

# Texas Substance Use Hospitalization Dashboard

## How-To Guide: view, search, and query

## Contents

General Overview .....	2
Identifying Substance Use (SUD) Diagnoses .....	2
Type of Substance .....	2
Dashboards and Measures .....	3
Common Features .....	3
County Dashboards .....	4
County Rate .....	4
Most Prevalent Substance by County Rate .....	4
County Demographics by Substance .....	5
Texas Health Service Region Dashboards .....	6
Health Service Region Rate .....	6
Most Prevalent Substance by Health Service Region .....	7
Health Service Region Demographics by Substance .....	8
Need Additional Information? .....	9
References .....	9

## General Overview

In support of Project HOMES, the [Center for Health Care Data](#) has created interactive dashboards to help better understand the healthcare utilization of people with substance use disorder in Texas. Using the Texas Health Care Information Collection (THCIC) database and the United States Census data, our team has analyzed inpatient and outpatient visits for substance use-related diagnoses for the years 2018-2022. Overall, there are six dashboards that provide information by County or Health Service Region (HSR) as defined by Texas Health and Human Services and type of substance.

### Identifying Substance Use (SUD) Diagnoses

Primary International Classification of Diseases (ICD) Codes were used to identify SUD diagnoses.

- Over 1,300 ICD codes were related to abuse and dependence, accidental or intentional poisoning, adverse effects, and more.
- If the primary ICD-10 code of the visit was related to substance use it was considered a SUD visit.
- As defined by the World Health Organization, ICD codes are the global standard classification code for diagnostic health information in coding and classifying mortality and morbidity.<sup>5</sup>
- A hospital visit can have multiple ICD codes including the primary ICD code which indicates the main reason for the visit, along with secondary ICD codes that can include additional comorbidities and diagnoses.

### Type of Substance

The following is list of substances that were present in the data analyzed.

- Alcohol
- Antiepileptics and Anticonvulsants
- Barbiturates and Benzodiazepines (*e.g., tricyclic antidepressants, tetracyclic, serotonin and norepinephrine*)
- Cannabis
- Hallucinogens (*e.g., LSD, psychodysleptics and anxiolytics*)
- Opioids (*e.g., heroin, fentanyl, oxycodone, hydrocodone, methadone, tramadol, and synthetic narcotics*)
- Psychoactive
- Stimulants (*e.g., cocaine, methamphetamine, psychostimulants, amphetamines and ecstasy*)
- Other (*e.g., inhalants, medicaments and biological substances*)

## Dashboards and Measures

Dashboards are either by County or Health Service Region as defined by Texas Department of State Health Services. In total, there are six interactive dashboards, three by county and 3 by Health Service Region. The data used for each dashboard was collected from Texas Healthcare Information Collection (THCIC). THCIC collects information for inpatient and outpatient care data from hospitals and health maintenance organizations throughout Texas.<sup>4</sup>

The CHCD is committed ensuring everyone to have accessibility of the dashboards created. If you encounter accessibility barriers, please email us at [CHCD@uth.tmc.edu](mailto:CHCD@uth.tmc.edu).

### Common Features

The dashboards have common features which include the following:

- Filters at the top of dashboard include:
  - Year (2018-2022)
  - Alcohol & Cannabis inclusion or exclusion: this filter is not available for county/HSR demographics by substance
  - Type of Care
    - Inpatient Visits – visits that provide 24-hour medically supervised treatment where the patient has been admitted into the healthcare facility<sup>1</sup>
    - Emergency Department (ED) Visits – visits where the patient is not lodged in the healthcare facility while receiving care<sup>1</sup>. An emergency department visit could potentially lead to an inpatient visit if the patient is admitted into the facility and would then be counted in both groups.
  - Substance Type: only available in the demographics by substance dashboards
- A count of less than 10 people will not be displayed and will be labeled “Not Reportable” (NR).
- Click on the map or use the search bar within the map to select a County/Health Service Region
- Gradient colors in the maps indicate variation from the state average.
- Gray color on the map indicates no or insufficient data.
- Missing gender: DSHS (Department of State Health Services) suppresses gender codes for diagnoses, ZIP codes, hospitals, or providers with counts less than 5 for a specific gender, encounters with an HIV diagnosis, or specific drug-use diagnoses.
- Other non-Hispanic race/ethnicity category: this category includes those identified as Asian non-Hispanic, Native American non-Hispanic, Pacific Islander non-Hispanic, and other non-Hispanic.

## County Dashboards

County dashboards are dedicated to displaying information for all 254 counties in Texas. However, due to low or no information available, some counties may be grayed when selecting indicators.

- Dashboards by County:
  - [County Rate](#)
  - [Most Prevalent Substance by County Rate](#)
  - [County Demographics by Substances](#)

## County Rate

Rates of inpatient/emergency visits due to substance use by county in Texas. Bar graphs display rates by type of substance, gender, age group, race/ethnicity, and payer type for the user-selected county.

### List of Measures

- Map Values
  - State Value – the rate of SUD visits per 100,000 people in Texas:
    - $(\text{total number of unique primary SUD visits in Texas} / \text{total number of people in Texas}) * 100,000$
  - Rate per 100,000 people for inpatient/ED visits – the rate of SUD visits per 100,000 people in that county
  - Count – total number of SUD visits in that county
  - Ratio – rate per 100,000 people for inpatient/ED visits divided by the state value
    - Reflects the county's variation from the state average. Darker blue in the color gradient indicates above the state mean and lighter blue indicates below the state mean.
- Bar Graph Values
  - Substance/Gender/Age Group/Race/Ethnicity/Payer – the name of the group represented by the bar currently hovered over
  - County rate per 100,000 people for inpatient/ED visits – the rate of SUD visits the group represented by the bar currently hovered over per 100,000 facility people in the selected county
  - State Rate per 100,000 inpatient/ED Visits – the rate of the group represented by the bar currently hovered over per 100,000 facility visits in Texas

## Most Prevalent Substance by County Rate

Inpatient/emergency visits ranked by type of substance use by county. Counties are colored-coded by the most prevalent substance. All substances used are ranked in the county profile. Bar graphs display percentages on gender, age group, race/ethnicity, and payer type for the user-selected county.

### List of Measures

- Map Values
  - County – the name of the county selected
  - Substance – the name of the most prevalent substance in the county
  - State Value – the rate of visits related to the most prevalent substance in that county per 1000 facility visits in Texas
  - Rate per 1000 inpatient or ED visits – the rate of SUD visits related to the most prevalent substance per 1000 facility visits in the county
  - Count – total number of SUD visits related to the most prevalent substance in that county
  - Ratio – rate per 1000 inpatient or ED visits divided by the state value
  - Rank – shows the distribution of the type of SUD visits and the percent of each substance making up all SUD visits in that county
- Bar Graphs Values
  - Year – the year selected in the dropdown menu
  - Facility Type – the facility type selected in the dropdown menu
  - Substance/Gender/Age Group/Race/Ethnicity/Payer – the name of the group represented by the bar currently hovered over
  - Substance – the most prevalent substance in the selected county
  - Count – the number of visits including the group representing the bar currently hovered over
  - Percentage – the percent of the demographic of the group represented by the bar currently hovered over
  - State Value – the rate of visits related to the most prevalent substance per 100 facility visits in Texas
  - Rate per 100 inpatient/ED visits – the rate of visits related to the most prevalent substance per 100 facility visits in the selected county
  - Total Ratio – the rate per 100 facility visits divided by the State Value

### County Demographics by Substance

Inpatient/emergency visits by substance type. Bar graphs display rates by gender, age group, race/ethnicity, and payer type for the user-selected county.

### **List of Measures**

- Map Values
  - County – the name of the county selected
  - Substance – the name of the substance selected in the drop-down menu
  - State Value – the rate of visits related to the selected substance use per 100,000 people in Texas

- Rate per 100,000 people for inpatient/ED visits– the rate of SUD visits related to the selected substance per 100,000 people in the county
- Count – total number of SUD visits related to the selected substance in that county
- Ratio – rate per 100,000 people for inpatient/ED visits divided by the state value
- **Bar Graphs Values**  
Display information from the population of visits of the selected substance
  - County – the name of the county selected
  - Substance/Gender/Age Group/Race/Ethnicity/Payer – the name of the group represented by the bar currently hovered over
  - County Rate per 1000 inpatient/ED visits – the rate of the group represented by the bar currently hovered over per 1000 facility visits related to the selected substance and county
  - State Rate per 1000 inpatient/ED Visits – the rate of the group represented by the bar currently hovered over per 1000 facility visits related to the selected substance in Texas
  - Ratio – County Rate per 1000 inpatient/ED visits divided by the State Rate per 1000 inpatient/ED Visits
  - Count – the number of visits including the group representing the bar currently hovered over

## **Texas Health Service Region Dashboards**

Texas Health Service Region– a cluster of continuous counties which are relatively self-contained with respect to hospital care<sup>2</sup>. In the state of Texas, there are a total of 11 regions. Defined by the Department of State Health Services (DSHS) which is a Texas Health and Human Services Commission agency.<sup>3</sup>

- **Dashboards by Public Health Region**
  - [Health Service Region Rate](#)
  - [Most Prevalent Substance by Health Service Region](#)
  - [Health Service Region Demographics by Substance](#)

### **Health Service Region Rate**

Rates of inpatient/emergency visits due to substance use by 11 HSR in Texas. Bar graphs display rates by type of substance, gender, age group, race/ethnicity, and payer type for the user-selected service region.

## **List of Measures**

- **Map Values**
  - Health Service Region – the name of the health service region
  - State Value – rate of SUD visits per 100,00 people in Texas
  - Rate per 100,000 people for inpatient/ED visits – the rate of SUD visits per 100,000 people in that health service region
  - Count – total number of SUD visits in that health service region

- Ratio – rate of SUD visits per 100,000 people for inpatient/ED visits divided by the state value
  - Reflects the health service region's variation from the state average. Darker blue in the color gradient indicates above the state mean and lighter blue indicates below the state mean.
- Bar Graphs Values
  - Health Service Region – the name of the Health Service Region selected
  - Substance/Gender/Age Group/Race/Ethnicity/Payer – the name of the group represented by the bar currently hovered over
  - Rate per 100,000 people for inpatient/ED visits– the rate of SUD visits of the group represented by the bar currently hovered over per 100,000 people in the selected health service region
  - State Rate per 100,000 inpatient/ED Visits – the rate of SUD visits of the group represented by the bar currently hovered over per 100,000 people in Texas

### Most Prevalent Substance by Health Service Region

Inpatient/emergency visits ranked by type of substance use. HSRs are colored-coded by the most prevalent substance. All substances used are ranked in the county profile. Bar graphs display percentages on gender, age group, race/ethnicity, and payer type for the user-selected service region.

### **List of Measures**

- Map Values
  - Health Service Region – the name of the Health Service Region selected
  - Substance – the name of the most prevalent substance in the health service region
  - State Value – the rate of visits related to the most prevalent substance in that health service region per 100 facility visits in Texas
  - Rate per 100 inpatient or ED visits – the rate of SUD visits related to the most prevalent substance per 100 facility visits in that health service region
  - Count – total number of SUD visits related to the most prevalent substance in that health service region
  - Ratio – rate per 100 facility visits divided by the state value
  - Rank – shows the distribution of the SUD visits and the percent of each substance making up all SUD visits in that health service region
- Bar Graphs Values

Display information from the population of visits of the most prevalent substance in the selected health service region

  - Year – the year selected in the dropdown menu
  - Facility Type – the facility type selected in the dropdown menu
  - Substance/Gender/Age Group/Race/Ethnicity/Payer – the name of the group represented by the bar currently hovered over
  - Substance – the most prevalent substance in the selected health service region



- Count– the number of visits including the group representing the bar currently hovered over
- Percentage – the percent of the demographic of the group represented by the bar currently hovered over
- State Value – the rate of visits related to the most prevalent substance per 100 facility visits in Texas
- Rate per 100 inpatients or ED visits – the rate of visits related to the most prevalent substance per 100 facility visits in the selected health service region
- Total Ratio – the rate per 100 inpatient/ED visits divided by the State Value

### Health Service Region Demographics by Substance

Inpatient/emergency visits by substance type. Bar graphs display rates by gender, age group, race/ethnicity, and payer type.

### **List of Measures**

- Map Values
  - Health Service Region – the name of the Health Service Region selected
  - Substance – the name of the substance selected in the drop-down menu
  - State Value – the rate of SUD facility visits related to the selected substance per 100,000 people in Texas
  - Rate per 100,000 people for inpatient/ED visits – the rate of SUD visits related to the selected substance per 100,000 people in the health service region
  - Count – total number of SUD visits related to the selected substance in that health service region
  - Ratio – rate per 100,000 people for inpatient/ED visits divided by the state value
- Bar Graphs Values

Display information from the population of visits of the selected substance

  - Health Service Region – the name of the Health Service Region selected
  - Substance/Gender/Age Group/Race/Ethnicity/Payer – the name of the group represented by the bar currently hovered over
  - Health Service Region Rate per 1000 inpatient/ED visits – the rate of the group represented by the bar currently hovered over per 1000 facility visits related to the selected substance and health service region
  - State Rate per 1000 inpatient/ED Visits – the rate of the group represented by the bar currently hovered over per 1000 facility visits related to the selected substance in Texas
  - Ratio – Health Service Region Rate per 1000 inpatient/ED visits divided by the State Rate per 1000 inpatient/ED Visits
  - Count – the number of visits including the group representing the bar currently hovered over

## Need Additional Information?

Our team has a wide range of expertise and is happy to assist with data-related questions. The CHCD is committed ensuring everyone to have accessibility of the dashboards created. If you encounter accessibility barriers, please contact us. We can be reached via email at [CHCD@uth.tmc.edu](mailto:CHCD@uth.tmc.edu). Please be sure to include the following in the email's subject line: Inquiry related to **Project HOMES Dashboards**.

## References

1. "International Classification of Diseases (ICD)." *World Health Organization*, World Health Organization, <https://www.who.int/standards/classifications/classification-of-diseases>.
2. Makuc DM, Haglund B, Ingram DD, Kleinman JC, Feldman JJ. Health service areas for the United States. *Vital Health Stat 2*. 1991 Nov;(112):1-102. PMID: 1808847.
3. Texas Health Care Information Council. Available at: [Texas Health Care Information Collection \(state.tx.us\)](https://www.state.tx.us/hcic/)
4. "Texas Local Public Health Organizations." *Texas Local Public Health Organizations | Texas DSHS*, <https://dshtexas.gov/regional-local-health-operations/public-health-regions/texas-local-public-health>.
5. U.S. Census Bureau (2010-2019). Selected housing characteristics, 2010-2019 American Community Survey 5-year estimates. <https://data.census.gov/table>
6. U.S. Census Bureau (2010-2019). Selected economic characteristics, 2010-2019 American Community Survey 5-year estimates. <https://data.census.gov/table>
7. "What Is Inpatient vs. Outpatient Care?" *Cigna*, <https://www.cigna.com/knowledge-center/what-is-inpatient-vs-outpatient-care>.