

Inpatient Hospitalizations for COVID-19 in Texas – 2020

Part 1b: Pre-existing Comorbidities and Certain Medical Conditions

A report using the 2020 THCIC Inpatient Public Use Data File

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Background

Severe illness from the SARS-CoV-2 infection, commonly known as the coronavirus disease (COVID-19), can result in hospitalization, the need for intensive care and breathing assistance, and death (Centers for Disease Control and Prevention, 2022). Previous literature suggests that individuals with certain pre-existing comorbidities and medical conditions, such as cancer, diabetes, and various heart conditions, have a greater risk of COVID-19 hospitalization and death (Centers for Disease Control and Prevention, 2022).

The purpose of this report is to examine distributions of certain pre-existing comorbidities and medical conditions that have been associated with greater risk of severe illness from COVID-19 among inpatients hospitalized for COVID-19 in Texas in 2020. This report also examines these pre-existing comorbidities and medical conditions by age, sex, and race/ethnicity.

Methods

Data for this report come from the Texas Department of State Health Services (DSHS) Texas Health Care Information Collection's (THCIC) 2020 Texas Inpatient Public Use Data File (PUDF). In Texas, all state licensed hospitals are required to report health care activity data to THCIC under Chapter 108 of the Texas Health and Safety Code (Sections 108.011 through 108.0135) (Texas Department of State Health Services, 2022). The THCIC inpatient PUDF therefore contains hospital discharge data (at the patient level) from all state licensed hospitals. Of note, these data are individual hospitalizations and not necessarily individual patients (i.e., the same patient may appear multiple times throughout the data set if he or she was hospitalized more than once in Texas in 2020). Data are available by quarter and are broken down as follows: January 1-March 31, 2020 (Quarter 1), April 1- June 30, 2020 (Quarter 2), July 1-September 30, 2020 (Quarter 3), and October 1-December 31, 2020 (Quarter 4). Seven hundred and two, 687, 688, and 694 facilities reported to THCIC for Quarters 1, 2, 3, and 4, respectively, in the 2020 inpatient PUDF.¹

This report defined a hospitalization for COVID-19 as a discharge with the ICD-10-CM code of U07.1 in the admitting diagnosis or principal diagnosis. Hospitalizations in this report include non-Texas residents (i.e. any patient hospitalized in a Texas hospital regardless of residency status).

Based on guidance from the Centers for Disease Control and Prevention, we examined the following pre-existing comorbidities and medical conditions in our analyses: cancer, chronic kidney disease, chronic liver disease, chronic lung disease, cystic fibrosis, dementia or other neurological conditions, diabetes (Type I or Type II), certain types of disabilities,² heart

¹ The reporting variation between quarters is due to the opening and closing of facilities throughout the calendar year.

² Includes cerebral palsy, attention-deficit/hyperactivity disorder, spinal cord injuries, Down syndrome, and intellectual development disabilities.

conditions, HIV infection, immunocompromised state, certain mental health conditions,³ overweight⁴ and obesity,⁵ pregnancy, sickle cell disease or thalassemia, current or former smoker, solid organ or blood stem cell transplant (including bone marrow transplants), stroke or cerebrovascular disease, substance use disorders, and tuberculosis (Centers for Disease Control and Prevention, 2022). The ICD-10-CM codes used to identify these diagnoses in the THCIC Inpatient PUDF are provided in Appendix 1.

Analysis

Descriptive statistics were calculated using SAS 9.4 (SAS Institute Inc., Cary, NC).

Results

In 2020, there were 2,945,904 inpatient hospitalizations due to any cause in Texas. Of these hospitalizations, 117,151 (4.0%) were hospitalizations for COVID-19. Heart conditions were the most common pre-existing comorbidity or medical condition among patients hospitalized for COVID-19 Texas in 2020 (85,288, equating to 72.8%) followed by hypertension (78,640, 67.1%), and Type I or II diabetes (52,849, 45.1%) (Table 1).

Table 1. Pre-existing comorbidities and certain medical conditions of patients hospitalized for COVID-19 in Texas in 2020 (n=117,151).

Pre-existing Comorbidities or Certain Medical Conditions	Number	Percent
Heart conditions	85,228	72.8%
Hypertension	78,640	67.1%
Diabetes	52,849	45.1%
Dementia or other neurological conditions	38,658	33.0%
Overweight & obesity	35,396	30.2%
Chronic lung disease	31,658	27.0%
Chronic kidney disease	21,316	18.2%
Certain mental health conditions	13,533	11.6%
Cancer	9,774	8.3%
Immunocompromised state	8,517	7.3%
Chronic liver disease	6,766	5.8%
Substance use disorders	5,146	4.4%
Current or former smoker	4,098	3.5%
Stroke or cerebrovascular disease	3,923	3.3%
Certain Types of Disabilities	1,582	1.4%
<i>Intellectual development disabilities</i>	595	0.5%

³ Includes mood disorders, including depression and schizophrenia spectrum disorders.

⁴ Overweight is defined as a body mass index (BMI) of 25.0-29.9 kg/m².

⁵ Obesity is defined as a BMI of 30 kg/m² or higher.

<i>Cerebral palsy</i>	437	0.4%
<i>Attention-deficit/hyperactivity disorder (ADHD)</i>	315	0.3%
<i>Down syndrome</i>	244	0.2%
<i>Muscular Dystrophy</i>	45	0.0%
<i>Spinal Cord Injuries</i>	19	0.0%
Solid organ transplant & Blood stem cell transplant (including bone marrow transplants)	1,427	1.2%
HIV infection	558	0.5%
Pregnancy	144	0.1%
Sickle cell disease	204	0.2%
Thalassemia	55	0.0%
Cystic fibrosis	28	0.0%
Tuberculosis	27	0.0%

Most patients had at least one pre-existing comorbidity or medical condition (108,188, equating to 92.3%) (Table 2). Additionally, 15.5%, 23.2%, 23.1%, 16.7%, 8.9%, and 5.0% of patients had one, two, three, four, five, and six comorbidities or medical conditions, respectively (Table 2).

Table 2. Number of pre-existing comorbidities and certain medical conditions of patients hospitalized for COVID-19 in Texas in 2020 (n=117,151).

Number of Pre-existing Comorbidities or Certain Medical Conditions*	Number	Percent (of all hospitalizations for COVID-19)
None	8,963	7.7%
One or more	108,188	92.3%
One	18,128	15.5%
Two	27,223	23.2%
Three	27,006	23.1%
Four	19,588	16.7%
Five	10,380	8.9%
Six or more	5,863	5.0%

*See Table 2 for list

This report also examined pre-existing comorbidities and certain medical conditions by age, sex, and race/ethnicity among hospitalizations for COVID-19 (see following pages).

Pre-existing Comorbidities and Certain Medical Conditions by Age

Table 3 displays the number of hospitalizations for COVID-19 with each comorbidity or medical condition stratified by age group. The number of hospitalizations for COVID-19 with each pre-existing comorbidity or medical condition generally increased with age but were highest for the age group 45-64 years of age, mirroring trends for all hospitalizations for COVID-19.

All hospitalizations for COVID-19 in Texas in 2020 by age group	Number	Percent
0-17	1,053	0.9%
18-44	17,954	15.3%
45-64	43,298	37.0%
65-74	25,713	21.9%
75+	29,131	24.9%
Unknown/Missing/Invalid ^a	2	0.0%

Table 3. Number of patients hospitalized for COVID-19 in Texas with a pre-existing comorbidity or certain medical conditions by age and type of condition (n=117,151)

Pre-existing Comorbidities or Certain Medical Conditions	Number	Percent
Heart conditions	85,228	
0-17	171	0.2%
18-44	6,714	7.9%
45-64	29,965	35.2%
65-74	22,032	25.9%
75+	26,345	30.9%
Unknown/Missing/Invalid/Suppressed ^a	1	0.0%
Hypertension	78,640	
0-17	64	0.1%
18-44	5,862	7.5%
45-64	27,854	35.4%
65-74	20,567	26.2%
75+	24,293	30.9%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Diabetes	52,849	
0-17	60	0.1%
18-44	5,477	10.4%
45-64	20,896	39.5%
65-74	13,913	26.3%
75+	12,503	23.7%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Overweight & obesity	35,396	

0-17	190	0.5%
18-44	8,498	24.0%
45-64	16,395	46.3%
65-74	6,771	19.1%
75+	3,542	10.0%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Dementia or other neurological conditions	38,658	
0-17	181	0.5%
18-44	3,189	8.2%
45-64	10,836	28.0%
65-74	9,028	23.4%
75+	15,423	39.9%
Unknown/Missing/Invalid/Suppressed ^a	1	0.0%
Chronic lung disease	31,658	
0-17	188	0.6%
18-44	3,574	11.3%
45-64	10,602	33.5%
65-74	7,946	25.1%
75+	9,348	29.5%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Chronic kidney disease	21,316	
0-17	16	0.1%
18-44	1,193	5.6%
45-64	6,015	28.2%
65-74	5,859	27.5%
75+	8,233	38.6%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Certain mental health conditions	13,533	
0-17	50	0.4%
18-44	1,554	11.5%
45-64	4,654	34.4%
65-74	3,403	25.1%
75+	3,872	28.6%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Pregnancy	144	
0-17	2	1.4%
18-44	139	96.5%
45-64	3	2.1%
65-74	0	0.0%
75+	0	0.0%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%

Immunocompromised state	8,517	
0-17	90	1.1%
18-44	1,093	12.8%
45-64	3,310	38.9%
65-74	2,017	23.7%
75+	2,007	23.6%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Chronic liver disease	6,766	
0-17	37	0.5%
18-44	1,217	18.0%
45-64	3,029	44.8%
65-74	1,530	22.6%
75+	952	14.1%
Unknown/Missing/Invalid/Suppressed ^a	1	0.0%
Cancer	9,774	
0-17	44	0.5%
18-44	357	3.7%
45-64	2,392	24.5%
65-74	2,803	28.7%
75+	4,178	42.7%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Current or former smoker	4,098	
0-17	2	0.0%
18-44	918	22.4%
45-64	1,710	41.7%
65-74	880	21.5%
75+	588	14.3%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Stroke or cerebrovascular disease	3,923	
0-17	7	0.2%
18-44	116	3.0%
45-64	1,083	27.6%
65-74	1,238	31.6%
75+	1,479	37.7%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Substance use disorders	5,146	
0-17	13	0.3%
18-44	1,363	26.5%
45-64	2,274	44.2%
65-74	899	17.5%
75+	597	11.6%

Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Solid organ transplant & stem cell transplant (including bone marrow transplant)	1,427	
0-17	29	2.0%
18-44	198	13.9%
45-64	703	49.3%
65-74	383	26.8%
75+	114	8.0%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Sickle cell disease	204	
0-17	23	11.3%
18-44	98	48.0%
45-64	67	32.8%
65-74	11	5.4%
75+	5	2.5%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Thalassemia	55	
0-17	2	3.6%
18-44	8	14.5%
45-64	28	50.9%
65-74	8	14.5%
75+	9	16.4%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Cystic fibrosis	28	
0-17	2	7.1%
18-44	10	35.7%
45-64	6	21.4%
65-74	6	21.4%
75+	4	14.3%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
HIV infection	558	
0-17	0	0.0%
18-44	153	27.4%
45-64	313	56.1%
65-74	69	12.4%
75+	23	4.1%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Tuberculosis	27	
0-17	1	3.7%
18-44	6	22.2%
45-64	8	29.6%

65-74	3	11.1%
75+	9	33.3%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Certain types of disabilities (Specific disabilities listed below)	1,582	
0-17	72	4.6%
18-44	446	28.2%
45-64	586	37.0%
65-74	278	17.6%
75+	200	12.6%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Cerebral palsy	437	
0-17	3	0.7%
18-44	33	7.6%
45-64	151	34.6%
65-74	111	25.4%
75+	139	31.8%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Muscular Dystrophy	45	
0-17	4	8.9%
18-44	9	20.0%
45-64	19	42.2%
65-74	8	17.8%
75+	5	11.1%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Attention-deficit/hyperactivity disorder (ADHD)	315	0.3%
0-17	34	10.8%
18-44	153	48.6%
45-64	101	32.1%
65-74	22	7.0%
75+	5	1.6%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Spinal cord injuries	19	
0-17	0	0.0%
18-44	4	21.1%
45-64	8	42.1%
65-74	3	15.8%
75+	4	21.1%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Down syndrome	244	
0-17	15	6.1%
18-44	130	53.3%

45-64	84	34.4%
65-74	13	5.3%
75+	2	0.8%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%
Intellectual development disabilities	595	
0-17	18	3.0%
18-44	149	25.0%
45-64	253	42.5%
65-74	129	21.7%
75+	46	7.7%
Unknown/Missing/Invalid/Suppressed ^a	0	0.0%

^aUnknown sex, age, and race/ethnicity may occur due to redaction of this information in the THCIC PUDF. Additionally, unknown sex, age, and race/ethnicity do not have an underlying population for rate calculation.

Pre-existing Comorbidities and Certain Medical Conditions by Sex

Table 4 examines pre-existing comorbidities and certain medical conditions by sex among hospitalizations for COVID-19 in 2020. A higher number of males than females were hospitalized for COVID-19 and the following conditions: heart condition, hypertension, diabetes, dementia, kidney disease, liver disease, cancer, tobacco use, stroke, substance use, and organ transplants. However, there were more females than males hospitalized for COVID-19 with overweight and obesity, chronic lung disease, certain mental health conditions, pregnancy, immunocompromised state, sickle cell disease, and thalassemia.

All hospitalizations for COVID-19 in Texas in 2020 by sex	Number	Percent
Female	53,427	45.6%
Male	59,748	51.0%
Unknown/Missing/Invalid ^a	3,976	3.4%

Table 4. Hospitalizations for COVID-19 with a pre-existing comorbidity or certain medical condition by sex and type of condition in Texas in 2020 (n=117,151).

Pre-existing Comorbidities or Certain Medical Conditions	Number	Percent
Heart conditions	85,228	
Female	38,919	45.7%
Male	43,538	51.1%
Unknown/Missing/Invalid/Suppressed ^a	2,771	3.3%
Hypertension	78,640	
Female	36,406	46.3%
Male	39,738	50.5%
Unknown/Missing/Invalid/Suppressed ^a	2,496	3.2%
Diabetes	52,849	
Female	24,260	45.9%
Male	27,133	51.3%
Unknown/Missing/Invalid/Suppressed ^a	1,456	2.8%
Overweight & obesity	35,396	
Female	17,967	50.8%
Male	16,362	46.2%
Unknown/Missing/Invalid/Suppressed ^a	1,067	3.0%
Dementia or other neurological conditions	38,658	
Female	18,217	47.1%
Male	18,867	48.8%
Unknown/Missing/Invalid/Suppressed ^a	1,574	4.1%
Chronic lung disease	31,658	

Female	15,498	49.0%
Male	14,926	47.1%
Unknown/Missing/Invalid/Suppressed ^a	1,234	3.9%
Chronic kidney disease	21,316	
Female	9,089	42.6%
Male	11,548	54.2%
Unknown/Missing/Invalid/Suppressed ^a	679	3.2%
Certain mental health conditions	13,533	
Female	7,987	59.0%
Male	4,505	33.3%
Unknown/Missing/Invalid/Suppressed ^a	1,041	7.7%
Pregnancy	144	
Female	140	97.2%
Male	0	0.0%
Unknown/Missing/Invalid/Suppressed ^a	4	2.8%
Immunocompromised state	8,517	
Female	4,536	53.3%
Male	3,737	43.9%
Unknown/Missing/Invalid/Suppressed ^a	244	2.9%
Chronic liver disease	6,766	
Female	2,702	39.9%
Male	3,357	49.6%
Unknown/Missing/Invalid/Suppressed ^a	707	10.4%
Cancer	9,774	
Female	4,515	46.2%
Male	4,987	51.0%
Unknown/Missing/Invalid/Suppressed ^a	272	2.8%
Current or former smoker	4,098	
Female	1,248	30.5%
Male	2,194	53.5%
Unknown/Missing/Invalid/Suppressed ^a	656	16.0%
Stroke or cerebrovascular disease	3,923	
Female	1,625	41.4%
Male	2,150	54.8%
Unknown/Missing/Invalid/Suppressed ^a	148	3.8%
Substance use disorders	5,146	
Female	589	11.4%
Male	1,596	31.0%
Unknown/Missing/Invalid/Suppressed ^a	2,961	57.5%
Solid organ transplant & stem cell transplant (including bone marrow transplant)	1,427	

Female	569	39.9%
Male	833	58.4%
Unknown/Missing/Invalid/Suppressed ^a	25	1.8%
Sickle cell disease	204	
Female	112	54.9%
Male	74	36.3%
Unknown/Missing/Invalid/Suppressed ^a	18	8.8%
Thalassemia	55	
Female	35	63.6%
Male	17	30.9%
Unknown/Missing/Invalid/Suppressed ^a	3	5.5%
Cystic fibrosis	28	
Female	12	42.9%
Male	14	50.0%
Unknown/Missing/Invalid/Suppressed ^a	2	7.1%
HIV infection	558	
Female	0	0.0%
Male	0	0.0%
Unknown/Missing/Invalid/Suppressed ^a	558	100.0%
Tuberculosis	27	
Female	6	22.2%
Male	16	59.3%
Unknown/Missing/Invalid/Suppressed ^a	5	18.5%
Certain types of disabilities (Specific disabilities listed below)	1,582	
Female	660	41.7%
Male	847	53.5%
Unknown/Missing/Invalid/Suppressed ^a	75	4.7%
Cerebral palsy	437	
Female	176	40.3%
Male	242	55.4%
Unknown/Missing/Invalid/Suppressed ^a	19	4.3%
Muscular Dystrophy	45	
Female	17	37.8%
Male	26	57.8%
Unknown/Missing/Invalid/Suppressed ^a	2	4.4%
Attention-deficit/hyperactivity disorder (ADHD)	315	
Female	137	43.5%
Male	146	46.3%
Unknown/Missing/Invalid/Suppressed ^a	32	10.2%
Spinal cord injuries	19	

Female	7	36.8%
Male	11	57.9%
Unknown/Missing/Invalid/Suppressed ^a	1	5.3%
Down syndrome	244	
Female	109	44.7%
Male	133	54.5%
Unknown/Missing/Invalid/Suppressed ^a	2	0.8%
Intellectual development disabilities	595	
Female	241	40.50%
Male	334	56.13%
Unknown/Missing/Invalid/Suppressed ^a	20	3.36%

^aUnknown sex, age, and race/ethnicity may occur due to redaction of this information in the THCIC PUDF. Additionally, unknown sex, age, and race/ethnicity do not have an underlying population for rate calculation.

Pre-existing Comorbidities and Certain Medical Conditions by Race/Ethnicity

Lastly, Table 5 displays the number hospitalizations for COVID-19 with each pre-existing comorbidity or medical condition by race/ethnicity. Most often, the number of conditions were highest for non-Hispanic White hospitalizations and Hispanic hospitalizations, mirroring the percentages for all hospitalizations for COVID-19. Though non-Hispanic Blacks accounted for 13% of COVID-19 hospitalizations in 2020, they accounted for a disproportionate percentage of hospitalizations with the following coexisting conditions chronic kidney disease, tobacco use history, stroke, thalassemia, and HIV infection .

All hospitalizations for COVID-19 in Texas in 2020 by race/ethnicity	Number	Percent
Non-Hispanic Asian	1,966	1.7%
Non-Hispanic Black	15,299	13.1%
Non-Hispanic White	48,410	41.3%
Non-Hispanic Other ^a	7,676	6.6%
Hispanic/Latino	43,228	36.9%
Unknown/Missing/Invalid ^b	572	0.5%

Table 5. Number of pre-existing comorbidities and certain medical conditions by race/ethnicity among hospitalizations for COVID-19 in Texas in 2020 (n=117,151)

Pre-existing Comorbidities or Certain Medical Conditions	Number	Percent
Heart conditions	85,228	
Non-Hispanic Asian or Pacific Islander	1,366	1.6%
Non-Hispanic Black	12,462	14.6%
Non-Hispanic White	37,425	43.9%
Non-Hispanic Other ^a	5,191	6.1%
Hispanic	28,413	33.3%
Unknown/Missing/Invalid/Suppressed ^b	371	0.4%
Hypertension	78,640	
Non-Hispanic Asian or Pacific Islander	1,263	1.6%
Non-Hispanic Black	11,866	15.1%
Non-Hispanic White	34,125	43.4%
Non-Hispanic Other ^a	4,714	6.0%
Hispanic	26,330	33.5%
Unknown/Missing/Invalid/Suppressed ^b	342	0.4%
Diabetes	52,849	
Non-Hispanic Asian or Pacific Islander	848	1.6%
Non-Hispanic Black	7,516	14.2%
Non-Hispanic White	18,920	35.8%

Non-Hispanic Other ^a	3,428	6.5%
Hispanic	21,885	41.4%
Unknown/Missing/Invalid/Suppressed ^b	252	0.5%
Overweight & obesity	35,396	
Non-Hispanic Asian or Pacific Islander	274	0.8%
Non-Hispanic Black	5,375	15.2%
Non-Hispanic White	12,921	36.5%
Non-Hispanic Other ^a	2,491	7.0%
Hispanic	14,243	40.2%
Unknown/Missing/Invalid/Suppressed ^b	92	0.3%
Dementia or other neurological conditions	38,658	
Non-Hispanic Asian or Pacific Islander	498	1.3%
Non-Hispanic Black	5,414	14.0%
Non-Hispanic White	20,008	51.8%
Non-Hispanic Other ^a	2,210	5.7%
Hispanic	10,364	26.8%
Unknown/Missing/Invalid/Suppressed ^b	164	0.4%
Chronic lung disease	31,658	
Non-Hispanic Asian or Pacific Islander	391	1.2%
Non-Hispanic Black	4,698	14.8%
Non-Hispanic White	15,714	49.6%
Non-Hispanic Other ^a	1,882	5.9%
Hispanic	8,854	28.0%
Unknown/Missing/Invalid/Suppressed ^b	119	0.4%
Chronic kidney disease	21,316	
Non-Hispanic Asian or Pacific Islander	294	1.4%
Non-Hispanic Black	4,210	19.8%
Non-Hispanic White	8,755	41.1%
Non-Hispanic Other ^a	1,132	5.3%
Hispanic	6,848	32.1%
Unknown/Missing/Invalid/Suppressed ^b	77	0.4%
Certain mental health conditions	13,533	
Non-Hispanic Asian or Pacific Islander	103	0.8%
Non-Hispanic Black	1,707	12.6%
Non-Hispanic White	7,660	56.6%
Non-Hispanic Other ^a	661	4.9%
Hispanic	3,358	24.8%
Unknown/Missing/Invalid/Suppressed ^b	44	0.3%
Pregnancy	144	
Non-Hispanic Asian or Pacific Islander	4	2.8%

Non-Hispanic Black	16	11.1%
Non-Hispanic White	34	23.6%
Non-Hispanic Other ^a	7	4.9%
Hispanic	82	56.9%
Unknown/Missing/Invalid/Suppressed ^b	1	0.7%
Immunocompromised state	8,517	
Non-Hispanic Asian or Pacific Islander	159	1.9%
Non-Hispanic Black	1,286	15.1%
Non-Hispanic White	4,382	51.5%
Non-Hispanic Other ^a	407	4.8%
Hispanic	2,249	26.4%
Unknown/Missing/Invalid/Suppressed ^b	34	0.4%
Chronic liver disease	6,766	
Non-Hispanic Asian or Pacific Islander	125	1.8%
Non-Hispanic Black	712	10.5%
Non-Hispanic White	2,606	38.5%
Non-Hispanic Other ^a	457	6.8%
Hispanic	2,851	42.1%
Unknown/Missing/Invalid/Suppressed ^b	15	0.2%
Cancer	9,774	
Non-Hispanic Asian or Pacific Islander	107	1.1%
Non-Hispanic Black	1,202	12.3%
Non-Hispanic White	5,721	58.5%
Non-Hispanic Other ^a	445	4.6%
Hispanic	2,277	23.3%
Unknown/Missing/Invalid/Suppressed ^b	22	0.2%
Current or former smoker	4,098	
Non-Hispanic Asian or Pacific Islander	39	1.0%
Non-Hispanic Black	756	18.4%
Non-Hispanic White	1,821	44.4%
Non-Hispanic Other ^a	229	5.6%
Hispanic	1,236	30.2%
Unknown/Missing/Invalid/Suppressed ^b	17	0.4%
Stroke or cerebrovascular disease	3,923	
Non-Hispanic Asian or Pacific Islander	73	1.9%
Non-Hispanic Black	729	18.6%
Non-Hispanic White	1,766	45.0%
Non-Hispanic Other ^a	238	6.1%
Hispanic	1,100	28.0%
Unknown/Missing/Invalid/Suppressed ^b	17	0.4%

Substance use disorders	5,146	
Non-Hispanic Asian or Pacific Islander	39	0.8%
Non-Hispanic Black	750	14.6%
Non-Hispanic White	2,225	43.2%
Non-Hispanic Other ^a	318	6.2%
Hispanic	1,787	34.7%
Unknown/Missing/Invalid/Suppressed ^b	27	0.5%
Solid organ transplant & stem cell transplant (including bone marrow transplant)	1,427	
Non-Hispanic Asian or Pacific Islander	35	2.5%
Non-Hispanic Black	280	19.6%
Non-Hispanic White	487	34.1%
Non-Hispanic Other ^a	66	4.6%
Hispanic	557	39.0%
Unknown/Missing/Invalid/Suppressed ^b	2	0.1%
Sickle cell disease	204	
Non-Hispanic Asian or Pacific Islander	0	0.0%
Non-Hispanic Black	175	85.8%
Non-Hispanic White	6	2.9%
Non-Hispanic Other ^a	6	2.9%
Hispanic	15	7.4%
Unknown/Missing/Invalid/Suppressed ^b	2	1.0%
Thalassemia	55	
Non-Hispanic Asian or Pacific Islander	10	18.2%
Non-Hispanic Black	15	27.3%
Non-Hispanic White	13	23.6%
Non-Hispanic Other ^a	4	7.3%
Hispanic	13	23.6%
Unknown/Missing/Invalid/Suppressed ^b	0	0.0%
Cystic fibrosis	28	
Non-Hispanic Asian or Pacific Islander	0	0.0%
Non-Hispanic Black	3	10.7%
Non-Hispanic White	13	46.4%
Non-Hispanic Other ^a	0	0.0%
Hispanic	12	42.9%
Unknown/Missing/Invalid/Suppressed ^b	0	0.0%
HIV infection	558	
Non-Hispanic Asian or Pacific Islander	4	0.7%
Non-Hispanic Black	223	40.0%
Non-Hispanic White	127	22.8%
Non-Hispanic Other ^a	25	4.5%

Hispanic	179	32.1%
Unknown/Missing/Invalid/Suppressed ^b	0	0.0%
Tuberculosis	27	
Non-Hispanic Asian or Pacific Islander	0	0.0%
Non-Hispanic Black	3	11.1%
Non-Hispanic White	6	22.2%
Non-Hispanic Other ^a	4	14.8%
Hispanic	12	44.4%
Unknown/Missing/Invalid/Suppressed ^b	2	7.4%
Certain types of disabilities	1,582	
Non-Hispanic Asian or Pacific Islander	11	0.7%
Non-Hispanic Black	215	13.6%
Non-Hispanic White	777	49.1%
Non-Hispanic Other ^a	88	5.6%
Hispanic	486	30.7%
Unknown/Missing/Invalid/Suppressed ^b	5	0.3%
Cerebral palsy	437	
Non-Hispanic Asian or Pacific Islander	7	1.6%
Non-Hispanic Black	58	13.3%
Non-Hispanic White	178	40.7%
Non-Hispanic Other ^a	30	6.9%
Hispanic	164	37.5%
Unknown/Missing/Invalid/Suppressed ^b	0	0.0%
Muscular Dystrophy	45	
Non-Hispanic Asian or Pacific Islander	0	0.0%
Non-Hispanic Black	5	11.1%
Non-Hispanic White	29	64.4%
Non-Hispanic Other ^a	2	4.4%
Hispanic	8	17.8%
Unknown/Missing/Invalid/Suppressed ^b	1	2.2%
Attention-deficit/hyperactivity disorder (ADHD)	315	
Non-Hispanic Asian or Pacific Islander	3	1.0%
Non-Hispanic Black	40	12.7%
Non-Hispanic White	189	60.0%
Non-Hispanic Other ^a	13	4.1%
Hispanic	69	21.9%
Unknown/Missing/Invalid/Suppressed ^b	1	0.3%
Spinal cord injuries	19	
Non-Hispanic Asian or Pacific Islander	0	0.0%
Non-Hispanic Black	1	5.3%

Non-Hispanic White	11	57.9%
Non-Hispanic Other ^a	1	5.3%
Hispanic	6	31.6%
Unknown/Missing/Invalid/Suppressed ^b	0	0.0%
Down syndrome	244	
Non-Hispanic Asian or Pacific Islander	1	0.4%
Non-Hispanic Black	24	9.8%
Non-Hispanic White	108	44.3%
Non-Hispanic Other ^a	15	6.1%
Hispanic	95	38.9%
Unknown/Missing/Invalid/Suppressed ^b	1	0.4%
Intellectual development disabilities	595	
Non-Hispanic Asian or Pacific Islander	0	0.0%
Non-Hispanic Black	98	16.5%
Non-Hispanic White	296	49.7%
Non-Hispanic Other ^a	31	5.2%
Hispanic	167	28.1%
Unknown/Missing/Invalid/Suppressed ^b	3	0.5%

^aNon-Hispanic Other includes non-Hispanic American Indian/Alaska Native, Native Hawaiian/Pacific Islander, some other race alone, or two or more races.

^bUnknown sex, age, and race/ethnicity may occur due to redaction of this information in the THCIC PUDF. Additionally, unknown sex, age, and race/ethnicity do not have an underlying population for rate calculation.

Maps

Figure 1 displays the average number of comorbidities and certain medical conditions among hospitalizations for COVID-19 in Texas in 2020 per 1,000 population by county. Counties with the highest average number of comorbidities and certain medical conditions per 1,000 population among hospitalizations for COVID-19 were located in eastern Texas.

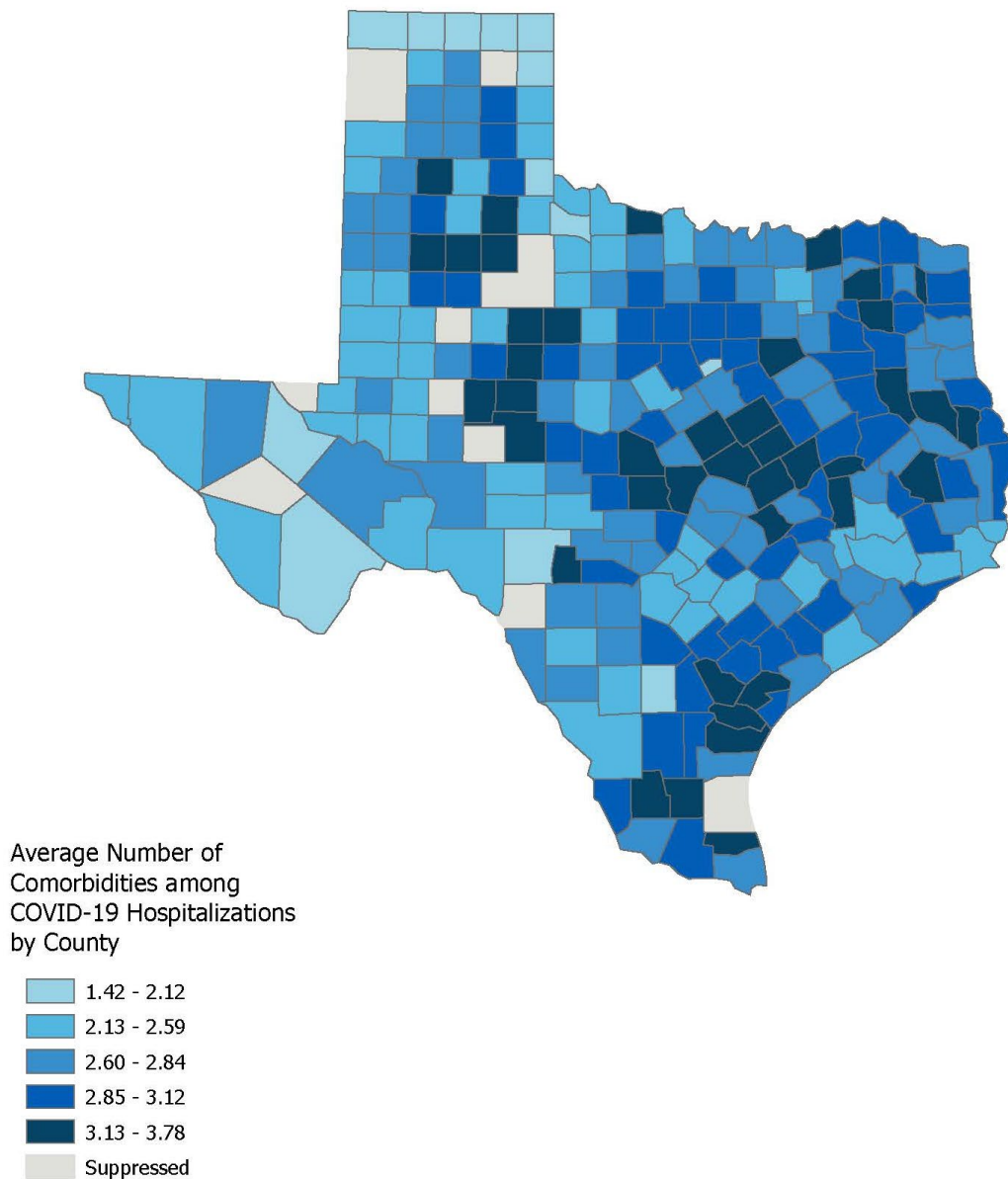


Figure 1. Average number of comorbidities and certain medical conditions among hospitalizations for COVID-19 in Texas in 2020 per 1,000 population by county.

Conclusion

Nine out of ten hospitalizations for COVID-19 in Texas in 2020 had a pre-existing comorbidity or medical condition, with one out of ten having four or more pre-existing comorbidities or medical conditions. The most common comorbidities were heart conditions, hypertension, and type I or II diabetes. In Report 2 (separate), we describe illness severity (including ICU admission, length of hospital stay, experiencing an acute complication, undergoing a medical procedure, and in-hospital mortality) among hospitalizations for COVID-19 in 2020 in Texas. In the future, we aim to assess the association between pre-existing comorbidities or certain medical conditions and severe illness from COVID-19 among inpatients hospitalized for COVID-19 in Texas in 2020.

References

Centers for Disease Control and Prevention. (2022, February 25). *People With Certain Medical Conditions*. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>

Texas Department of State Health Services. (2022, January 26). *Texas Health Care Information Collection (THCIC)*. <https://www.dshs.texas.gov/texas-health-care-information-collection>

Appendix 1. ICD-10-CM diagnosis parent codes and sub-codes for pre-existing comorbidities and certain medical conditions among COVID-19 inpatients examined in this report.

- **Cancer:**
 - C00-C96: Malignant neoplasms or tumors
 - O9A.1: Malignant neoplasm complicating pregnancy, childbirth and the puerperium
 - Z85: Personal history of malignant neoplasm
- **Chronic kidney disease:**
 - N18: Chronic kidney disease
- **Chronic liver disease:**
 - K70-K77: Diseases of liver
 - B18: Chronic viral hepatitis
 - E83.0: Wilson's disease
 - E83.11: Hemochromatosis
- **Chronic lung disease:**
 - J40-J47: Chronic lower respiratory diseases
 - J80-J84: Other respiratory diseases principally affecting the interstitium
 - I26-I28: Pulmonary embolism
 - P27: Chronic respiratory disease originating in the perinatal period
- **Cystic fibrosis:**
 - E84: Cystic fibrosis
- **Diabetes:**
 - E08-E13: Diabetes mellitus
- **Immunocompromised state:**
 - D80-D89: Certain disorders involving the immune mechanism
 - Z79.5: Long term (current) use of steroids
 - N04: Nephrotic syndrome
 - M08: Juvenile arthritis
 - M32: Systemic lupus erythematosus
 - K50: Crohn disease of small intestine
 - K51: Ulcerative colitis
- **Certain types of disabilities:**
 - G81: Cerebral palsy
 - G71.0: Muscular dystrophy
 - F90: Attention-deficit/hyperactivity disorder
 - S14: Unspecified injury of cervical spinal cord
 - S24: Injury of nerves and spinal cord at thorax level

- S34: Injury of lumbar and sacral spinal cord and nerves at abdomen, lower back and pelvis level
- Q90: Down syndrome
- F70-F79: Intellectual development disabilities
- **Heart conditions:**
 - I01: Rheumatic fever with heart involvement
 - I05-I09: Chronic rheumatic heart disease
 - I10-I16: Hypertensive diseases
 - I20-I25: Ischemic heart diseases
 - I30-I5A: Other forms of heart disease
 - Q20-Q24: Congenital malformations of the heart
- **HIV:**
 - B20: Human immunodeficiency virus [HIV] disease
 - Z21: Asymptomatic human immunodeficiency virus [HIV] infection status
- **Mental health conditions:**
 - F20-F29: Schizophrenia, schizotypal, delusional, and other non-mood psychotic disorders
 - F30-F39: Mood [affective] disorders
- **Dementia or other neurological conditions:**
 - F01-F09: Mental disorders due to known physiological conditions
 - G00-G70: Various diseases of the nervous system
 - G71.1-G80: Various diseases of the nervous system
 - Note: excludes G81: Cerebral palsy and G71.0: Muscular dystrophy. These are included in the “Certain types of disabilities” section.
 - G82-G99: Various diseases of the nervous system
- **Pregnancy:**
 - Z33: Pregnant state
 - O00-O99: Pregnancy, childbirth and the puerperium
 - O9A.2-O9A.9: Pregnancy, childbirth and the puerperium
 - Excludes O9A.1: Malignant neoplasm complicating pregnancy, childbirth and the puerperium. This is included in the “Cancer” section.
- **Sickle cell disease:**
 - D57: Sickle-cell disorders
- **Thalassemia:**
 - D56: Thalassemia
- **Solid organ transplant and blood stem cell transplant (including bone marrow transplants):**
 - Z94: Transplanted organ and tissue status
 - T86: Complications of transplanted organs and tissue
- **Stroke or cerebrovascular disease:**

- I60-I69: Cerebrovascular diseases
- **Overweight and obesity:**
 - E66: Overweight and obesity
 - Z68.53: Body mass index [BMI] pediatric, 85th percentile to less than 95th percentile for age
 - Z68.54: Body mass index [BMI] pediatric, greater than or equal to 95th percentile for age
- **Smoking, current or former:**
 - Z72.0: Tobacco use
 - F17.21: Nicotine dependence, cigarettes
- **Substance abuse disorders:**
 - F10-F17.20: Mental and behavioral disorders due to psychoactive substance use
 - F17.22-F19: Mental and behavioral disorders due to psychoactive substance use
 - Excludes F17.21: Nicotine dependence, cigarettes. This is included in the “Smoking, current or former” section.
- **Tuberculosis:**
 - A15-A19: Tuberculosis

*ICD-10-CM codes were extracted from: <https://www.icd10data.com/ICD10CM/Codes>.