

Hibbs Brief

Hibbs Institute for Business & Economic Research

COVID-19 by the Numbers in Texas

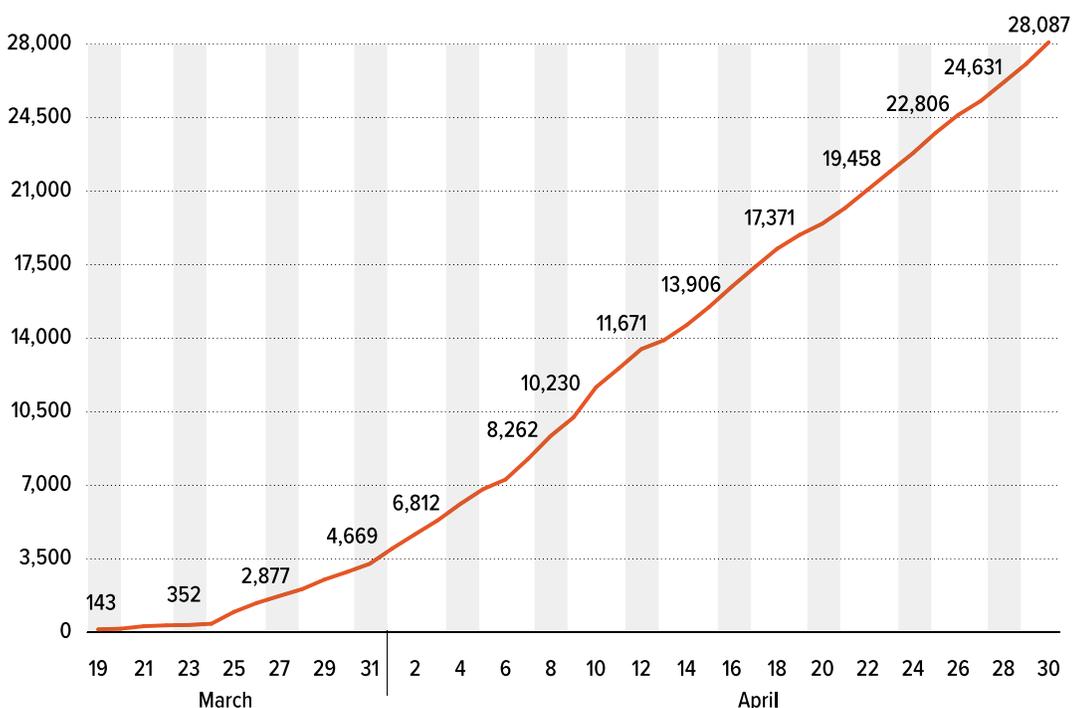
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As the COVID-19 (coronavirus) pandemic continues to evolve, nearly 3.5 million people worldwide have been infected and nearly 240,000 have died.¹ This special issue of the Hibbs Brief discusses the trends and recent numbers on the COVID-19 outbreak in Smith County, East Texas and the overall state. The Hibbs Institute finds that Tyler Metropolitan Statistical Area (MSA)² has proportionally lower rates of confirmed cases and deaths compared to other highlighted areas of Texas.

The first confirmed case of COVID-19 in East Texas occurred on March 10 in Gregg County. On March 13, three cases were confirmed in Smith County. A county typically shows a low number of confirmed cases until it reaches the community spread contagion.³ Then, the number of cases can increase exponentially in a short period of time if strong measures, such as social distancing, are not put into place.

Since counties in Texas vary widely in population size, density and their interaction with other locations the development of COVID-19 has impacted each county differently. By April 30, the spread of COVID-19 in Texas reached 28,087 cases;⁴ less than two months since the first confirmed case was announced in Fort Bend County in Houston.⁵ See **Figure 1**.

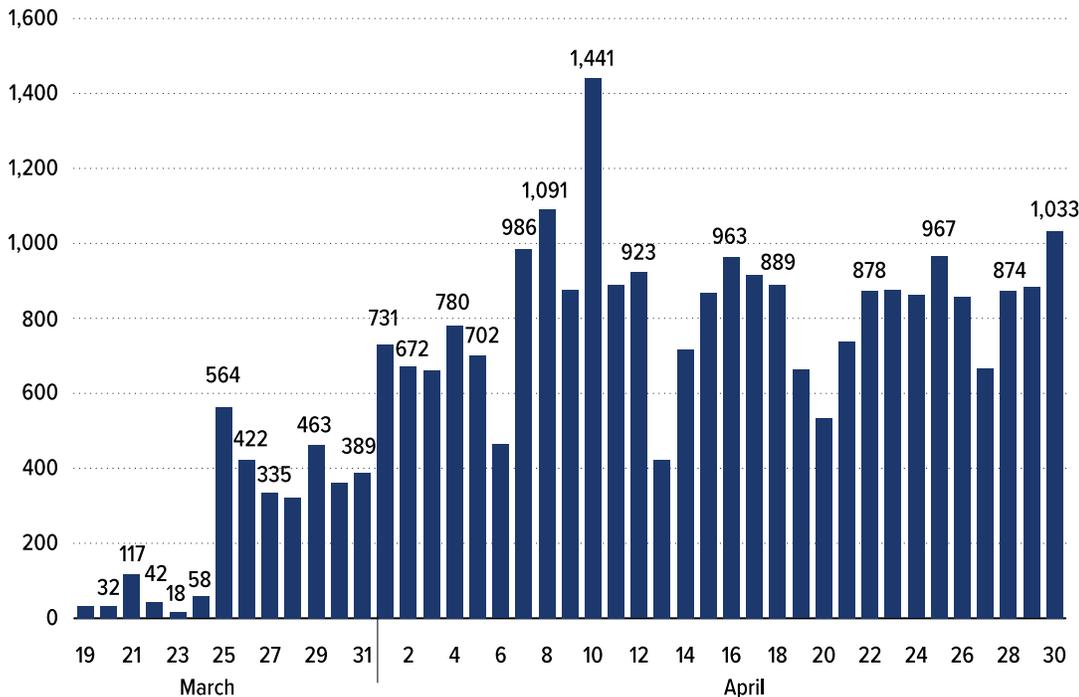
Figure 1. Total Confirmed COVID-19 Cases by Day in Texas (March 19– April 30)



Source: Texas Department of State Health Services. Made by the Hibbs Institute collecting daily numbers since March 19.

Since Texas is a large state with 254 counties, it may be difficult to detect whether the peak of the COVID-19 pandemic has been reached and when the spread of the virus will come to an end. The pandemic showed different magnitudes and timelines in the Texas counties during these past two months. On April 10, the Texas Department of State Health Services (TDSHS) reported the highest number of confirmed COVID-19 cases with 1,441; the second largest was on April 9, with 1,093; and the third largest was on April 30, with 1,033. The contagion curve showing new COVID-19 cases does not seem to be flattening yet in Texas (**Figure 2**).

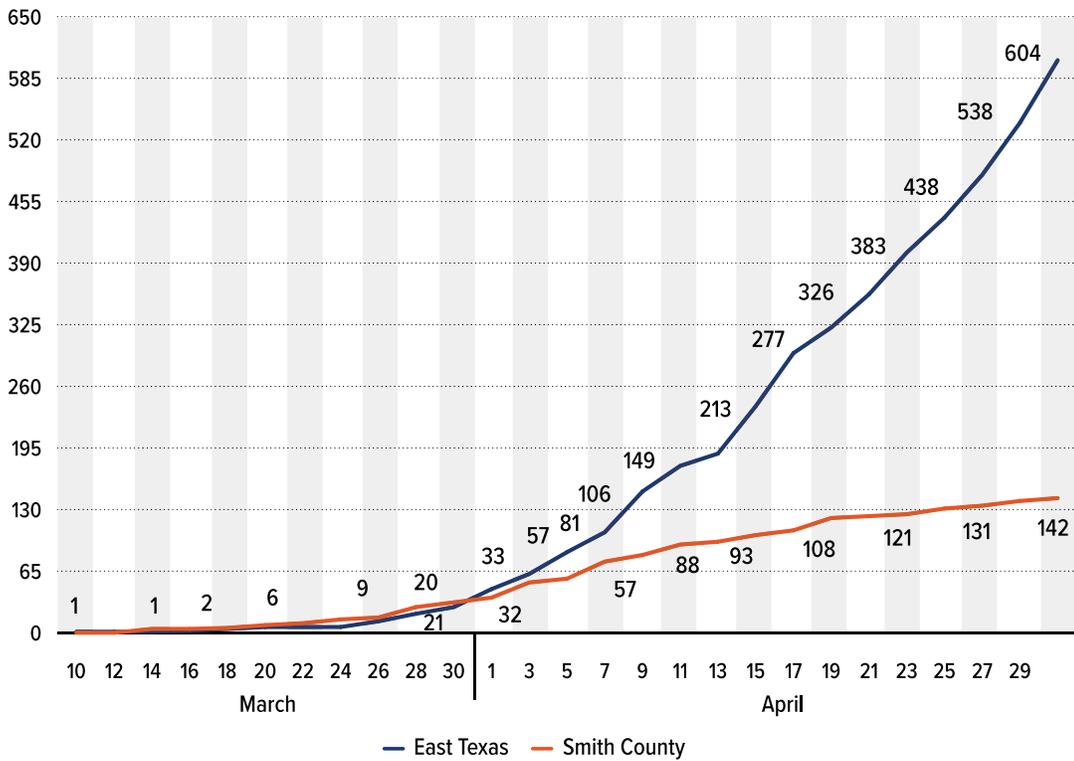
Figure 2. New Confirmed COVID-19 Cases by Day in Texas (March 20 – April 30)



Source: Texas Department of State Health Services. Made by the Hibbs Institute collecting daily numbers since March 19.

According to data collected, Smith County has successfully contained the spread of the COVID-19 pandemic, as it can be observed in **Figure 3** (red line). **Figures 3 and 4** show the development of the pandemic spread in Smith County and East Texas. While **Figure 3** illustrates the pandemic’s growth as the total confirmed cases by day over a six-week period, **Figure 4** gives a general perspective of the stage of the outbreak via new COVID-19 cases by day. Smith County saw a peak of new COVID-19 cases on April 7 with 18 new confirmed cases, then the spread slowed down over the following weeks. In contrast, the spread of COVID-19 is still growing in several counties of East Texas. East Texas saw a peak of new confirmed cases on April 30 with 66 new cases (**Figure 4**).

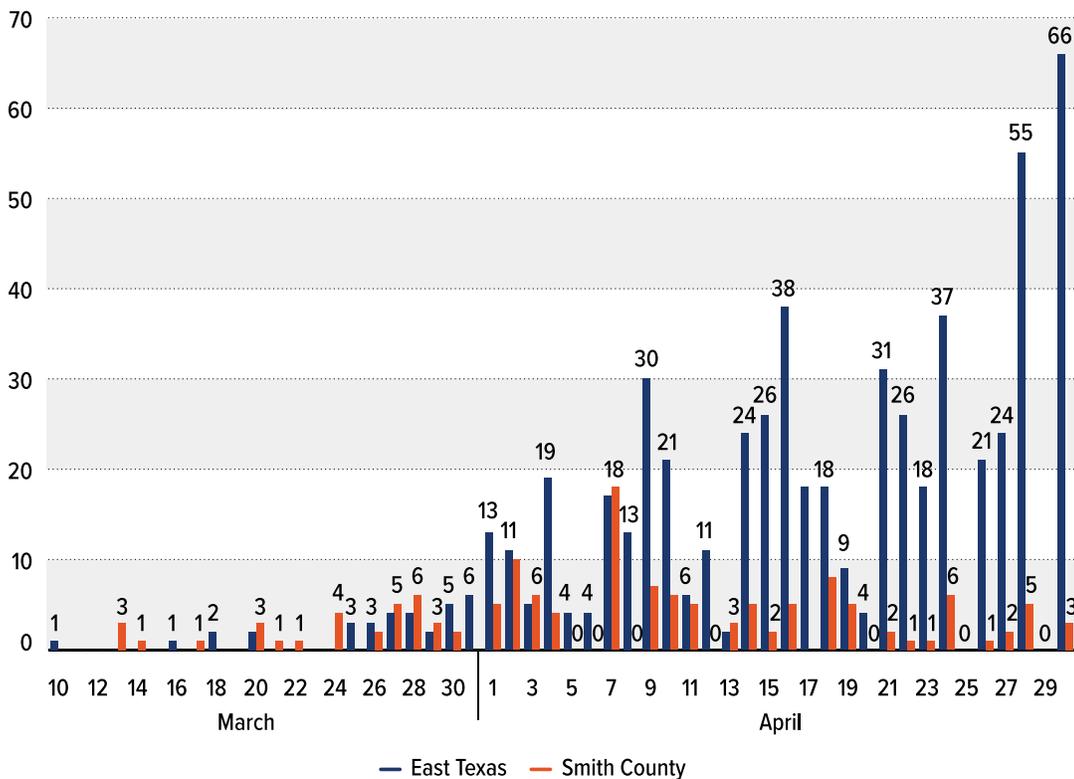
Figure 3. Total Confirmed COVID-19 Cases by Day in East Texas* and Smith County (March 10 – April 30)



Note: The number of COVID-19 cases in East Texas excludes Smith County as it is graphed separately.

Source: Texas Department of State Health Services. Made by the Hibbs Institute collecting daily numbers since March 10.

Figure 4. New Confirmed COVID-19 Cases by Day in East Texas* and Smith County (March 10 – April 30)



Note: The number of COVID-19 cases in East Texas excludes Smith County as it is graphed separately.

Source: Texas Department of State Health Services. Made by the Hibbs Institute collecting daily numbers since March 10.

Table 1 shows total confirmed COVID-19 cases and deaths, population, and rates of cases by 100,000 population and deaths by 100,000 population in 10 selected MSAs in Texas. These rates take away the population bias when two locations are considerably different in size. The MSA (a formal definition of a region that consists of at least one urbanized area with a minimum population of 50,000 and other surrounding communities) with the largest number of COVID-19 cases per 100,000 population is the Houston MSA with 128.03, followed by El Paso MSA with 105.0, and Dallas MSA with 98.76. College Station MSA has a high rate of deaths per 100,000 population with 6.04, followed by Longview MSA with 3.19 and Dallas MSA with 2.85. Tyler MSA has proportionally low rates with 61.68 confirmed COVID-19 cases per 100,000 population and 1.30 deaths caused by COVID-19 per 100,000 population.⁶

Figure 4. New Confirmed COVID-19 Cases by Day in East Texas* and Smith County (March 10 – April 30)

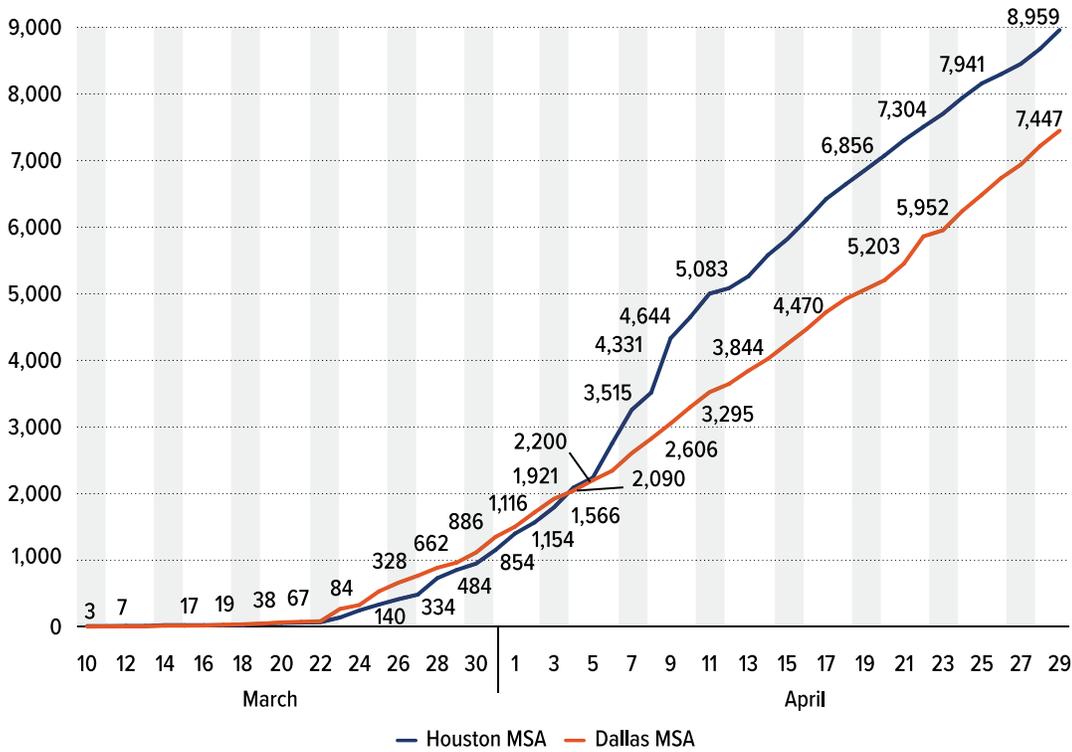
MSA Name	Total Cases	Deaths	Population	Cases/100k Population	Deaths/100k Population
Dallas–Fort Worth–Arlington	7,447	215	7,540,371	98.76	2.85
Houston–The Woodlands–Sugar Land	8,959	175	6,997,384	128.03	2.50
San Antonio–New Braunfels	1,558	58	2,518,036	61.87	2.30
Austin–Round Rock–San Marcos	2,131	55	2,168,316	98.28	2.54
El Paso	887	18	844,723	105.00	2.13
Killeen–Temple–Fort Hood	324	5	451,681	71.73	1.11
Waco	103	4	270,566	38.07	1.48
College Station–Bryan	210	16	265,024	79.24	6.04
Tyler	142	3	230,221	61.68	1.30
Longview	159	7	219,417	72.46	3.19

Note: The number of COVID-19 cases in East Texas excludes Smith County as it is graphed separately.

Source: Texas Department of State Health Services. Made by the Hibbs Institute collecting daily numbers since March 10.

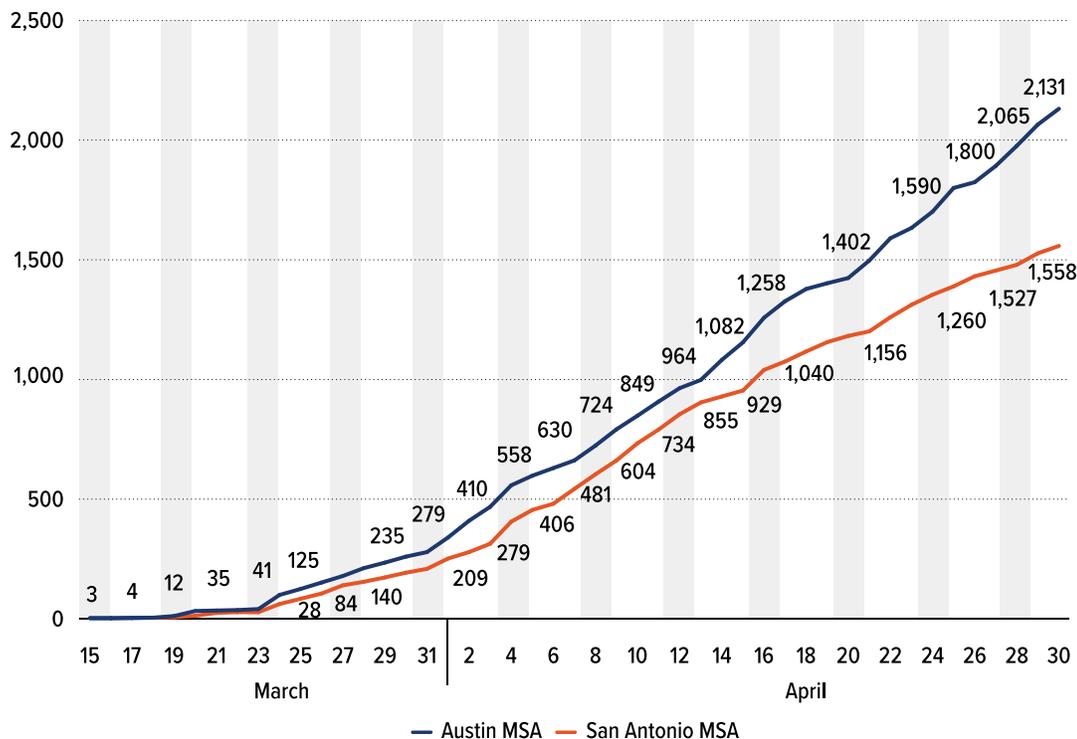
Figures 5 and 6 are complementary to show the COVID-19 progress over time during the past six or seven weeks in the Dallas MSA, Houston MSA, Austin MSA and San Antonio MSA. The Houston MSA has the largest number of confirmed COVID-19 cases in Texas with nearly 9,000 cases by April 30 and an average of 210 new additional cases per day during the previous 10 days. Next on the list is the Dallas MSA with nearly 7,500 confirmed cases and an average of 230 new additional cases per day in the same timeframe (**Figure 6**). Similarly, the Austin and San Antonio MSAs rank third and fourth largest, respectively, with 2,131 and 1,558 confirmed cases of COVID-19 by April 30. Austin and San Antonio MSAs saw an average of 66 and 37 new additional cases, respectively, during the previous 10 days.

Figure 5. Total Confirmed COVID-19 Cases by Day in Houston MSA and Dallas MSA (March 10 – April 30)



Source: Texas Department of State Health Services. Made by the Hibbs Institute collecting daily numbers since March 10.

Figure 6. Total Confirmed COVID-19 Cases by Day in Austin MSA and San Antonio MSA (March 15 – April 30)



Source: Texas Department of State Health Services. Made by the Hibbs Institute collecting daily numbers since March 15.

¹The World Health Organization (WHO) reports 3,435,894 confirmed cases and 239,604 deaths associated with COVID-19 by May 6, 2020.

https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200504-covid-19-sitrep-105.pdf?sfvrsn=4cdda8af_2

²Metropolitan statistical Area (MSA) is the formal definition of a region that consists of at least one urbanized area with a minimum population of 50,000 and other surrounding communities. <https://www.census.gov/programs-surveys/metro-micro/about.html>

³Community spread is defined as people have been infected with the virus in an area, including some who are not sure how or where they became infected.

Frequently Asked Questions; Coronavirus Disease 2019 (COVID-19), Centers for Disease and Control Prevention (CDC).

<https://www.cdc.gov/coronavirus/2019-ncov/faq.html>

⁴Texas Case Counts COVID-19; Department of State Health Services.

<https://txdshs.maps.arcgis.com/apps/opsdashboard/index.html#/ed483ecd702b4298ab01e8b9cafc8b83>

⁵10 people on self-quarantine after contact with 'presumptive positive' coronavirus patient in Fort Bend County; March 5, 2020; Click 2 Houston.

<https://www.click2houston.com/news/local/2020/03/04/reports-first-case-of-presumptive-positive-case-of-coronavirus-in-fort-bend-county/>

⁶All data in this section were obtained from the Texas Case Counts COVID-19 (04-30-2020), from the Texas Department of State Health Services.

<https://txdshs.maps.arcgis.com/apps/opsdashboard/index.html#/ed483ecd702b4298ab01e8b9cafc8b83>

