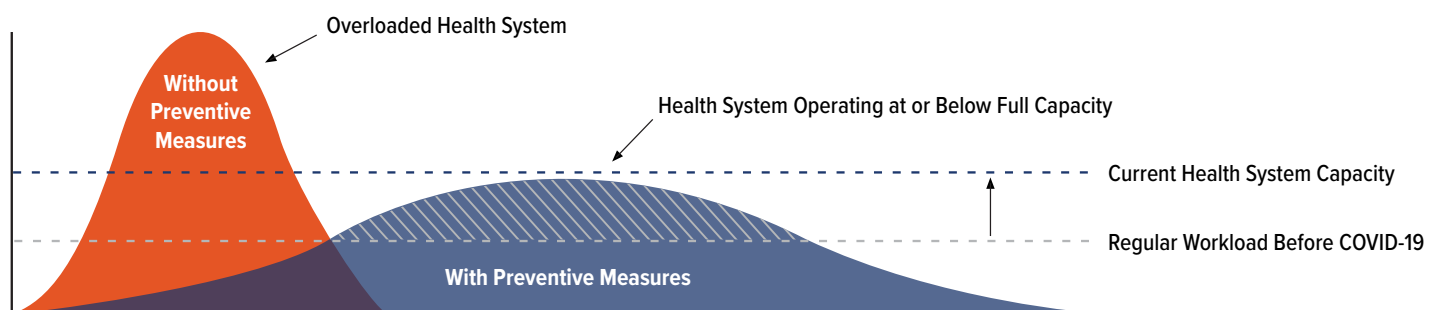
Since COVID-19 is highly contagious, most of the world has taken significant steps to contain or slow the spread of the virus. The term “flattening the

curve” describes a phenomenon where restriction of social contact reduces the impact at any one time on a healthcare system. Assuming a large number of individuals will contract COVID-19, these individuals would not be sick at the same time so as not to exceed healthcare system capacity. The more COVID-19 cases can be distributed in the following months, the better medical assistance can be provided; lowering the fatality rate (**Figure 1**).

Healthcare system capacity varies widely across the globe. The typical variables used to measure the healthcare system capacity are the number of physicians and the number of hospital beds per 100,000 population. For instance, the US has 924,107 staffed beds in all hospitals (6,146); equaling 281.5 beds per 100,000 population.² Compared with other nations, this number may be considered relatively high and efficient under normal circumstances.

So what is the healthcare system capacity here in East Texas? For Smith and Gregg counties in particular, the capacity is favorable. The UT Tyler Hibbs Institute further describes how the capacity is determined.

Figure 1. Flattening the Curve to Operate Below Full Capacity



Source: Hibbs Institute illustration.

¹ Coronavirus Disease 2019 (COVID-19), Situation Report – 92; World Health Organization.

² Hospital Statistics, 2020 edition. American Hospital Association.

<https://www.aha.org/system/files/media/file/2020/01/2020-aha-hospital-fast-facts-new-Jan-2020.pdf>

TRAUMA SERVICES AREAS IN GREATER EAST TEXAS

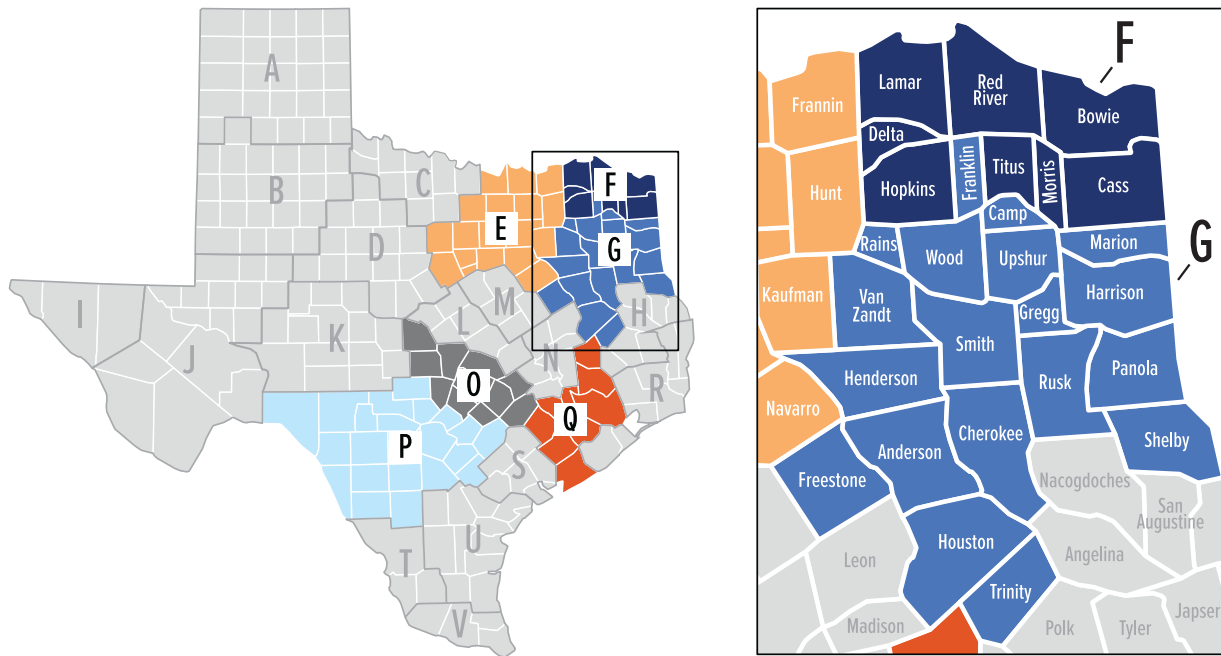
The Texas Department of State and Health Services classifies the 254 counties in Texas into 22 trauma service areas (TSAs). The department grouped areas with relatively low hospital bed capacities (typically rural) with well-endowed areas. This grouping describes how the healthcare system may provide the necessary medical assistance to Texas residents during times with high usage, as you may find during a pandemic. (Table 1). The **Hibbs Institute** uses the TSA classification to compare the healthcare system capacities in selected TSA areas.

Within the area labeled Greater East Texas, trauma service area F includes eight counties, while trauma service area G includes 19 counties. Both service areas combined (27 counties) include the Hibbs Institute influence area (23 counties in East Texas) plus four counties: Freestone, Houston, Shelby and Trinity (Figure 2).

**Figure 2. Greater East Texas (27 Counties)
Trauma Service Area F (East Texas–North) and Trauma Service Area G (19 Counties in East Texas)**

Selected Trauma Service Areas

E. Dallas MSA* G. East Texas – South P. San Antonio MSA* F. East Texas –North O. Austin MSA* Q. Houston MSA*



Source: Texas Department of State and Health Services.

Table 1. Hospital Bed Capacities and Population Ratios by Trauma Service Area (Selected Areas)

	TSA F (East Texas-North)	TSA G (East Texas-South)	TSA E (Dallas MSA*)	TSA Q (Houston MSA*)	TSA O (Austin MSA*)	TSA P (San Antonio MSA*)
Population Estimate (2019)	279,198	970,139	7,888,098	6,371,536	2,321,636	2,840,955
Total Staffed Hospital Beds	679	1,602	14,067	10,760	2,412	5,592
Staffed Hospital Beds per 100K	243.2	165.1	178.3	168.9	103.9	196.8
Available Hospital Beds	212	589	5,703	3,816	1,200	2,260
Available Hospital Beds per 100K	75.9	60.7	72.3	59.9	51.7	79.6
Available Intensive Care Unit Beds	33	64	765	394	172	299
Available Intensive Care Unit Beds per 100K	11.8	6.6	9.7	6.2	7.4	10.5
Available Ventilators	87	145	2,191	1,179	393	881
Available Ventilators per 100K	31.2	14.9	27.8	18.5	16.9	31.0

*Trauma Service Areas do not exactly match with Metropolitan Statistical Areas but may be used as a good proxy.
Source: Texas Department of State and Health Services

HEALTHCARE SYSTEM CAPACITY IN GREATER EAST TEXAS

The healthcare system capacity is considerably different from county to county in Greater East Texas. The ratios between population and primary care physicians (PCP) are common variables used to measure the capacity. For instance, the ratio of population to PCP in Smith County is 810.9, or 811 (Table 2). This ratio means that the county has one primary care physician for every 811 individuals. A smaller number implies a larger capacity. In contrast, Van Zandt County shows a similar ratio of 5,015.5, meaning that the county has one primary care physician for every 5,015 individuals.

While the most populated counties in Greater East Texas (Smith, Gregg and Bowie) have outstanding positions in the state ranking (fifth, sixth and

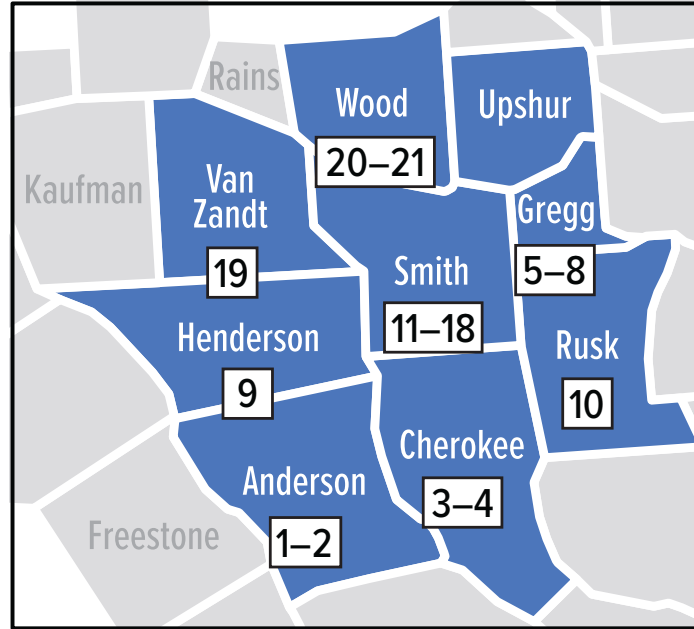
ninth, respectively), counties such as Rains, Marion and Shelby rank among the bottom 50 out of 254 Texas counties. Remarkably, Smith, Gregg and Bowie counties show significantly better ratios than large metropolitan statistical areas (MSAs) in Texas (Dallas, Houston, Austin and San Antonio). They are included in the following information graphic for comparison. As of Tuesday, there are 53 active cases in Smith County and 74 active cases in Gregg County, according to the Northeast Texas Public Health District. By comparing the number of cases to PCP, the data shows that both counties are well-positioned to overcome this pandemic.

Table 2. Population, Primary Care Physicians, Their Ratios and County Ranking in Texas (Greater East Texas & Selected MSAs by Alphabetic Order)

County	Population	Primary Care Physicians (PCP)	Ratio of Population to PCP	Ratio of PCP to 100,000 Population	Rank in TX
Anderson	58,248	37	1,574.3	63.5	65
Bowie	92,596	104	890.3	112.3	9
Camp	13,231	12	1,102.6	90.7	27
Cass	30,365	9	3,373.9	29.6	172
Cherokee	52,090	33	1,578.5	63.4	66
Delta	5,366	0	-	0.0	-
Franklin	10,885	3	3,628.3	27.6	183
Freestone	19,879	7	2,839.9	35.2	154
Gregg	125,425	153	819.8	122.0	6
Harrison	68,004	17	4,000.2	25.0	189
Henderson	80,985	46	1,760.5	56.8	83
Hopkins	36,879	17	2,169.4	46.1	118
Houston	22,738	3	7,579.3	13.2	212
Lamar	50,032	41	1,220.3	81.9	45
Marion	10,343	1	10,343.0	9.7	218
Morris	12,506	4	3,126.5	32.0	165
Panola	24,531	8	3,066.4	32.6	162
Rains	11,325	1	11,325.0	8.8	219
Red River	12,645	2	6,322.5	15.8	207
Rusk	52,822	18	2,934.6	34.1	156
Shelby	25,565	3	8,521.7	11.7	215
Smith	232,715	287	810.9	123.3	5
Titus	32,934	28	1,176.2	85.0	40
Trinity	14,285	3	4,761.7	21.0	200
Upshur	41,389	6	6,898.2	14.5	210
Van Zandt	55,170	11	5,015.5	19.9	201
Wood	44,993	20	2,249.7	44.5	126
East Texas Plus Total	1,237,946	874	1,416.4	70.6	-
(27 counties)					
Austin MSA	2,189,981	1,942	1,127.7	88.7	-
(11 counties)					
Dallas MSA	7,547,725	6,115	1,234.3	81.0	-
(9 counties)					
Houston MSA	7,217,331	5,863	1,231.0	81.2	-
(5 counties)					
San Antonio MSA	2,579,661	1,982	1,301.5	76.8	-
(8 counties)					

Source: Texas Department of State and Health Services.

HEALTHCARE SYSTEM CAPACITY IN TYLER AREA



Source: Texas Department of State and Health Services.

Anderson County

Palestine	1	Palestine Regional Medical Center
	2	Palestine Regional West Campus

Cherokee County

Jacksonville	3	Christus Mother Frances Hospital
	4	UT Health East Texas

Gregg County

Kilgore	5	Alliance Specialty Hospital of Kilgore
Longview	6	Christus Good Shepherd Medical Center
	7	Longview Regional Medical Center
	8	Select Specialty Hospital - Longview, Inc.

Henderson County

Athens	9	UT Health East Texas
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Rusk County

Henderson	10	UT Health East Texas
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Smith County

Tyler	11	Christus Mother Frances Hospital
	12	Christus Trinity Mother Frances Rehab Hosp, Aff with HealthSouth
	13	UT Health East Texas
	14	UT Health East Texas Rehabilitation Hospital
	15	UT Health East Texas Specialty Hospital
	16	Texas Spine and Joint Hospital
	17	Tyler Continue Care Hospital
	18	UT Health East Texas

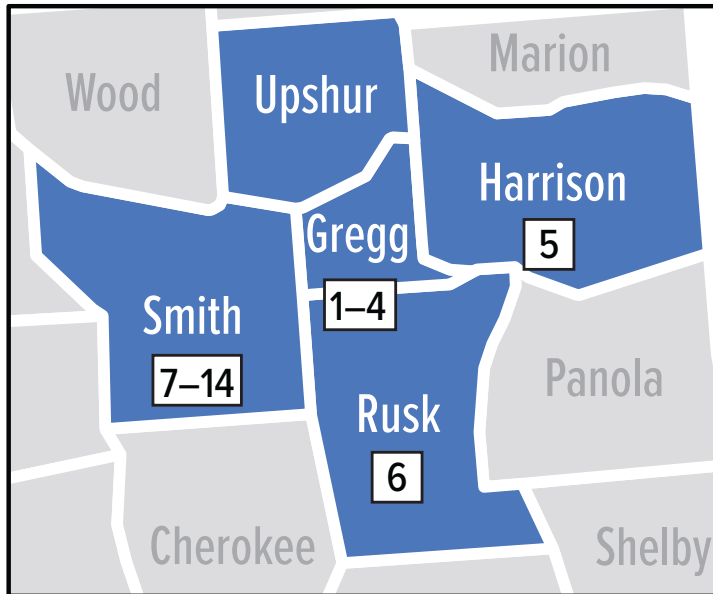
Van Zandt County

Grand Saline	19	Texas General Hospital - Van Zandt Regional Medical Center LP
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Wood County

Quitman	20	UT Health East Texas - Quitman
Winnsboro	21	Christus Mother Frances Hospital

HEALTHCARE SYSTEM CAPACITY IN LONGVIEW AREA



Source: Texas Department of State and Health Services.

Gregg County

Kilgore	1	Alligiance Specialty Hospital of Kilgore
Longview	2	Christus Good Shepherd Medical Center
	3	Longview Regional Medical Center
	4	Select Specialty Hospital - Longview, Inc.

Harrison County

Marshall	5	Christus Good Sheperd Medical Center
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Rusk County

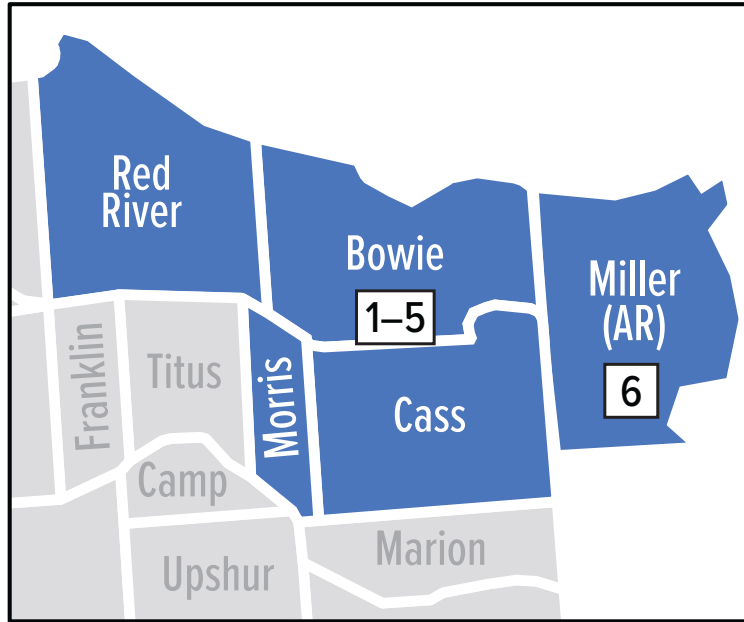
Henderson	6	UT Health East Texas - Henderson
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Smith County

Tyler	7	Christus Mother Frances Hospital - Tyler
	8	Christus Trinity Mother Frances Rehab Hosp, Aff with HealthSouth
	9	UT Health East Texas
	10	UT Health East Texas Rehabilitation Hospital
	11	UT Health East Texas Specialty Hospital
	12	Texas Spine and Joint Hospital
	13	Tyler Continue Care Hospital
	14	UT Health East Texas

Source: Cooperative DSHS/AHA/THA/ Annual Survey of Hospitals and Hospitals Tracking Database.

HEALTHCARE SYSTEM CAPACITY IN TEXARKANA AREA



Source: Texas Department of State and Health Services.

Bowie County

Texarkana	1	Christus St. Michael Health System
	2	Christus St. Michael Rehabilitation Hospital
	3	Healthsouth Rehabilitation Hospital of Texarkana
	4	Post Acute Medical Specialty Hospital at Texarkana North
	5	Wadley Regional Medical Center

Miller County, Arkansas

Texarkana	6	Riverview Behavioral Health
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Source: Cooperative DSHS/AHA/THA/ Annual Survey of Hospitals and Hospitals Tracking Database.

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The Hibbs Institute is a unit of The University of Texas at Tyler's Soules College of Business. The mission of the Hibbs Institute is to provide expert research and analysis for businesses, local governments and economic development councils with the common goal of increasing economic activity and personal income in East Texas.

Services provided include economic impact analysis; industry/firm economic contribution studies; policy analysis; strategic planning; project analysis; and business and economic forecasting.

Associated with several leading universities, the Hibbs team includes professors of economics, finance, management, marketing and accounting.

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