



2015

REGIONAL NEEDS ASSESSMENT

A RESOURCE FOR YOUTH SUBSTANCE ABUSE PREVENTION

REGION 6: TEXAS GULF COAST
PREVENTION RESOURCE CENTER

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Executive Summary

The Regional Needs Assessment (RNA) is compiled by the Prevention Resource Center in Texas Region 6 (PRC 6). PRC 6 is a program of The Council on Recovery and the Texas Department of State Health Services (DSHS). The PRC 6 serves 13 counties in Southeast Texas including the Greater Houston area.

The needs assessment has been conducted to provide a foundation of information for evidence-based decision making regarding adolescent drug and alcohol prevention. The data presented are organized in terms of drug consumption, consequences, and risk and protective factors.

The RNA helps the PRC 6, DSHS, and community stakeholders to engage in long-term strategic prevention planning based on current data that demonstrates the needs of the community. The information compiled in the RNA are available via the PRC regional data repository and the PRC Epidemiology Workgroup.

Assessing community needs requires a scientific approach using both quantitative and qualitative data. This document synthesizes available data collected by regional evaluators, in collaboration with local, state, and federal entities. The PRC thanks the community stakeholders who aided this research.

Key Findings

- The top prevention priorities identified by DSHS -- alcohol, marijuana, prescription drugs -- continue to match regional indicators for substances of choice among youth and local prevention and treatment needs.
- Teens' perception of the risks of alcohol and marijuana are lower in Region 6 than state averages. Research consistently indicates that as perceived risk of harm decreases, use increases.
- Region 6's rural and semi-rural areas remain underserved by prevention and treatment services: Austin, Chambers, Liberty, Matagorda, Waller, and Wharton Counties.
- Synthetic drug use and availability is rising in Region 6 in 2014-2015, with very serious health effects. Community awareness of this public health threat is needed, as well as enforcement of new state laws prohibiting synthetic drug sales or possession.
- More education for parents is needed, in terms of the health and developmental risks of underage drinking and drug use, age of first use, and evidence-based protective factors.
- Prevention materials and public service announcements are needed in multiple languages in this diverse region.

Prevention Resource Centers

Our Purpose

The Prevention Resource Center 6 has three primary objectives that serve prevention professionals and the general community:

1. Collect data on adolescent drug and alcohol use and assess need for prevention services in Region 6. Share this data with community partners via an annual needs assessment, presentations and mini-reports, and an inter-agency epidemiological workgroup.
2. Coordinate regional prevention trainings, liaise with community coalitions, and raise awareness via PSAs about the risks and consequences of underage drinking and drug use.
3. Provide tobacco education to retailers to encourage compliance with state law and reduce sales to minors.

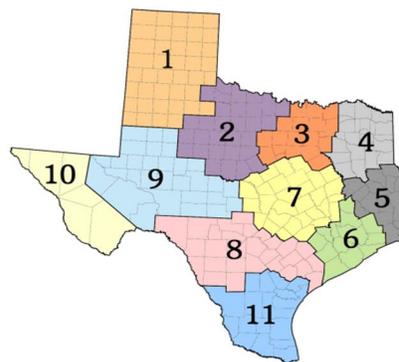
How We Help the Community

Prevention Resource Centers serve the community by providing infrastructure for prevention resources and other indirect services to support a network of substance abuse prevention services. Beginning in 2013, PRCs were re-tasked to become a regional resource for substance abuse prevention data. They formerly served as a clearinghouse for substance use literature, prevention education, and media resources.

The primary purpose of PRCs now is to gather and disseminate substance abuse prevention data to support substance abuse prevention programs in Texas. These services provide an essential service to the state and local prevention programs, by providing data used for program planning and evaluating the long-term impact of prevention efforts in Texas. Other valuable services provided by PRCs include prevention media campaigns, early warning of emerging drug abuse trends via the PRC Epidemiological Workgroup, alcohol retailer compliance monitoring, tobacco Synar activities, and substance abuse prevention training.

Our Regions

Regional Evaluators and Prevention Resource Centers are currently in ten of the eleven health regions across the state of Texas. Together, the seven PRCs work together to collect substance use data across Texas. A full listing of counties served by PRCs across the state can be found in Appendix A.



What Evaluators Do

Regional evaluators collect and share data related to the epidemiology of youth substance abuse in their region. Along with the PRC community liaison and tobacco specialist, PRC evaluators develop relationships with community stakeholders to collect and disseminate information about local risk and protective factors and regional consumption and consequences patterns. More specifically, evaluators gather quantitative and qualitative data on the incidence, distribution, impacts, and environmental factors of local youth substance abuse. They analyze and synthesize the resulting data and report trends to the community.

Key Concepts in This Report

Regional needs for substance abuse prevention services are assessed in this report within a public health framework. Three key aspects to understanding youth drug, alcohol, and tobacco use are explored: risk and protective factors, consumption, and consequences.

The PRCs, along with DSHS, are well aware of the impact that drugs and alcohol have on Texans of all ages. While the incidence of substance use among all age groups are concerning, evidence indicates that prevention work done with adolescents has a positive and sustainable community impact. Thus, adolescents are the target population for this RNA.

Adolescence

Adolescence is a developmental stage at which environmental risk and protective factors can have the most impact on the individual.¹ Adolescence and young adulthood are also critical stages for brain development, which can be impeded by substance abuse.² Longitudinal neuroimaging research indicates that the human brain is still developing into our mid-twenties.³ The area of the brain known for judgment and reason is the last to develop and is not complete by the age of 18.

Standard models of development are beginning to include neurological models, in addition to psychological, social, and sexual development, to more accurately define a discrete age range of adolescence that is accepted across disciplines. However, age parameters in adolescence research are currently variable.

The Texas Department of State Health Services defines adolescence as the period of ages 13-17.⁴ The American Psychological Association (APA) defines adolescence as ages 10-18, and the World Health Organization (WHO) defines it as ages 10-19.^{5,6} Both the APA and WHO include characteristics of the chronology of adolescence in their definitions: the sexual maturation process; social priorities (including peer relations); and attempts to establish autonomy. Other developmental markers are also considered when defining adolescence, for example new behaviors, cognitive reason, aptitude, attitude, and competencies.⁷

The information presented in this RNA is comprised of regional and state data, which generally define adolescence as ages 10 through 17-19. The data reviewed here has been mined from multiple sources and will therefore consist of varying demographic subsets of age. Some domains of youth data conclude with ages 17, 18 or 19, while others combine “adolescent” and “young adult” to conclude with age 21.

Epidemiology

Epidemiology is a method of study employed in public health. Epidemiological studies consider contextual factors when planning disease control, namely the contributing factors of disease development and a disease's impact upon the public at large.

The World Health Organization explains⁸:

Epidemiology is the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems. Various methods can be used to carry out epidemiological investigations: surveillance and descriptive studies can be used to study distribution; analytical studies are used to study determinants.

The epidemiological approach considers drug and alcohol use as a public health concern that is both preventable and treatable. Many states in the U.S. have used this perspective to approach drug and alcohol use and have gained ground in prevention work as a result. This model's investigations of causation of disease (etiologies) consider root problems rather than just symptoms, by examining the key aspects of substance abuse in communities: risk factors, protective factors, consumption, and consequences.

The Substance Abuse Mental Health Services Administration (SAMHSA) and the National Institute on Drug Abuse (NIDA) utilize an epidemiological approach to survey and monitor current indicators of drug and alcohol use nationally. Ultimately, SAMHSA and several other organizations are endeavoring to create an ongoing systematic infrastructure, such as a repository, that will enable: a) effective analysis of the disease burden; b) identifying risk populations; and c) strategic policy planning for prevention and treatment.

This needs assessment seeks to provide data on the frequency and distribution of adolescent substance abuse in Region 6, and describe contributing factors and consequences within our communities to contextualize those figures and aid effective prevention planning.

Risk and Protective Factors

The risk and protective factors concept is a critical building block of current adolescent substance use prevention. It holds that a set of internal and external characteristics influence an individual's abstinence from or susceptibility to drug, alcohol, and tobacco use. For years, it was widely held that the chemical properties of drugs and alcohol were the primary determinant of addiction. The current paradigm holds that while drugs and alcohol in fact have addictive properties, the individual's biology and social environment play a significant role in the risk of, or protection from, the development of addiction.

Risk and protective factors fall among four domains: 1. Self; 2. Family; 3. Community; and 4. Society.⁹ The first domain, *self*, address factors of biology and psychology, such as genetic predisposition to drug use, positive or negative self-image, and the level of an individual's self-control. The second domain, *family*, consists of factors such as family drug and alcohol behavior, family relationships, household poverty, and generally unstable home environments.¹⁰

The third domain, *community*, addresses risk factors such as the level of violence and drug availability/use in neighborhoods and schools, and protective factors such as opportunities for recreation and access to health and social services. The final domain consists of broad societal factors that affect individuals, such as laws and policies, media, and cultural norms.

THE RISK AND PROTECTIVE FACTORS MODEL¹¹



As research on SUD shifted to focus on risk and protective factors, detailed questions about home environments were added to surveys on adolescent drug and alcohol abuse. The domains of self, family, and community organize the discussion on regional protective factors near the end of this report.

Consumption and Consequences

Consequences and consumption patterns share a complex relationship; they are deeply intertwined and often occur in the context of other factors. In some cases, it is unclear if the consumption has led to the consequence, or if what appears to be a consequence was actually a trigger for consumption. This report will examine rates of consequences and rates of consumption, within the understanding that they can have a cyclical, rather than linear, relationship.

Consumption

Consumption is defined in this report as the patterns of use of alcohol, tobacco, illicit drugs, and prescription drugs. Consumption factors are examined in terms of frequency of use and behaviors. Trends emerge from these factors, such as current use (within the previous 30 days), age of initial use, lifetime use, and trends by age, gender, or ethnicity.

Measurement of substances consumed can be a challenging factor in consumption data collection. For example, alcoholic beverages are available in various sizes and alcohol-by-volumes. Consequently, units must be standardized to derive meaningful conclusions of consumption and consequences patterns. The BAC (blood alcohol concentration) is also an important metric in determining risk associated with consumption.

Alcohol is legal, commercially available, and federally regulated and is therefore easier to standardize. However, the use/misuse of illicit and prescription drugs pose a greater challenge to standardized measurement. The inability to know or regulate the purity of street drugs is one of the riskiest

determinants for consumption. The irregularity of illicit drug composition poses a significant risk of overdose and inhibits measurement of consumption by standardized metrics. Pharmaceuticals pose another consumption variation potential, for they vary widely by potency and effect.

Few regional data sources include toxicology metrics. The majority of consumption data presented in this RNA are self-reported by adolescents via survey responses.

Consequences

For the purposes of this report, consequences are defined as adverse social, health, and safety issues or outcomes associated with alcohol or drug use. Examples of consequences include mortality, morbidity, violence, crime, health risks, academic failure, imprisonment, and alienation.

The consequences of drugs and alcohol are felt first in individual lives and communities and eventually ripple through the global spheres of public health, safety, and economy. The World Health Organization estimates that the harmful use of alcohol is a causal factor in more than 200 types of disease and injury, and that 5.1% of the global health burden is attributed to alcohol.¹² Additionally, stakeholders and policymakers have a vested interest in the monetary and safety costs associated with substance-related consequences. Regional data on the public safety consequences of alcohol and drugs are included later in this RNA.

Introduction

The Department of State Health Services (DSHS), Substance Abuse & Mental Health Services Section, funds approximately 188 school and community-based programs statewide to prevent the use and consequences of alcohol, tobacco and other drugs among Texas adolescents and families. These programs provide evidence-based curricula and effective prevention strategies identified by the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Prevention (CSAP).

The Strategic Prevention Framework provided by CSAP guides many prevention activities in Texas. In 2004, Texas received a state incentive grant from CSAP to implement the Strategic Prevention Framework in close collaboration with local communities in order to tailor services to meet local needs for substance abuse prevention. This prevention framework provides a continuum of services that target the three classifications of prevention activities under the Institute of Medicine (IOM), which are universal, selective, and indicated.

STRATEGIC PREVENTION FRAMEWORK¹³:



The DSHS Substance Abuse Services funds Prevention Resource Centers (PRCs) across the state of Texas. These centers are part of larger network of youth prevention programs providing direct prevention education to adolescents in schools and the community, as well as community coalitions that focus on implementing effective environmental strategies. This network of substance abuse prevention services work to improve the welfare of Texans by discouraging and reducing substance use and abuse. Their work provides valuable resources to enhance and improve our state's prevention services. The state's three prevention priorities are to reduce under-age drinking, marijuana use, and prescription drug misuse. These priorities are outlined in the Texas Behavioral Health Strategic Plan developed in 2012.

Our Audience

The audience of this needs assessment are primarily professionals from a variety of fields, namely substance abuse prevention and treatment, public safety, law enforcement, public health, education, government, and research. The data and information presented here contribute to program planning, evidence-based decision making, and community education.

The authors intentionally use accessible language and succinct presentation of data in this report, because it is intended as a reference tool for professionals at all levels who have an interest in reducing underage drinking and drug use in our communities.

How to Use this Document

This needs assessment is a review of data on substance abuse and related variables across the state that will aid in substance abuse prevention decision making. The information presented here may pertain to the state, region, county, or local levels. This report focuses on the state's prevention priorities of alcohol, marijuana, and prescription drug abuse among adolescents in Texas.

Specifically, the Regional Needs Assessments serves the following purposes:

- To discover patterns of substance use among adolescents and monitor changes in substance use trends over time;
- To identify gaps in data where critical substance abuse information is missing;
- To determine regional differences and disparities throughout the state;
- To identify substance use issues that are unique to specific communities and regions in the state;
- To provide a comprehensive resource tool for local providers to design relevant, data-driven prevention and intervention programs targeted to needs;
- To provide data to local providers to support their grant-writing activities and provide justification for funding requests;
- To assist policy-makers in program planning and policy decisions regarding substance abuse prevention, intervention, and treatment in the state of Texas.

Potential readers of this document include stakeholders who are vested in the prevention, intervention, and treatment of adolescent substance use in the state of Texas. Stakeholders include but are not limited to: substance abuse prevention and treatment providers; medical providers; schools and school districts; substance abuse community coalitions; city, county, and state leaders; prevention program staff; and community members vested in preventing substance use.

This report includes a wealth of information, and readers may consult it for a variety of reasons. Some readers may seek only an overview of the state of substance use among adolescents in our communities, while others may read for detailed data on specific topics. This document is organized in a way to meet these various needs.

The Executive Summary section provides highlights of the report for those seeking a brief overview. Our terminology and framework are described in Key Concepts. The core of the report contains tables and synthesis of data organized in five main sections:

- Demographics
- Risk Factors
- Consumption
- Consequences
- Protective Factors

The end of the report features a Region in Focus section which outlines gaps in data and services, and highlights positive impacts of existing services and regional community-driven successes.

Methodology

Process

The state evaluator and the regional evaluators collected primary and secondary data at the county, regional, and state levels between September 1, 2014 and June 30, 2015. Relevant data elements were determined and reliable data sources were identified through a collaborative process among the team of regional evaluators with the support of the Southwest Regional Center for Applied Prevention Technologies (CAPT).

The data were gathered primarily through established secondary sources, including federal and state government data sources. Region-specific data was collected through local organizations, community coalitions, school districts and local-level governments, in order to provide unique local information. Additional primary data was collected via in-depth interviews and focus groups with regional stakeholders and community members.

Stratification of Region 6

This section briefly addresses the urban/rural stratification of the Gulf Coast Region and the PRC's method for accessing information across the various clusters of communities in Region 6.

Region 6 is home to 6.5 million people across 13 counties. However, 4.5 million are concentrated in the Greater Houston Area, the nation's fourth largest city. During the research process, concerted efforts were made to gather information on the unique factors of each county regardless of population, while also acknowledging the potential impacts of close proximity to a major city that is an international drug trafficking hub.

Local data collection included working with two types of community groups to make contacts across the diverse areas of our region. Community substance abuse prevention coalitions helped to network in large and small populations. The PRC evaluator and community liaison were fortunate to join these coalitions and learn about specific conditions in the region as stratified by coalition service areas. Second, community planning committees exist at the county level in Region 6, supported by the Houston-Galveston Area Council. The annual planning meetings and reports were useful to gain perspective on the region as stratified by county.

Quantitative Data Selection

Identification of Variables

Indicators for this needs assessment were selected from established literature on effective community assessment of substance abuse, namely the following resources:

- SAMHSA Strategic Prevention Framework: Assess Needs
- SAMHSA Behavioral Health Treatment Needs Assessment Toolkit for States
- NIDA Research-Based Guide to Preventing Drug Use among Children and Adolescents
- NIDA Assessing Drug Abuse Within and Across Communities.

Regional Evaluators worked with the DSHS State Evaluator to create a literature-based list of indicators and corresponding key data sources. The Region 6 Evaluator reviewed this list with the PRC Epidemiological Workgroup to gain stakeholder feedback and support of the indicators and data sources selected for this report.

Key Data Sources

The Texas School Survey (TSS) is a primary data source for this year's report. It is the most recent survey, conducted last school year in Spring of 2014, and results are available at the regional and state levels. However, some regions were grouped together to ensure representative sample sizes. Region 6 was combined with Region 5, which is east of Houston and includes Beaumont and Lufkin, to create a Regions 5 and 6 Report. Results were provided to the PRC by the Public Policy Research Institute at Texas A&M University via the state evaluator.

The Youth Risk Behavior Survey (YRBS) provides statewide and Houston-Area data from 2013. The National Survey on Drug Use and Health (NSDUH) provides regional level data for Region 6 as well as statewide data, from 2002-2012.

Key sources for consequences data and risk and protective factors data include: Centers for Disease Control and Prevention; Texas Department of Public Safety; Texas Poison Centers; American Community Survey; Agency on Health Research and Quality; Texas Education Agency; Texas Department of Transportation; and Treatment Episode Data Set (TEDS).

Criterion for Selection

As a group, the regional evaluators and the state evaluator developed criteria for selecting quantitative data and other types of secondary data. Each region used their own discretion in developing criteria for collecting qualitative data.

Evaluators chose secondary data sources based on the following criteria:

- **Relevance:** Data sources that provide an appropriate measure of substance use consumption, consequence, and related risk and protective factors
- **Timeliness:** Data sources that contain the most recently available data (within the last five years)
- **Valid and Reliable:** Data sources that used well-documented methodology with valid and reliable data collection tools
- **Representative:** Data sources that most accurately reflect the target population in Texas and across the eleven human services regions

- **Accuracy:** Data sources that provide an accurate measure of the associated indicator.

Please note that each secondary data source presented in this assessment uses varying geographic parameters for analyzing data. Where possible, we obtained data that specifically covers Region 6 and provides county-specific data. However, some data are only available at the city, state, or national level.

Qualitative Data Collection

Each region features a unique set of data sources and substance related issues. The gathering of primary data is likewise unique to each region.

In Region 6, qualitative data collection included interviews with stakeholders, focus groups with prevention specialists, and focus groups with adolescents.

Stakeholder Interviews

The stakeholders selected for interviews for the 2015 RNA represent a variety of perspectives and have a professional vantage point that allows them to see high-level trends in youth substance abuse and their social contexts.

Participating institutions include community coalition leaders and members from across Region 6, directors of prevention and recovery services, local law enforcement, federal law enforcement, and public health research.

Interviews were conducted early in the assessment process, in order to learn of emerging trends, newly available data, and local concerns that the evaluator would investigate further through quantitative data collection.

Focus Groups

Focus groups were conducted with prevention specialists and high school students, separately. Substance abuse prevention specialists were invited to participate from agencies within the region that receive DSHS funding for prevention programming. The focus group questions addressed environmental factors that may create unique needs in their service areas, emerging drug trends or methods of concealing or sharing substances, and which prevention strategies have been most successful for their particular communities.

Adolescent focus group members were invited from a high school YPI program, a prevention curriculum that serves students with indicated risk for substance dependence. The focus group questions were designed to learn students' perceptions of the social norms of substance use in their school and communities. The students were comfortable speaking on these topics, partly because the prevention specialist with whom they meet regularly was present. The evaluator is deeply grateful for the students' candor and the prevention program that made these sessions possible.

Surveys

The Prevention Resource Center 6 designed and administered a simple survey instrument geared toward the three state priorities of alcohol, marijuana, and prescription drugs. The PRC-6 survey collects adults' perceptions of youth substance abuse issues. The survey gathers zip codes, which can be useful to identify localized substance use trends or to fill in gaps in secondary data sources. The instrument also gathers input on the community's preferred media platforms for prevention messages.

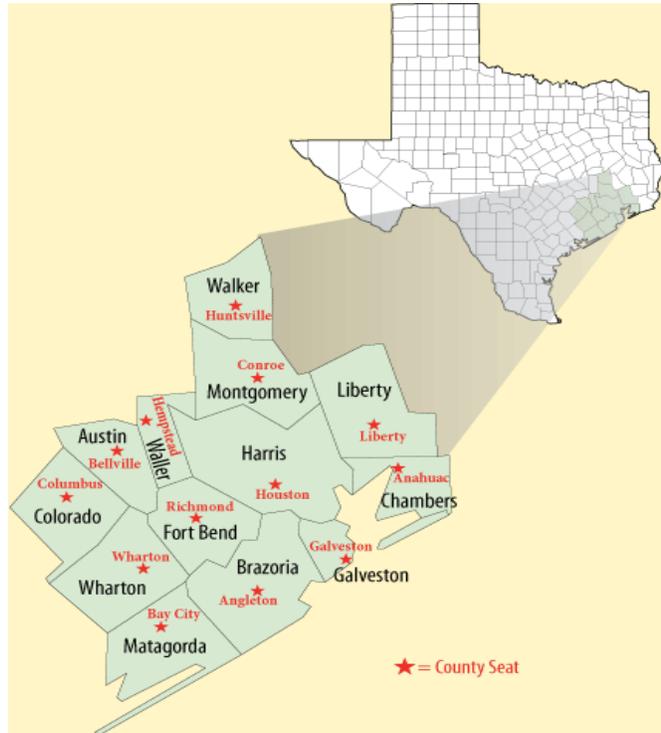
Survey participants were invited from a variety of professional trainings and community events.

Demographics

This section presents community demographic, economic, and health data for the state of Texas and Region 6.

Texas Region 6, also known as the Gulf Coast Region, is settled in southeast Texas and encompasses the following 13 counties:

1. Austin
2. Brazoria
3. Chambers
4. Colorado
5. Fort Bend
6. Galveston
7. Harris
8. Liberty
9. Matagorda
10. Montgomery
11. Walker
12. Waller
13. Wharton



Population

Texas is home to almost 26.5 million people. It was the fifth fastest growing state in the country during the period of 2000-2010, according to the U.S. Census.¹⁴ The Census Bureau also reported that Texas grew by 4.3 million people, making Texas the state with the highest numeric increase in population in the last decade. Approximately 24% of the population of Texas resides in Region 6.

Region 6 has a population of almost 6.5 million people, according to the latest data available (2013) from the Texas State Data Center.¹⁵ Over 4.3 million residents live in just one of our 13 counties: Harris County and the city of Houston. Houston is the fourth most populous city in the U.S. and one of the top three fastest growing U.S. cities, according to the 2010 Census.¹⁶ Houston and Dallas combined account for half the population of Texas.

Concentrations of Populations

Population density information is provided by the American Community Survey 2013 (5-year estimates)¹⁷:

Population Density in Region 6			
Report Area	Total Population	Total Land Area (Square Miles)	Population Density (Per Square Mile)
Colorado County, TX	20,776	960.02	21.64
Matagorda County, TX	36,639	1,099.98	33.31
Wharton County, TX	41,185	1,085.86	37.93
Austin County, TX	28,573	646.34	44.21
Chambers County, TX	35,570	596.98	59.58
Liberty County, TX	76,013	1,158.11	65.64
Waller County, TX	43,836	513.29	85.40
Walker County, TX	68,110	783.96	86.88
Brazoria County, TX	319,493	1,357.34	235.38
Montgomery County, TX	472,162	1,041.46	453.37
Fort Bend County, TX	608,939	861.25	707.04
Galveston County, TX	296,669	378.26	784.30
Harris County, TX	4,182,285	1,703.03	2,455.79

The fastest growing county in Region 6 is Fort Bend County. From 2000-2012, Fort Bend County's population grew by 65.8%.¹⁸ Fort Bend County now has the second largest adolescent population in the Region. There are almost 930,000 adolescents across Region 6.¹⁹

Age

There are almost 4 million youths (age 12-21) in the state of Texas. Twenty-four percent of the state's youth live in Region 6.

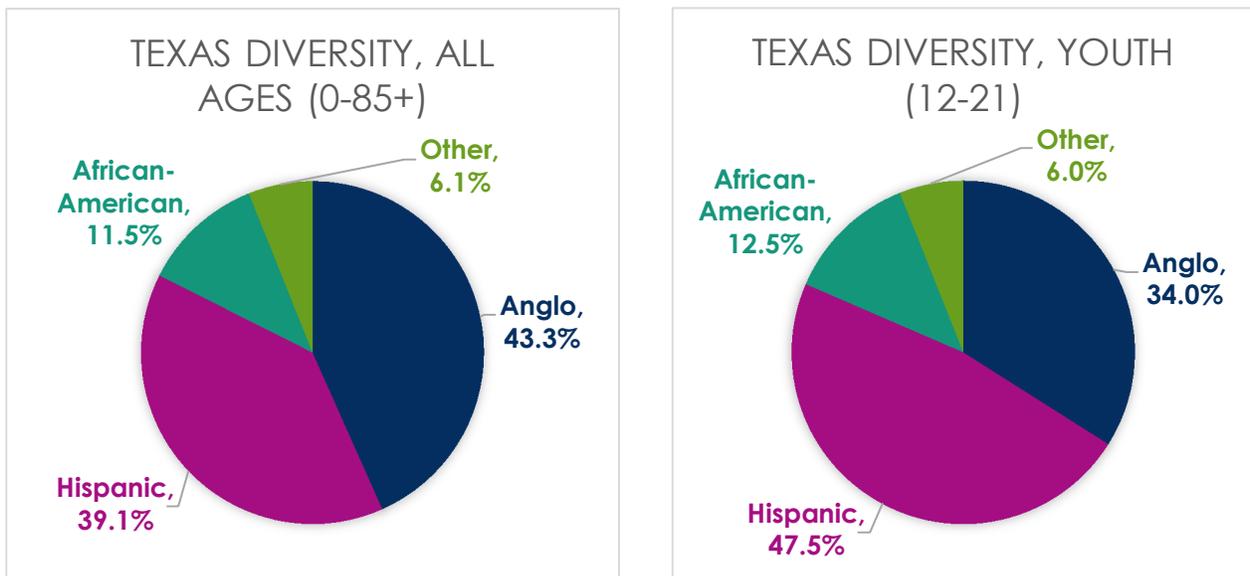
In the Gulf Coast Region, young people ages 12-21 comprise an average of 14.6% of the total population. Three counties have a higher youth population: Waller County, 20.2%; Walker County, 16.3%; and Fort Bend County, 16.7%. These counties are also home to colleges which may account for the higher youth population: Prairie View A&M University, Sam Houston State University, and University of Houston at Sugar Land.

Population estimates by age and county are provided by the Texas State Data Center (reporting year 2013)²⁰:

Population and Youth Population by County in Region 6			
Report Area	Total Population	12-21 Years of Age	% Youth of total population
State of Texas	26,448,193	3,936,400	14.9%
Region 6	6,333,796	929,473	14.6%
Austin	29,178	4,096	14.0%
Brazoria	330,385	47,844	14.5%
Chambers	36,774	6,081	16.5%
Colorado	21,514	2,862	13.3%
Fort Bend	650,693	108,619	16.7%
Galveston	305,938	42,027	13.7%
Harris	4,325,413	615,783	14.2%
Liberty	78,982	11,190	14.2%
Matagorda	36,541	5,288	14.5%
Montgomery	497,791	73,147	14.7%
Walker	69,411	11,305	16.3%
Waller	45,277	9,142	20.2%
Wharton	41,311	5,822	14.1%

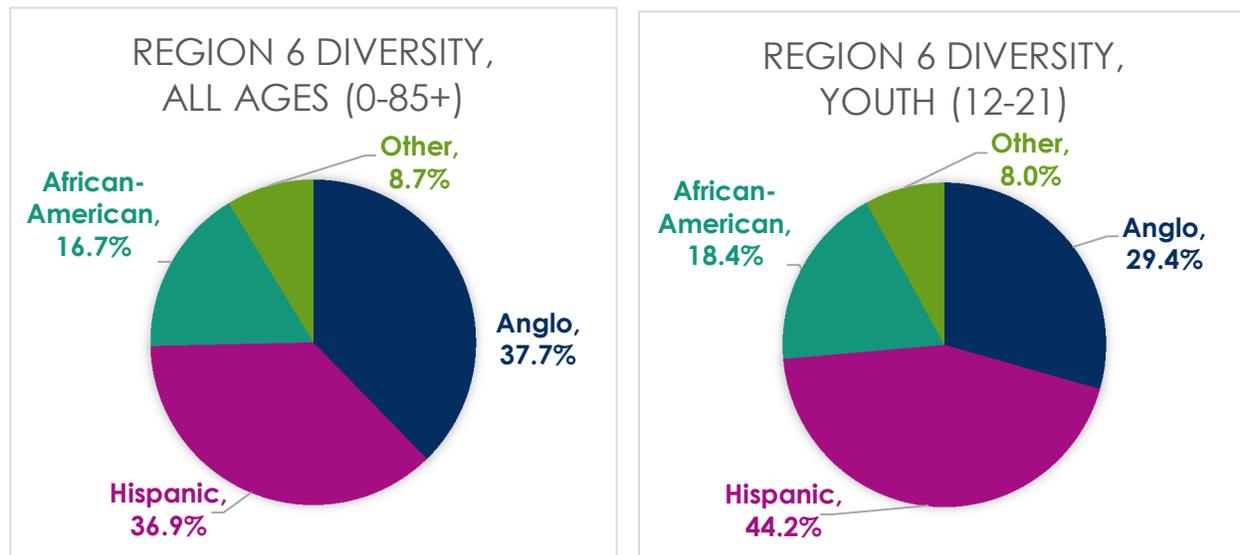
Race and Ethnicity

Information on the racial and ethnic diversity of Texas and Region 6 were collected from the Texas State Data Center.²¹ The figures below display total population (all ages) as well as youth population.



Texas-wide, Anglos are the most populous group among all ages (43.3%), and Hispanics are the most populous group among youth (47.5%).

In Region 6, Anglos are the most populous group among all ages (37.7%), although by less than one percent. Hispanics are the most populous group among youth (44.2%).²²



Region 6 is a culturally, racially, ethnically, and linguistically diverse region. The general category of “other” in the data pictured above is inadequate to represent the scope of cultural pluralism present in the greater Houston Area.

The Kinder Institute reports that following the 2010 national Census, “the Houston metropolitan area is the most racially/ethnically diverse large metropolitan area in the nation.”²³ Harris and Fort Bend Counties in particular have sizeable, cohesive communities from India, Vietnam, Pakistan, and Nigeria.

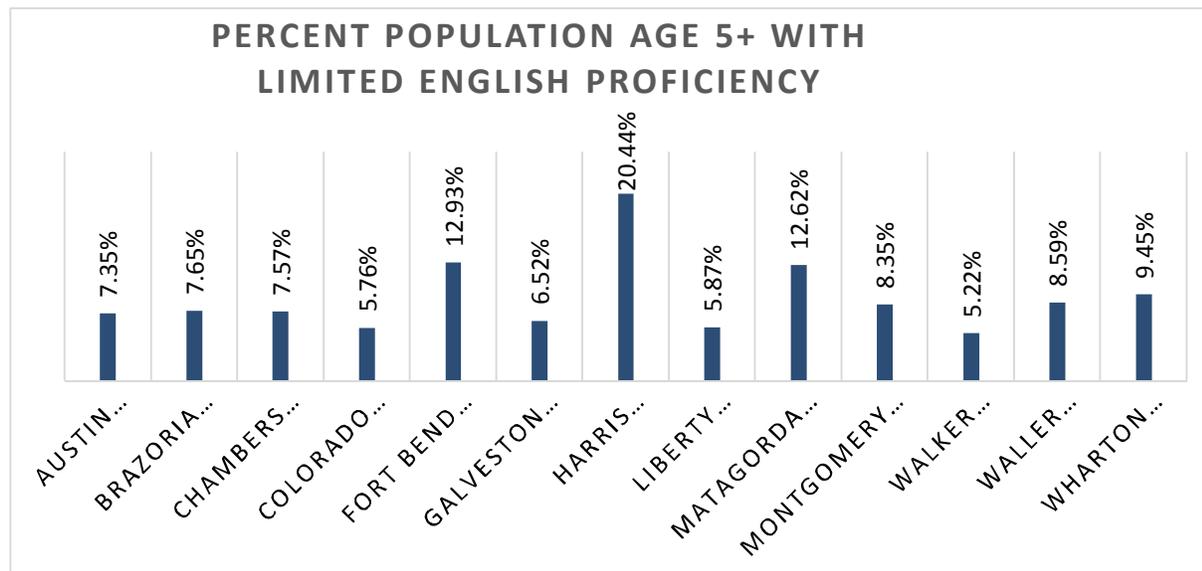
Of the 6.3 million people in the Houston metro area, 1.4 million are foreign-born.²⁴ The top five countries of origin are: Mexico (45%), El Salvador (8%), Vietnam (6%), India (5%), and Honduras (3%).²⁵ Community events in Houston swirl with multiculturalism and multilingualism.

Diversity varies across the counties of Region 6. For example, Fort Bend County has the greatest diversity while Montgomery County has the least, yet they share similar industries, income levels, and proximity to the city.

Languages

In the United States, approximately 80% of people speak English only, 13% speak Spanish, and 7% speak an other primary language.²⁶ In Texas, 66% of people speak English only, 29% speak Spanish, and 5% speak an other primary language. In the Houston metropolitan area, 54% of people speak English, 37% speak Spanish, and 4% speak an Asian language, and 5% peak an other primary language. This information is particularly relevant to the readers of this report who design and disseminate prevention materials.

Further detail about the English proficiency of Region 6 residents (ages 5+) is provided by the American Community Survey (2013)²⁷:



Household Composition

In the state of Texas, 33% of households are single-parent households. The Region 6 rate of single-parent households is similar but slightly less, 32%. County-level detail is provided in the chart below, in order of lowest to highest percent, followed by regional and state rates.²⁸

Region 6 and Texas Single-Parent Households, ACS 2013			
Report Area	# SP HH	# Households	% SP HH
Chambers Co.	1,984	9,822	20%
Fort Bend Co.	39,447	176,366	22%
Montgomery Co.	32,041	128,781	25%
Austin Co.	1,926	7,095	27%
Liberty Co.	5,199	19,043	27%
Brazoria Co.	24,660	87,099	28%
Galveston Co.	21,764	73,550	30%
Walker Co.	3,456	10,761	32%
Colorado Co.	1,595	4,882	33%
Waller Co.	3,445	10,489	33%
Harris Co.	406,594	1,150,837	35%
Matagorda Co.	3,603	9,423	38%
Wharton Co.	4,143	10,830	38%
Region 6	549,857	1,698,978	32%
State of Texas	2,283,452	6,869,557	33%

Region 6 comprises 25% of all Texas households, and 24% of all Texas single-parent households.

Economics

This section presents economic data for Region 6 and Texas, in terms of industry, income, employment, and poverty indicators.

The economy of Texas Region 6, including the Houston Metro Statistical Area (MSA)¹, has a large economy led by the mining (oil and gas) industry. The Greater Houston Partnership reports the Houston MSA's nominal gross area product in 2013 was \$532.9 billion, larger than most nations' gross domestic products.²⁹

As this section will explore, several counties in Region 6 have household incomes higher than the national average; however, there are also over 1 million households in poverty in our region.³⁰

Industry

Houston is known as the energy capitol of the world. The mining industry comprises one-fifth of the Houston MSA economy.³¹

The top five industries of Region 6 are: services, mining, manufacturing, finance and insurance, and trade. The Port of Houston, located in Southeast Harris County, is an integral part of Region 6's manufacturing and trade. One of the world's busiest ports, Houston has outpaced national exports for the last 13 years.³²

Average Wages by County

The following table provides median household income and estimated poverty rates for Region 6, provided by the U.S. Census Bureau via the Houston-Galveston Area Council³³:

- The median household income in Texas in 2013 was \$53,027, which is higher than the national median household income of \$51,939.

Median Household Income and Estimated Poverty Rate, 2013			
County	Median Household Income	Poverty Estimate All Ages	Estimated Poverty Rate
Austin	\$52,042	3,871	13.60%
Brazoria	\$66,337	37,646	11.80%
Chambers	\$74,915	3,820	10.50%
Colorado	\$42,438	3,444	16.90%
Fort Bend	\$87,901	57,286	8.90%
Galveston	\$60,210	42,814	14.20%
Harris	\$52,533	788,276	18.40%
Liberty	\$46,176	14,588	20.30%
Matagorda	\$42,036	7,379	20.40%
Montgomery	\$69,317	58,358	11.80%
Walker	\$40,092	13,266	25.50%
Waller	\$49,326	8,039	19.40%
Wharton	\$42,862	7,633	18.70%

¹ The Houston MSA includes most of Region 6 counties, except for Colorado, Matagorda, Walker, and Wharton Counties.

Employment Rates

Region 6 employment rates, as of May 2015, are stronger than Texas and United States rates.³⁴ Unemployment rates have dropped in all Region 6 counties over the last year.

The Houston Galveston Area Council (HGAC) provides data on regional unemployment via the Texas Workforce Commission³⁵:

- The average monthly unemployment rate thus far in 2015 in Region 6 is 4.2% (Jan. – May 2015).
- The average monthly unemployment rate in Region 6 has steadily decreased in the last 3 years: 6% in 2013, 4.9% in 2014, and 4.2% thus far in 2015.
- The current unemployment rate in Texas is 4.3% and 5.5% in the United States (May 2015).^{36, 37}

Unemployment Rates in Region 6 by County, 2014-2015		
County	May 2015	May 2014
Austin	4.1%	4.7%
Brazoria	4.1%	5.0%
Chambers	4.8%	5.6%
Colorado	3.5%	4.4%
Fort Bend	3.9%	4.5%
Galveston	4.5%	5.4%
Harris	4.2%	4.9%
Liberty	6.2%	6.8%
Matagorda	6.5%	7.3%
Montgomery	4.0%	4.4%
Walker	4.8%	5.4%
Waller	4.3%	5.0%
Wharton	3.9%	4.6%

Food Assistance

In addition to employment data, another method of assessing underemployment and poverty is to review food assistance programs.

Region 6 as a whole has a lower percentage of households receiving food stamps than the state average. However, some counties have an above-state average percent of households needing food assistance. Data on the number of households receiving state-sponsored food assistance are provided by the American Community Survey (2009-2013 average).³⁸

Households Receiving SNAP Benefits, ACS 2013 5-Year Average		
Report Area	Number of Households	Percentage of Total Households
Austin County, TX	831	7.83%
Brazoria County, TX	10,530	9.78%
Chambers County, TX	669	5.51%
Colorado County, TX	997	12.34%
Fort Bend County, TX	13,001	6.79%
Galveston County, TX	12,505	11.36%
Harris County, TX	180,876	12.61%
Liberty County, TX	4,584	18.45%
Matagorda County, TX	2,120	15.99%
Montgomery County, TX	12,274	7.51%
Walker County, TX	2,486	12.09%
Waller County, TX	1,943	14.29%
Wharton County, TX	2,272	15.65%
Texas	1,173,314	13.20%
Region 6	245,088	11.53%

Local food assistance is also provided by the Houston Food Bank. Region 6 is home to America’s largest food bank, measured by distribution to hunger relief charities, territory, and number of meals and people served.³⁹ The Houston Food Bank is a non-profit agency that feeds approximately 800,000 people a year. It was awarded the Food Bank of the Year (2015-2016) by the national food bank association Feeding America. The award recognized the Houston Food Bank’s healthy food programs and the Backpack Buddy program, which provides weekend food sacks to over 10,000 children in 500 schools in our region.⁴⁰

Temporary Assistance

The Temporary Assistance for Needy Families (TANF) provides financial and medical assistance to children in need and their families. Data on the number of regional households receiving TANF assistance is provided by the American Community Survey⁴¹.

- The rate of households receiving TANF benefits in Texas is 1.84%.

Households Receiving TANF Assistance, ACS 2013 5-Year Average		
Report Area	Number of Households	Percent of All Households
Austin County, TX	99	0.93%
Brazoria County, TX	1,525	1.42%
Colorado County, TX	139	1.72%
Fort Bend County, TX	2,258	1.18%
Galveston County, TX	1,447	1.32%
Harris County, TX	24,521	1.71%
Liberty County, TX	391	1.57%
Matagorda County, TX	136	1.03%
Walker County, TX	337	1.64%
Waller County, TX	219	1.61%
Wharton County, TX	119	0.82%
Texas	163,371	1.84%
Region 6	31,191	1.60%

Health

Community Health

America's Health Rankings 2014 rated the state of Texas 31st in the nation in overall health. The report, created by the United Health Foundation, listed strengths and challenges from the core metrics determining the ranking⁴²:

America's Health Rankings 2014, Texas: 31 st	
Strengths	Challenges
Low prevalence of smoking	High prevalence of physical inactivity
Low rate of drug deaths	Lack of health insurance
High immunization coverage	Limited availability of primary care physicians
Steady infant mortality decrease	Air pollution

Access to Healthcare

The rate of uninsured people is significantly higher in the entire West South Central region (Oklahoma, Arkansas, Louisiana, and Texas) than nationally, according to the 2014 National Health Interview Survey by the Centers for Disease Control.

- Texas is ranked 50th in the nation for health insurance coverage.⁴³

Access to primary care providers and health insurance coverage can play a significant role in the prevention or treatment of substance abuse. As reported in the 2012-2013 National Survey on Drug Use and Health⁴⁴:

- 45.5% of people who seek substance abuse treatment but do not receive it cite reasons of no health coverage (37.3%) or inadequate health coverage (8.2%) to afford the cost.
- 1.2 million youths (12-17) needed treatment for a substance use problem but did not receive it.

The following section will explore risk factors in detail.

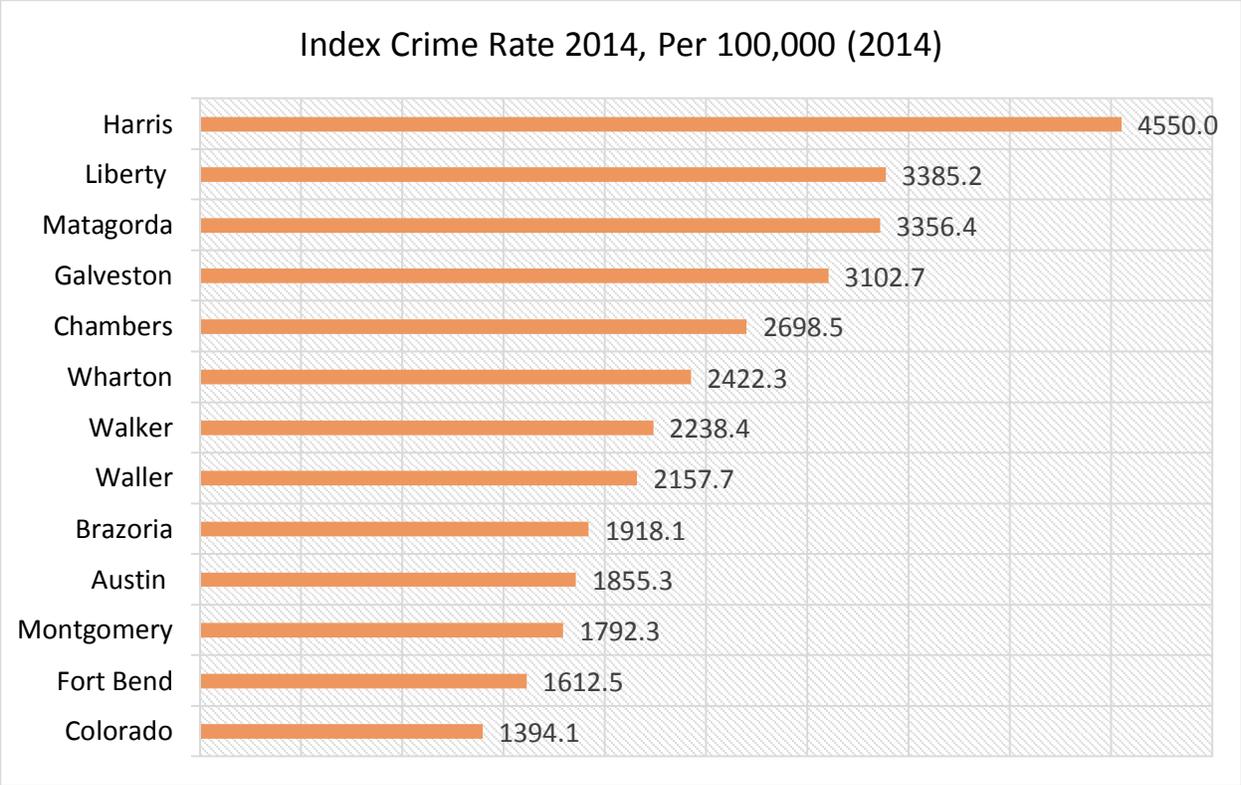
Environmental Risk Factors

Categories and indicators of risk factors for substance abuse were selected based on SAMHSA’s model of risk and protective factors, established prevention research literature and assessment models, as well as feedback from regional stakeholders and the state evaluator. The key risk factors of youth substance use incidence discussed here include the domains of community, school, family, and individual.

Criminal Activity

As with other indicators in this section on consequences, there is a link between crime and substance use. This section provides data on index crime from 2014 in Region 6 counties. Rates are shown as crime index per 100,000 people. These data are collated from multiple law enforcement agencies within each county. The criminal activity reported in this section do not indicate if crimes involved alcohol or drugs; they are presented as an indicator of criminal activity as a risk factor for involvement with drugs and alcohol.

The following two charts provide index crime rates in Region 6, from the Texas Department of Public Safety.⁴⁵ The first chart offers a high-level view by county of crime including murder, rape, robbery, assault, burglary, larceny, and auto theft.



Crime rate detail by type of crime⁴⁶:

Index Crime Rates per 100,000, by Crime (2014)

County	Murder	Rape	Robbery	Assault	Burglary	Larceny	Auto Theft	Total
Austin	0.0	27.4	30.9	216.0	541.5	946.5	92.6	1855.3
Brazoria	2.3	28.9	31.6	109.0	348.0	1315.2	83.0	1918.1
Chambers	6.0	39.0	18.0	207.1	405.2	1707.9	315.2	2698.5
Colorado	0.0	28.7	24.0	134.1	297.0	848.0	62.3	1394.1
Fort Bend	1.9	24.0	44.6	150.6	318.5	994.7	78.1	1612.5
Galveston	4.0	44.2	80.5	140.7	575.1	2072.7	185.5	3102.7
Harris	7.3	33.4	316.1	368.0	812.5	2506.6	505.9	4550.0
Liberty	7.7	65.6	36.0	329.3	690.7	1974.3	281.7	3385.2
Matagorda	0.0	35.3	43.4	247.1	803.8	2131.7	95.0	3356.4
Montgomery	1.6	22.2	38.2	107.5	395.7	1098.9	128.2	1792.3
Walker	2.9	82.0	38.9	256.2	457.8	1291.2	109.4	2238.4
Waller	6.6	70.8	50.9	232.4	655.1	1042.4	99.6	2157.7
Wharton	9.6	45.8	33.7	356.7	554.4	1323.2	98.8	2422.3

Drug Seizures/Trafficking

The Houston metro area is an identified international drug trafficking hub. Raw data on drug seizures was not available for this report; however, several regional and state experts monitor drug seizures and trafficking data and have released trend information that is helpful to understand the scope and relevance of local drug trafficking.

The information reported here is courtesy of the Substance Abuse Trends in Texas 2015 Preliminary Report, by Dr. Jane Maxwell at the Addiction Research Institute.⁴⁷

- The top three illicit substances identified by forensic laboratories in Texas are: methamphetamine, cannabis, and cocaine.
- Methamphetamine is ranked as a primary drug threat in the Houston area. Seizures along the Texas border are up by 420% this year on the lower Texas-Mexico border. Increased availability has reduced street prices.
- Supplies of cannabis have decreased since 2012 due to a drought in Mexico, and local hydroponic and indoor production has increased. Note: The potency of cannabis seized has increased in the last twenty years from 3.06% to 11.8%.
- Cocaine indicators have decreased, but it remains the third most identified substance by laboratories. There was a 32% decrease in cocaine kilograms seized on the Texas-Mexico border between 2010 and 2014.

Education

In this section, we discuss factors related to adolescents in schools, such as school dropout rates, suspensions, and truancy, which may reflect or influence drug, alcohol, and tobacco use.

The data reported in this section are provided by the Texas Education Agency (TEA). The regions used in the TEA's data analysis do not correspond exactly with the PRC regions. Thus, three reporting areas are presented here that include all PRC-6 counties plus others.

Dropout Rates

Below are dropout rates by TEA region, for the 2012-2013 school year⁴⁸:

Annual Dropout Rates, Grades 7-12, by ESC Region, 2013		
ESC Region	Region 6 Counties Included	Dropout Rate
ESC 3 – Victoria	Colorado, Wharton, Matagorda	1.0%
ESC 4 – Houston	Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Waller	1.6%
ESC 6 – Huntsville	Austin, Montgomery, Walker	1.1%
All Texas		1.6%

Youth Suspensions/Expulsions

Region 6 has a higher rate of school expulsions and in-school or out-of-school suspensions than the Texas average. The most recent discipline reports (2013-2014) are provided by the TEA via PEIMS Data⁴⁹:

Annual Expulsion and Suspension Rates, All Grades, by ESC Region, 2014			
ESC Region	Region 6 Counties Included	% Expelled	% Suspended (In-school and out-of-school suspensions)
ESC 3 – Victoria	Colorado, Wharton, Matagorda	0.06%	20.67%
ESC 4 – Houston	Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Waller	0.01%	16.83%
ESC 6 – Huntsville	Austin, Montgomery, Walker	0.01%	14.56%
All Texas		0.01%	14.49%

Mental Health

The Centers for Disease Control and Prevention report that approximately 6% of adolescents in the United States have serious emotional or behavioral difficulties.⁵⁰ This section addresses mental health indicators in Texas and Region 6.

Depression

Depression and substance use frequently co-occur in adolescence.⁵¹ In some cases, substance use leads to the development of major depressive disorder. In others, a depressive disorder may lead to substance abuse. In one study, researchers found that the co-morbidity of substance use disorders, specifically alcohol use and major depressive episodes, were associated with higher risk of suicide attempts, lower global functioning and life dissatisfaction.⁵²

Below are findings from the Youth Risk Behavior Survey regarding depressive symptoms among high school students in Texas and the city of Houston⁵³:

- 28.3% of high school students in Texas reported feeling sad or hopeless almost every day for 2 or more weeks in a row and that they stopped doing some usual activities during the 12 months before the survey.
- 29.9% of high school students in Houston reported feeling sad or hopeless almost every day for 2 or more weeks in a row and that they stopped doing some usual activities during the 12 months before the survey.

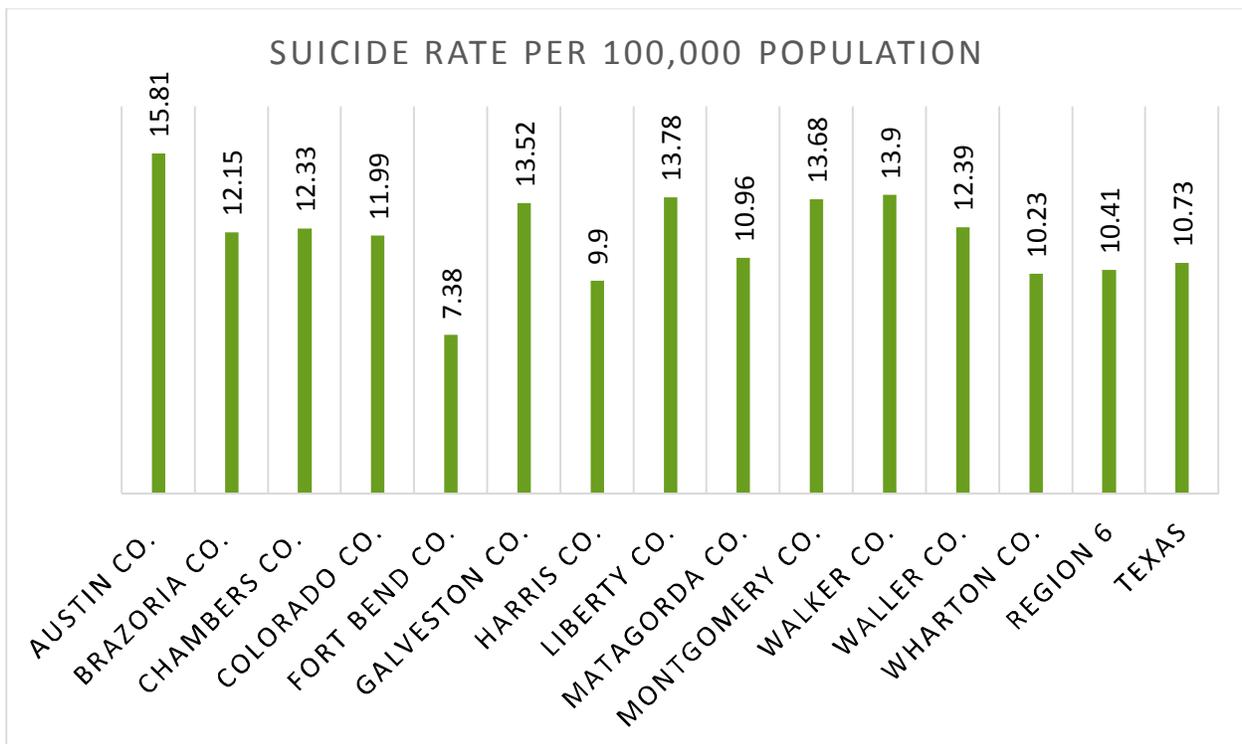
Additional data on Major Depressive Episode (MDE) among adolescents are provided by the Texas Behavioral Health Barometer⁵⁴:

- In Texas in the last 4 years, an average of 193,000 adolescents per year (8.9%) had at least one MDE within the year prior to being surveyed.
- The percentage of youths reporting MDE has increased from 8.0% in 2009 to 10.5% in 2013.
- In 2009-2012, the rate of Texas youths reporting MDE was on par with the national rate; however, in 2012-2013, the Texas rate was slightly higher than the U.S. rate (10.5% and 9.9%).

Suicide

The suicide rate in Region 6 as a whole is slightly lower than the state average. However, several counties in this region have a statistically significantly higher suicide rate than the state average.

The following data on suicide mortality rates in Region 6 are provided by the Centers for Disease Control (1999-2013)⁵⁵:

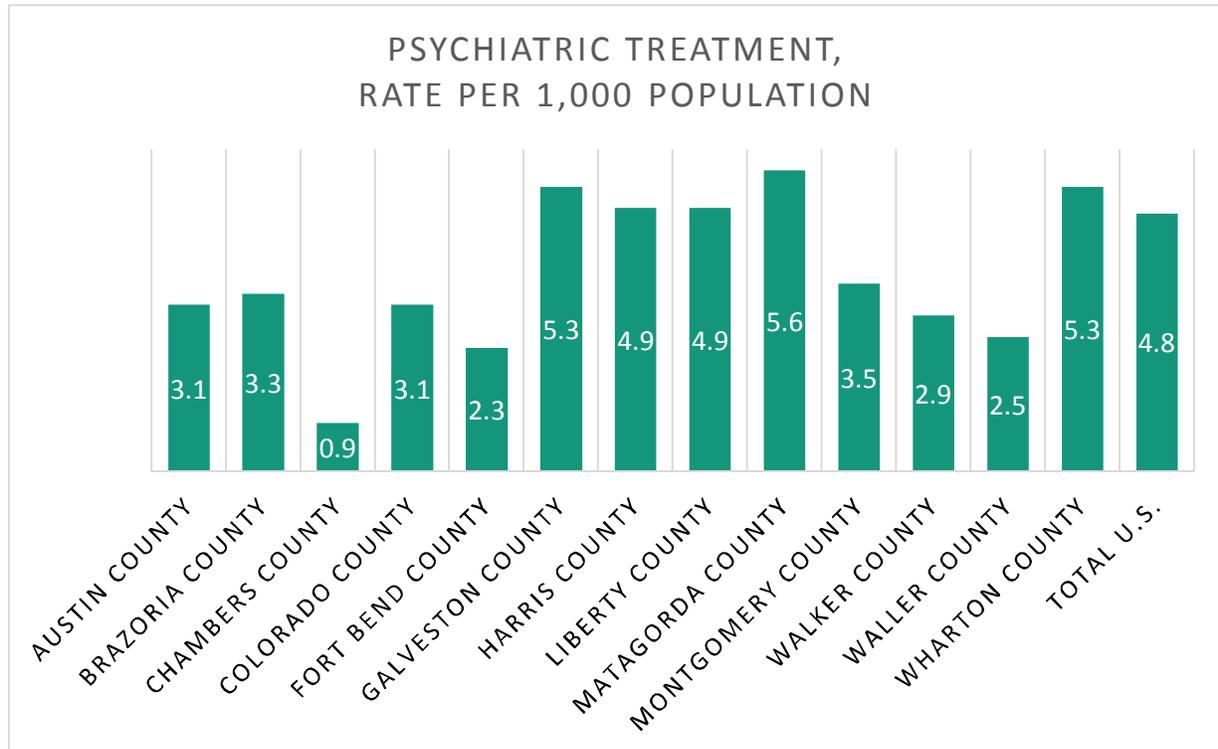


Information on suicide among adolescents is provided by the Youth Risk Behavior Survey⁵⁶:

- In 2013, 16.7% of high school students in the Houston MSA reported having seriously considered attempting suicide. This is similar to the Texas and U.S. rates, 16.7% and 17%.
- In 2013, 11.6% of high school students in the Houston MSA reported attempting a suicide. This is higher than the Texas rate of 10.1% and the national rate of 8%.

Psychiatric Hospital Admissions

The following information about regional psychiatric hospital admissions and discharges is provided by the MONARHQ data system of the Agency for Healthcare Research and Quality⁵⁷:



The data provided by MONARHQ includes average costs of treatment as well:

- The cost of psychiatric treatment in Texas is more than the national average.
- Average psychiatric treatment costs in Region 6 counties range from \$11,373 - \$18,377. The national average is \$6,388.

Youth Mental Health Treatment

The latest Texas behavioral Health Barometer provides data on the need for and utilization of mental health treatment among youth, citing data from the National Survey on Drug Use and Health 2009-2013⁵⁸:

- Among adolescents in Texas who experienced a Major Depressive Episode (MDE) in the last year, 35.5% received treatment, and 65.5% did not receive treatment for depression.
- In Texas, approximately 68,000 adolescents per year received treatment for MDE, within survey years 2009-2013.

Social Factors

This section addresses sociocultural factors that affect the risk of youth substance abuse initiation or prolonged use, such as perceived peer behavior, early risky behaviors, parental education, and cultural norms. Parental attitudes about substances are addressed in the Protective Factors section later in this report.

Parental Education

A significant protective factor against youth substance use is a close, trusted bond with parents and other adults. Conversely, adolescents who do not receive information about the risks of underage drinking and drug use, and clearly defined boundaries and consequences for drinking or drug use, are considered to have a greater risk for use.

Information about the rate of students who receive (and do not receive) information about drugs and alcohol from parents is provided by the National Survey on Drug Use and Health (2013)⁵⁹:

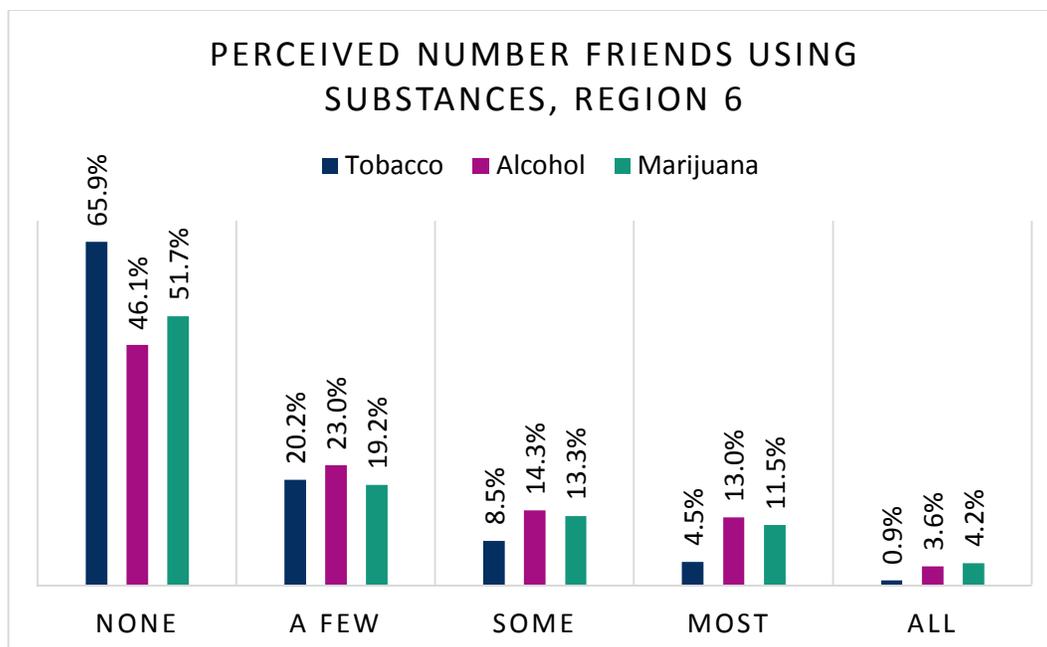
- 55% of adolescents in Region 6 reported that at least one of their parents have talked with them about the dangers of drugs and alcohol, and 45% have not.
- 57% of adolescents in Texas reported that at least one of their parents have talked with them about the dangers of drugs and alcohol, and 43% have not.

The rates of students receiving information in a school setting about drug and alcohol (72%) is higher than the rate of students receiving information from their parents.⁶⁰

Peer Approval/Consumption

Perceptions of substance use and perceived peer pressure can be as significant of a risk factor as direct peer pressure.

Students were asked in the Texas School Survey 2014, “How many of your friends are using...” [blank substance]. The following data includes grades 7-12 in Region 6⁶¹:



The following chart compares perceptions with self-reported data to illustrate that more students abstain from drugs and alcohol than their peers perceive. From the TSS 2014, grades 7-12:

Perceived Versus Reported No Use, Region 6

Substance	Perceived No Use	Reported No Use
Tobacco	65.9%	79.6%
Alcohol	46.1%	48.1%
Marijuana	51.7%	76.1%

Particularly with tobacco and marijuana, students overestimate the number of peers who use substances. Such assumptions create an inaccurate sense of what is normal or expected behavior among adolescent populations.

Adolescent Sexual Behavior

Often when adolescents experiment with one risky behavior, they may engage in another. This section provides data on teen sexual behavior and its relation to substance abuse. Note that regional data is not currently available, but Texas State and Houston MSA data are presented here.

Findings from the Youth Risk Behavior Survey (2013)⁶²:

- In Texas, 45.9% of high school students reported that they are sexually active.
- 46.8% of Houston high school students and 45.9% nationally reported they are sexually active.
- In Texas, 23.8% of high school students reported that they drank alcohol or used drugs before their last sexual intercourse.
- 24% of Houston high school students and 22.4% nationally reported that they drank alcohol or used drugs before their last sexual intercourse.

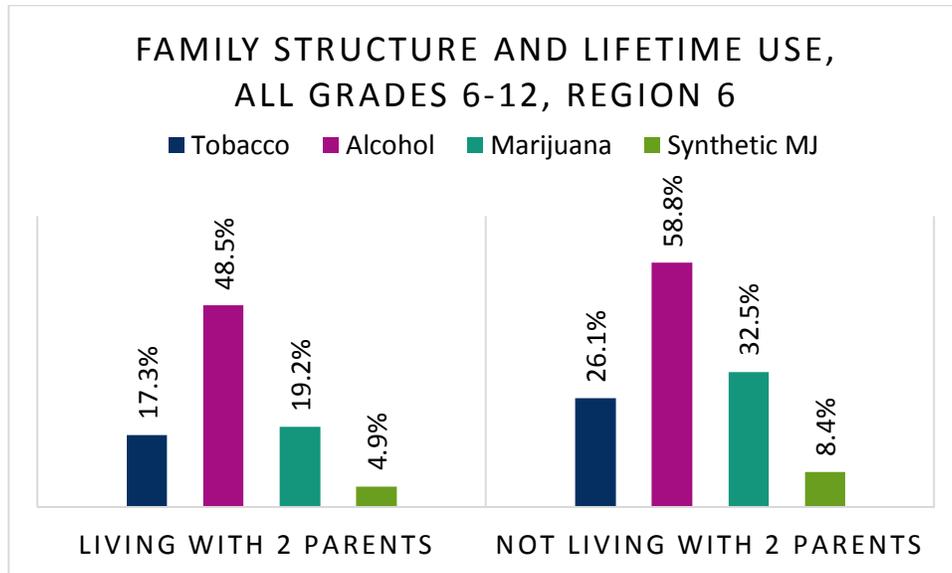
Drugs and alcohol impair decision making and increase impulsiveness. These effects can increase risky behavior, including unprotected sex.

Among sexually active high school students in Texas (YRBS 2013):

- 23.8% used alcohol or drugs before their last sexual intercourse.
- 47.1% did not use a condom to protect against transmittable disease.
- 19% did not use any method to prevent pregnancy.

Family Structure

Findings from the Texas School Survey (2014) address risk of substance abuse among single-parent family units and family units with two or more parents/step-parents/grandparents/guardians. The following table shows lifetime use (ever used) per number of parents in the home.⁶³



The American Community Survey reports the following about regional household composition⁶⁴:

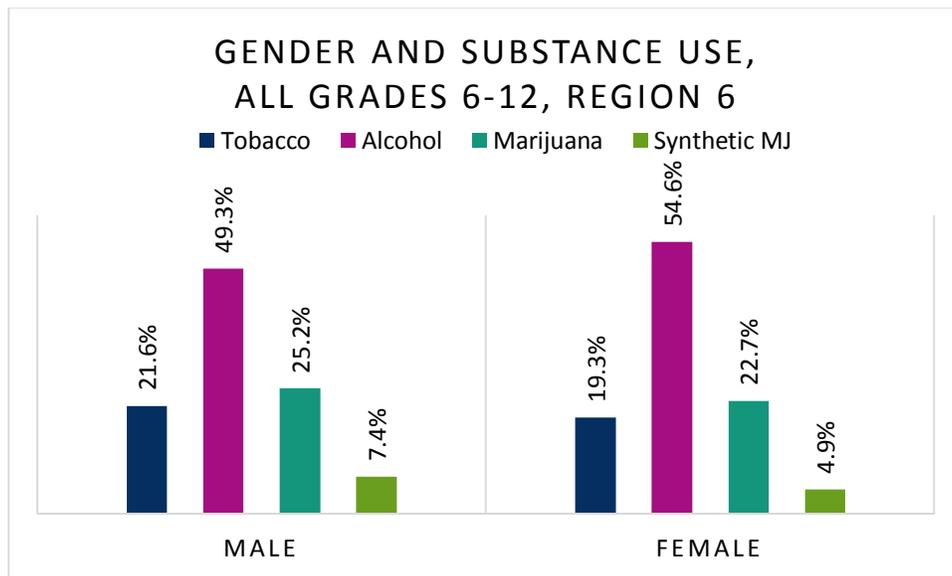
- 32% of households in Region 6 are single-family households.
- 33% of households in Texas are single-family households.

Cultural Factors

Social acceptance of substance use can vary according to many factors: region, peer groups, family group, gender, religions, media choices, racial and ethnic identity, and education. As reported earlier, Region 6 is a dynamically diverse area, with social norms varying widely both across and within groups.

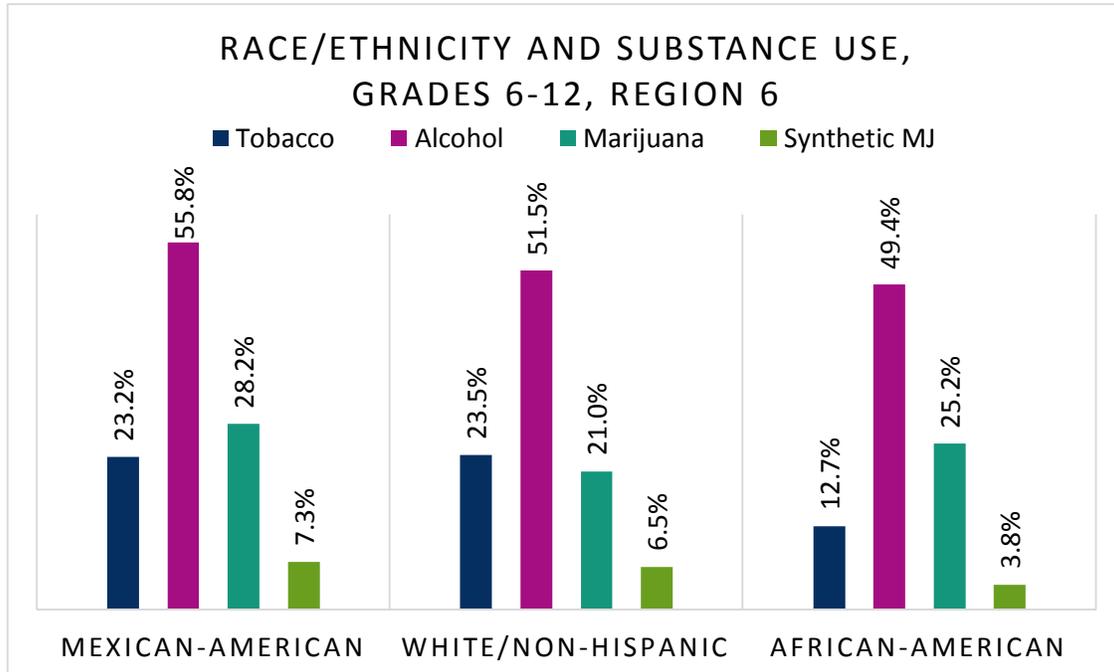
Few cultural factors are measured in the surveys used in this report. However, basic data are available regarding youth substance use per gender and race, which can be helpful to tailor prevention messages to meet students' risks and needs.

Lifetime use (ever used) of substances is reported by gender from the Texas School Survey (2014)⁶⁵:



- Alcohol use is higher among girls than boys.
- Tobacco, marijuana, and synthetic marijuana use is higher among boys than girls.[†]

Lifetime use (ever used) of substances is reported by race and ethnicity from the Texas School Survey (2014):



[†] Comparable data is not available for prescription drug abuse.

Misunderstandings about Marijuana

Among youth in Region 6, there appears to be some misunderstanding about the legal status and health effects of marijuana. Underestimating the temporary and long-term effects of marijuana, as well as overestimating its social acceptance, are risk factors for increased incidence.

In Texas it is illegal to grow, distribute, possess, or consume marijuana. In the 2015 Texas legislative session, a measure passed and became law to allow the use of non-intoxicating THC oil in medical treatments. Changes in legal status of marijuana in Texas and other U.S. states can create confusing contradictions in the logic schemas of adolescents, especially if an adult does not discuss it with them. The most common age of initiation to marijuana is thirteen years old.⁶⁶

Some parents and youth perceive low risk from marijuana based on misinformation from popular culture. However, marijuana is increasingly more potent and more developmentally damaging than current popular discourse indicates. THC levels in cannabis have increased in the last twenty years from 3.06% to 11.8%.⁶⁷ Clinical research indicates that marijuana use can cause substance dependence, withdrawal, early onset of schizophrenia, memory loss, and impair cognitive development.^{68, 69}

There may be a misunderstanding among some teens, and adults, that one cannot become addicted to marijuana. This myth can pose a significant social barrier to people seeking the help they need if they become substance dependent and want to stop but can't. Treatment admissions data show that marijuana is the second most common substance for which people seek treatment.⁷⁰ On average, ten percent of adult marijuana users become substance dependent, and seventeen percent of people who begin using before age 18 become substance dependent.⁷¹

Lastly, some teens consider synthetic cannabinoids, such as Kush, K2 and Spice, to be "legal weed." This is a dangerous misperception that has led to serious health effects and fatalities among teen users in our region. Synthetic marijuana is not safe, not legal, and not marijuana.

Perceptions of harm are explored further in the following sections.

Perceived Risk of Harm

Adolescents' perceptions of the dangers of drugs, alcohol, and tobacco are a key piece of information when analyzing incidence. Historically, as perceived risk from harm decreases, incidence of youth substance abuse increases.

The Texas School Survey provides data on perceived risk of harm from substances, by grade level, region, and substance. This section presents their findings in comparative tables.

From the Texas School Survey, 2014, in Region 6⁷²:

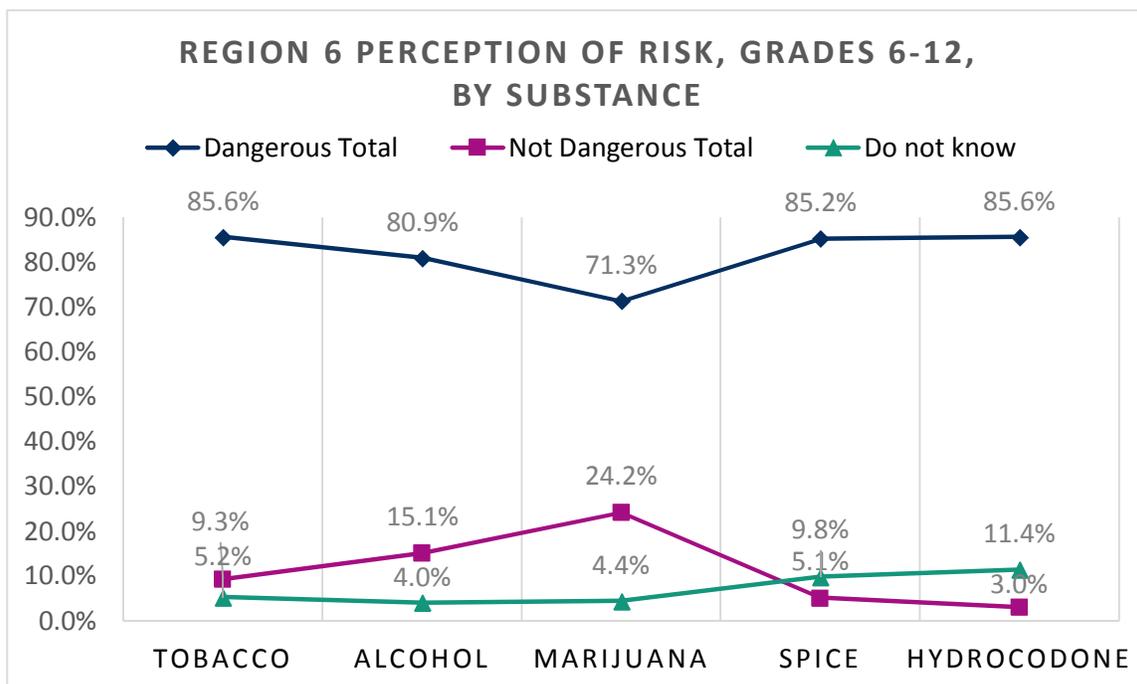
Perceived Risk of Harm, Grades 6-12, by Substance, Region 6					
Substance	Very dangerous	Somewhat dangerous	Not very dangerous	Not at all dangerous	Do not know
Tobacco	64.1%	21.5%	7.2%	2.1%	5.2%
Alcohol	52.8%	28.1%	12.6%	2.5%	4.0%
Marijuana	57.6%	13.7%	11.1%	13.1%	4.4%
Synthetic marijuana	76.8%	8.4%	3.6%	1.5%	9.8%
Hydrocodone	79.2%	6.4%	2.1%	0.9%	11.4%

Results from the state of Texas (TSS 2014):

Perceived Risk of Harm, Grades 6-12, by Substance, Texas					
Substance	Very dangerous	Somewhat dangerous	Not very dangerous	Not at all dangerous	Do not know
Tobacco	61.6%	23.0%	8.1%	2.2%	5.1%
Alcohol	52.0%	29.3%	12.4%	2.4%	3.9%
Marijuana	57.2%	13.6%	11.2%	13.7%	4.2%
Synthetic marijuana	78.1%	8.4%	3.6%	1.6%	8.3%
Hydrocodone	79.8%	7.0%	2.5%	1.2%	9.5%

- Perceived risk of harm from drugs and alcohol is lower in Region 6 than Texas-wide.
- In Region 6, the rate of youth perceiving alcohol as not dangerous is comparable to but slightly higher than statewide rates.
- In Region 6, slightly more students reported they do not know whether substances are harmful or not when compared to statewide rates.

The following charts visualize comparative perceived risk, by grouping results into simplified categories of “dangerous, not dangerous, and do not know.”



Access

Accessibility, or the extent to which adolescents can obtain alcohol and other drugs easily, is essential to understanding consumption rates among adolescents throughout the region.

Perceived Access

Youths’ perceptions of how easy it is to access substances is an indicator that can help predict changes in incidence rates of substance abuse.⁷³ This section presents perceived access by grade level and substance.

In the 2014 Texas School Survey, students in grades six through twelve were asked how difficult it would be to get substances, on a 5-point scale from impossible to very easy.⁷⁴ In the summary chart below, “easy” refers to students who reported it was either somewhat easy or very easy to get substances if they wanted them.

Region 6 Students Grades 6-12 Reporting it is Easy to Access Substances	
Substance	Percentage
Alcohol	46.4%
Marijuana	36.8%
Synthetic Marijuana	16.6%
Prescription Drugs	*

- In 2014, 46.4% of adolescents in grades 6-12 in Region 6 reported it would be easy to get alcohol.

Percentages of Students Reporting it is Easy to Get Alcohol		
Grade	“Somewhat easy”	“Very easy”
All grades	18.2	28.8
6th	6.3	7.4
7th	12.5	15.6
8th	17.0	22.0
9th	20.5	32.4
10th	22.9	37.1
11th	23.3	44.7
12th	25.3	44.5

- In 2014, 36.8% of students grades 6-12 in Region 6 reported it would be easy to get marijuana.

Percentages of Students Reporting it is Easy to Get Marijuana		
Grade	“Somewhat easy”	“Very easy”
All grades	13.7	23.1
6th	3.6	4.0
7th	5.5	8.3
8th	11.5	14.1
9th	15.5	27.2
10th	21.3	29.3
11th	18.9	42.4
12th	20.5	39.4

- In 2014, 23.5% of students grades 6-12 in Region 6 reported it would be easy to get synthetic marijuana.

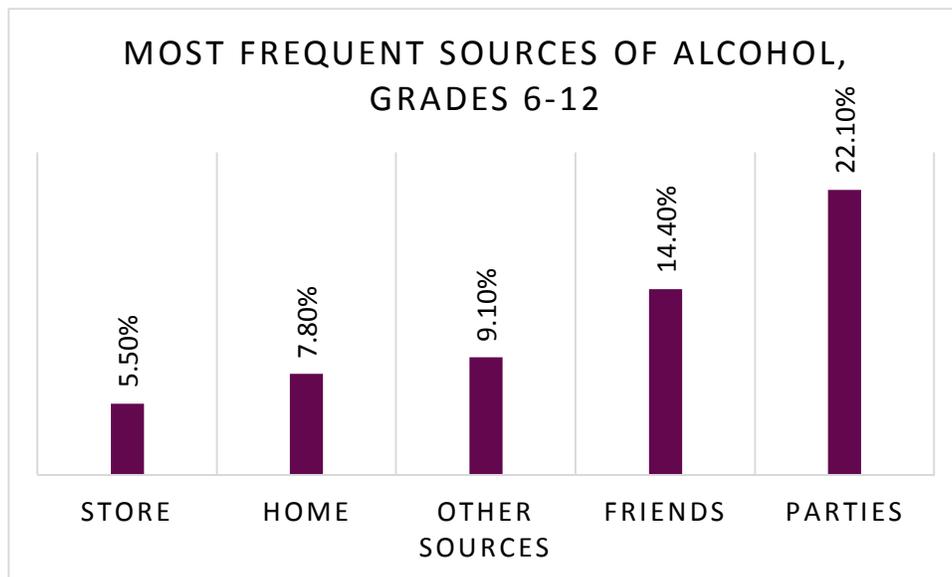
Percentages of Students Reporting it is Easy to Get Synthetic Marijuana		
All grades	13.7	9.8
6th	1.7	1.8
7th	2.7	4.3
8th	5.9	5.8
9th	8.3	12.1
10th	8.5	11.4
11th	11.8	16.6
12th	9.2	17.8

Alcohol Access

The most common type of alcohol consumed by youth in Region 6 is beer (38.5%), with liquor a close second (34.7%). The most common access point for youth to obtain these and other alcohol is at parties.

A summary of findings on access points of alcohol by students grades 6-12 is below, based on the 2014 Texas School Survey.⁷⁵ These figures reflect the number of students who reported drinking and getting the alcohol from the following sources either “most of the time” or “always.”

- The most common access point of alcohol for teens in Region 6 is parties.



Alcohol Licenses and Sales Violations

The Texas Alcohol and Beverage Commission (TABC) regulates the alcoholic beverage industry in Texas. TABC regulates the sale, taxation, importation, manufacturing, transporting and advertising of beverages. Violations from the TABC are relevant to underage drinking because adolescents often access alcohol from retailers who commit alcohol license violations.

Findings from the TABC⁷⁶:

- Between April 2013 and April 2014, TABC reported 1,003 alcohol permit violations from retailers throughout Region 6.

A new product of powdered alcohol was approved and then revoked by the Alcohol and Tobacco Tax and Trade Bureau in 2015. Powdered alcohol would have been sold on shelves and online in small, portable pouches. When mixed with water it creates five ounces of alcohol. As of July 2015, this product is not approved for sale in the U.S.

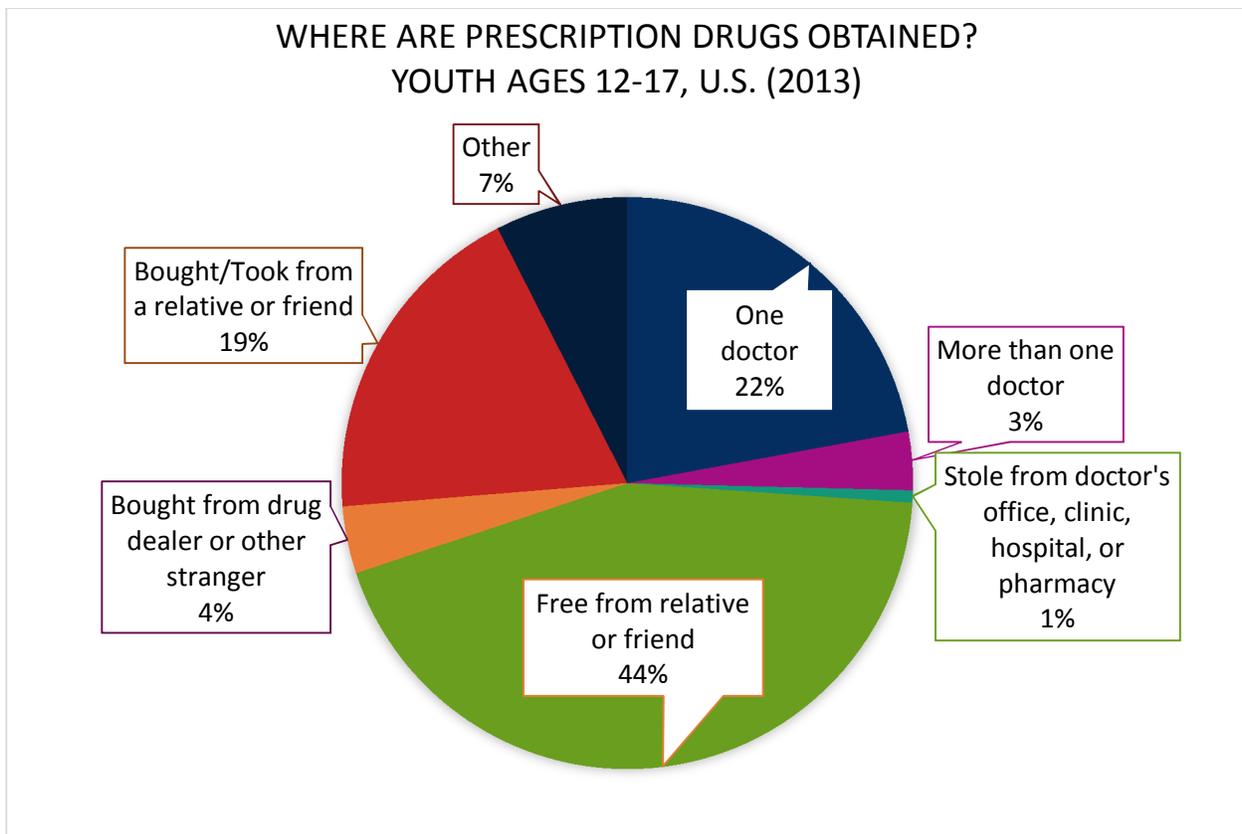
The National Poll on Children’s Health by the University of Michigan’s C.S. Mott Children’s Hospital surveyed adults about powdered alcohol in March 2015⁷⁷:

- 85% of adults are concerned that powdered alcohol will increase use of alcohol for people under age 21.
- 60% of adults are in favor of banning the sale of powdered alcohol in their state.
- 84% of adults are in favor of prohibiting online sales of powdered alcohol.

Prescription Drugs Access

Information on where people access prescription drugs that are abused is provided by the National Survey on Drug Use and Health⁷⁸:

- Among all ages surveyed across the U.S., the most common source of prescription drugs is “free from a relative or friend,” 53%.
- Among teens ages 12-17 surveyed in the U.S., the most common source of prescription drugs are family and friends: 19% bought or took pills from a relative or friend, and 44% received them for free from a relative or friend.



Illegal Drugs on School Property

Some youth have access to drugs brought onto school property by students or others. The findings below are taken from the Youth Risk Behavior Survey (2013), which provides data for the state of Texas and the Houston MSA⁷⁹:

- 26.4% of high school students in Texas reported they were offered, sold, or given an illegal drug on school property.
- 32.2% of high school students in Houston reported they were offered, sold, or given an illegal drug on school property.

To contextualize these figures, the following comparisons are provided by the YRBS State/District and National Results comparison tool⁸⁰:

- Nationally, 22.1% of high school students reported being offered or sold drugs on school property. The Texas rate of 26.4% is higher than the national rate.
- Houston's rate of 32.2% of students being offered or sold drugs on school property is comparable to, although higher than, other large urban areas of similar size, such as Chicago, IL (30.9%) and Los Angeles, CA (29.5%).

Regional Consumption

This section of the RNA focuses on consumption rates of alcohol, marijuana, prescription drugs, tobacco and other drugs among adolescents. State and national surveys provide self-reported use rates, and poison control centers and hospital admissions data provide exposure rates. The key sources utilized in this section are:

- The Texas School Survey (TSS) via DSHS and Texas A&M University (2014)
- The Youth Risk Behavior Survey (YRBS) via CDC (2013)
- National Survey on Drug Use and Health (NSDUH) via SAMHSA (2013)
- Texas Poison Centers (2014)

This year (2015), the most current and most local data on substance consumption is provided by the Texas School Survey (2014). This section begins with a comparative overview of regional and state incidence rates then considers each key substance of abuse individually.

Consumption Overview

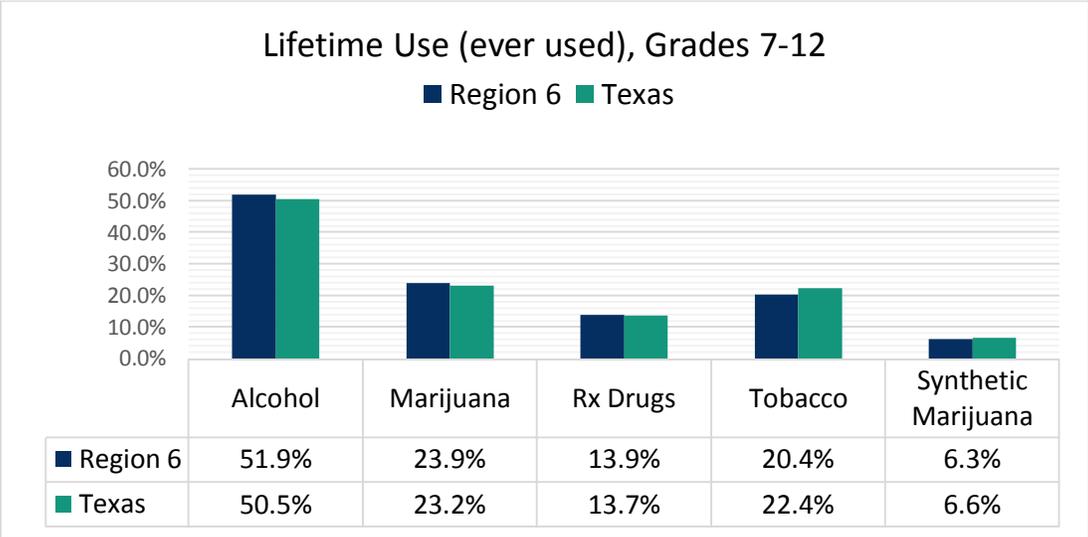
This overview provides readers with a high-level comparative picture of consumption in Texas and our region, including:

1. Current use (last 30 days prior to survey)
2. Lifetime use (ever used prior to survey)
3. Age of initiation

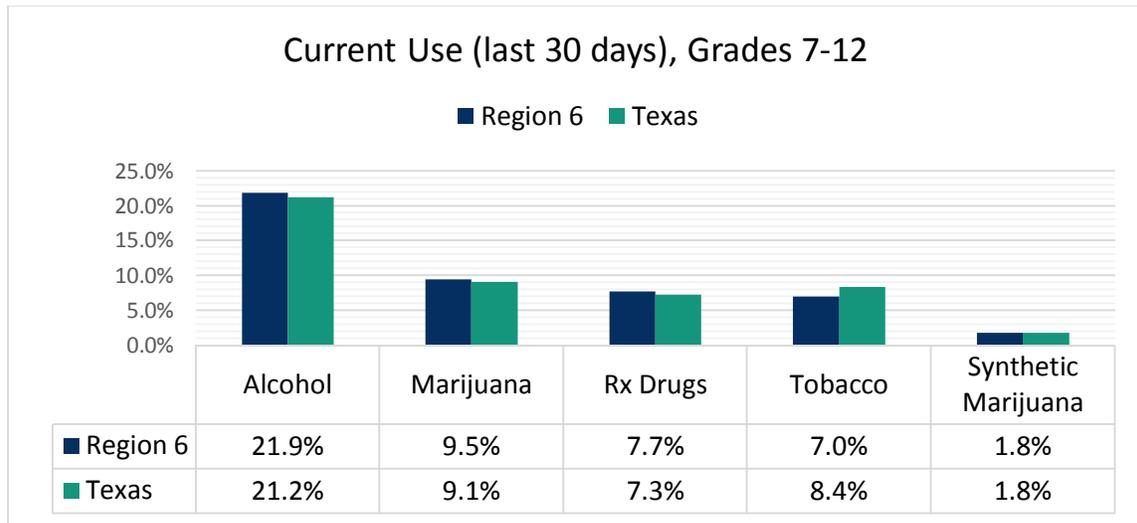
Alcohol remains the number one substance of abuse among adolescents, and marijuana is the second.

Rates of students having ever abused alcohol, marijuana, or prescription drugs are slightly higher in Region 6 than statewide rates.

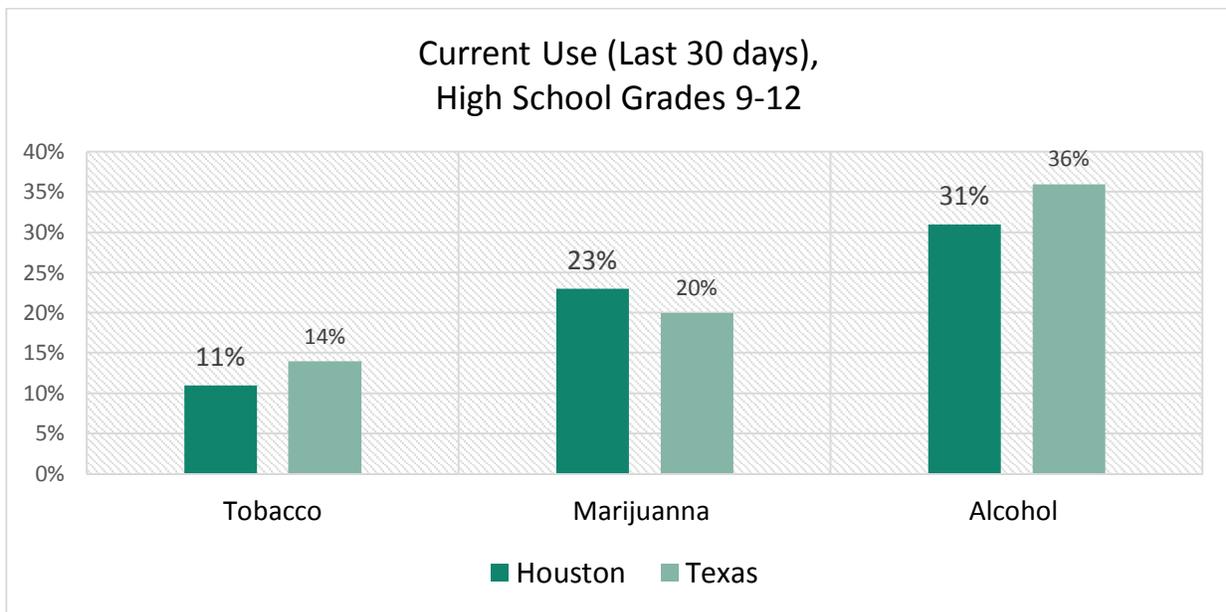
Lifetime use rates may indicate a single use in the past or present continuous use. Results from adolescents in grades 7-12, via the Texas School Survey (2014)⁸¹⁻⁸²:

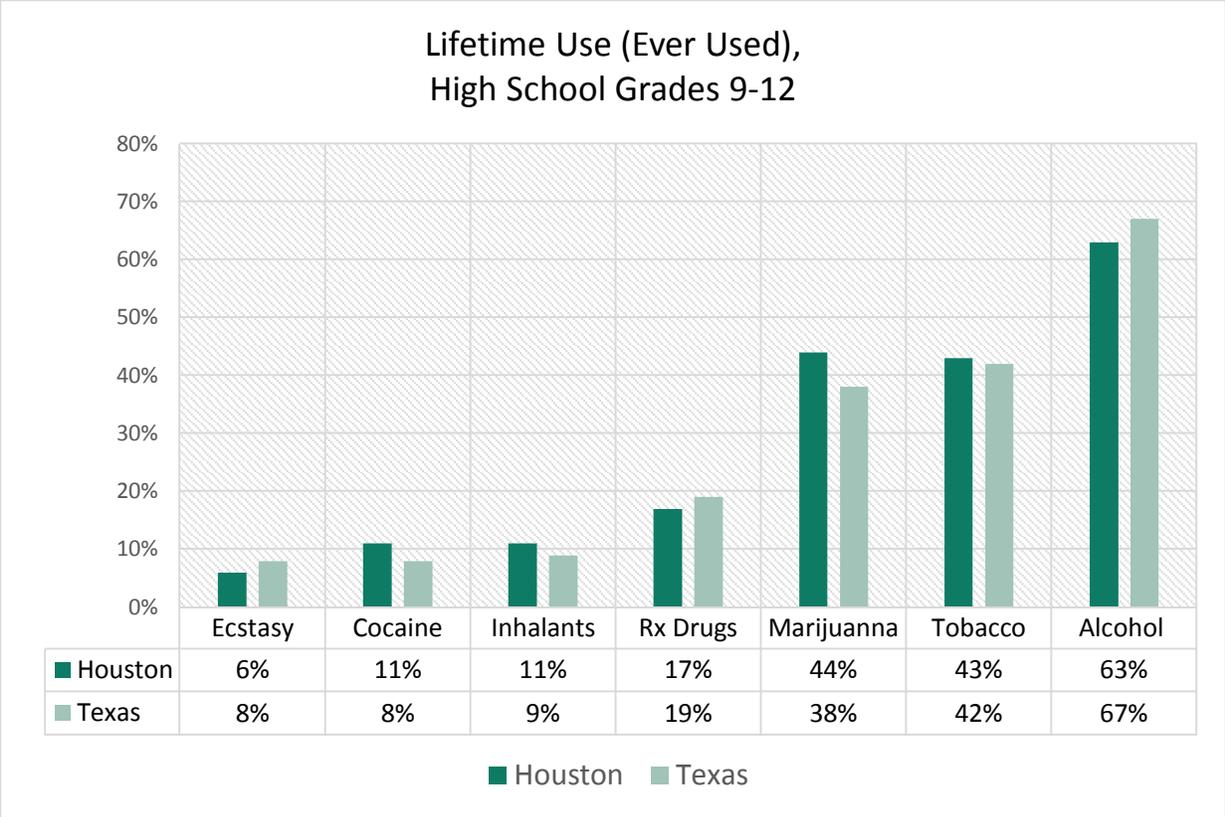


Current use rates function as a snapshot of activity indicative of new and continuous use.



Rates of use among high school students (grades 9-12) are available as well. The following data includes the state of Texas and the Houston MSA, from the Youth Risk Behavior Survey (2013)⁸³:





Age of Initiation

Information on age of first use is presented here to help regional prevention programs deliver information to students before and during pivotal ages.

The average age of first use is 13 years old.

Among adolescents who have used substances, the age of initiation is slightly younger in Region 6 than state-wide averages. From the Texas School Survey (2014)⁸⁴:

Average Age of Initiation to Substances		
Region 6	Texas	Substance
12.8	12.9	Alcohol
13.1	13.3	Tobacco
13.6	13.8	Marijuana
14.2	14.2	Synthetic Marijuana
*		Prescription Drugs ‡

*Data is unavailable on age of first use of prescription drugs.

Early initiation figures help explain how many teens who are currently using substances started before the age of 13.

Percentages of Early Initiation (before age 13)		
Region 6	Texas	Substance
40.7%	38.0%	Alcohol
36.3%	33.7%	Tobacco
25.8%	23.1%	Marijuana
14.9%	14.7%	Synthetic Marijuana
*		Prescription Drugs

The following sections examine each substance individually.

Alcohol

Rates of underage drinking in Texas are declining slowly over time; however, alcohol remains the number one drug of choice among adolescents.

Findings from the Texas School Survey^{85,86}:

- The rate of lifetime use of alcohol among youth in Texas has reduced in the last 20 years from 74.1% in 1994 to 50.5% in 2014.
- 51.9% of students in Region 6 have ever used alcohol (lifetime use).
- 21.9% of students in middle and high school used alcohol in the last month in Region 6 (current use).
- 13.3% of Region 6 students in middle and high school report binge drinking in the last month.
- 4.2% of students in grades 6-12 report having attended class while drunk at least once in the last school year.
- The number-one source for alcohol among teens in our region is parties.
- The average age of first use of alcohol in Region 6 is 12.8 years old.
- 40.7% of students who have ever drunk alcohol started before age 13.
- Students who use alcohol report having conduct problems in school three times as often as non-users.
- 8.3% of students of driving age report having driven while drunk in the last year.

Binge drinking is defined as four drinks in a two-hour period for women and five drinks in two hours for men. The following provides information on current use and binge drinking in our region, by grade level⁸⁷:

Current (past month) Alcohol Consumption, by Grade, Region 6		
Grade	Current Use	Current High-Risk Use (binge drinking)
All	21.9%	13.3%
6th	8.1%	2.7%
7th	12.7%	4.3%
8th	12.3%	6.6%
9th	25.4%	15.7%
10th	27.5%	15.3%
11th	33.2%	24.3%
12th	36.3%	26.4%

Early initiation to alcohol is slightly more common in Region 6 than the state average:

Alcohol Initiation, Grades 6-12, Region 6 and Texas		
Report Area	Average Age of Initiation	Early Initiation (<13)
Texas	12.9	38.0%
Region 6	12.8	40.7%

Marijuana

Rates of marijuana use by adolescents have remained relatively stable in the last 20 years while incidence of other substance use declined significantly.⁸⁸

Findings from the 2014 Texas School Survey, Region 6⁸⁹:

- 23.9% of middle school and high school students in Region 6 have used marijuana (lifetime use).
- Prevalence is slightly higher among boys than girls in our Region: 25.2% of boys in grades 6-12 have used marijuana at least once, compared with 22.7% of girls.
- Rates of early initiation to marijuana (first use before age 13) are higher in Region 6 than the statewide average. 25.8% of students who have used marijuana began using before age 13.
- 15% of high school juniors and seniors report attending class while high on marijuana in the last school year at least once.
- 5% of high school juniors and seniors report attending class while high on marijuana ten or more times in the last school year.
- Middle and high school students who use marijuana report having conduct problems in school more than four times as often as non-users.
- 11% of students of driving age report having driven while high in the last year.

The following table provides detail of regional marijuana consumption by grade level:

Current and Lifetime Marijuana Use, by Grade, Texas Region 6		
Grade	Current Use	Lifetime Use
All Grades	9.50%	23.90%
6th	1.40%	6.90%
7th	4.30%	9.20%
8th	4.30%	14.90%
9th	11.00%	27.90%
10th	10.60%	29.80%
11th	18.30%	40.50%
12th	18.10%	41.40%

The most significant increases in incidence appear in 9th grade.

- Lifetime use jumps from 14.9% among 8th graders to 27.9% among 9th graders.
- Current use rises from 4.3% among 8th graders to 11% among 9th graders.

The average age of first use of marijuana in our region is 13.6 years old.

Marijuana Initiation, Grades 6-12, Region 6 and Texas		
Report Area	Average Age of Initiation	Early Initiation (<13)
Texas	13.8	23.1%
Region 6	13.6	25.8%

Prescription Drugs

Prescription drugs are the third most commonly abused substance by adolescents. Many different classes of prescription drugs exist, with varying effects, which can make consistent data collection about prescription drug abuse challenging. Fortunately, the Public Policy Research Institute provides some regional data about a variety of prescription drugs commonly abused in our state.

Findings from the Texas School Survey (2014)⁹⁰:

- Rates of non-medical use of prescription drugs are comparable to and slightly higher than state averages.
- 7.7% of students in grades 7-12 in Region 6 report current use (last 30 days) of prescription drugs for the feeling they cause.
- 13.9% of students in grades 7-12 in Region 6 report lifetime use (ever used) of prescription drugs for the feeling they cause.

Local data on the average age of initiation to prescription drug abuse is unavailable at this time.

The following table provides detail of prescription drug misuse by drug type and grade level:

Lifetime Use of Prescription Drugs, by Grade, Region 6				
Grade	Codeine	Vicodin, Hydrocodone, Lortab, or Lorcet	Xanax or Alprazolam	Oxycodone, Oxycontin, Percodan, or Percocet
All Grades	5.6%	3.7%	2.6%	2.1%
6th	3.4%	0.8%	0.5%	0.8%
7th	2.6%	0.5%	0.2%	0.4%
8th	4.0%	1.1%	0.6%	0.8%
9th	6.3%	4.5%	3.1%	2.3%
10th	6.9%	4.0%	2.7%	2.3%
11th	9.0%	8.4%	5.1%	3.9%
12th	7.2%	7.2%	6.0%	3.9%

Opioid prescription drug overdose remains the leading cause of accidental death in Texas and the United States.

Texas Poison Centers provided the following information about opioid drug exposures in Region 6⁹¹:

- Approximately 7,500 opioid exposures were reported to poison control in Region 6 in the last six years.
- Adjusted for population, Texas rural counties have a higher rate of exposure to opioids per population total than urban counties.
- 26% of reported opioid exposures in our region involved youth under age 20. 11% involved adolescents ages 13-19.
- 58% of reported opioid exposures involved female patients.

Tobacco

Tobacco use has steadily declined in the last 20 years in Texas, from 54.5% in 1994 to 22.4% in 2014.⁹²

Regional findings on tobacco use among Region 6 youth from the Texas School Survey (2014)⁹³:

- 7% of adolescents in Region 6 are current smokers, which is slightly less than the state average of 8.4%.
- 36% of youths who have smoked started by age 12 or younger in Region 6. This is higher than the statewide early initiation rate of 33.7%

Tobacco Initiation, Grades 7-12, Region 6 and Texas		
Report Area	Age of Initiation	Early Initiation (<13)
Texas	13.3	33.7%
Region 6	13.1	36.3%

Emerging Trends

Synthetic Cannabinoids

Synthetic marijuana indicators and consumption initially spiked in 2011 but decreased in 2013 and early 2014. However, a dramatic increase in synthetic marijuana consumption and hospitalization occurred in late 2014 and early 2015, both nation-wide and in Region 6.

The following information is provided by the Centers for Disease Control and Prevention⁹⁴:

- The National Poison Data System reported a 330% increase in synthetic cannabinoid exposures from 2014 to 2015.
- Emergency room visits involving synthetic cannabis are occurring at four times the rate in 2015 than in 2014.

Regional data is provided by the Texas Poison Centers, 2010-2015⁹⁵:

- Synthetic marijuana exposures reported to poison control spiked in 2014, from an average of 508 per year the previous four years to 785 in 2014. This is a 169% increase from 2013 to 2014.
- 45% of synthetic marijuana exposures in the last 5 years are youth under the age of 20.
- 76.9% of synthetic marijuana exposures are male patients.
- The Region 6 counties with the most synthetic marijuana exposures 2010-2014 are: Brazoria, Fort Bend, Harris, and Montgomery Counties.

The following information on rates of use are provided by the Monitoring the Future (MTF) survey and the Texas School Survey (TSS).⁹⁶⁻⁹⁷ Unfortunately, MTF data are not directly comparable to local TSS data, because the MTF surveys students about past-year use, and the TSS surveys students about past-month use and lifetime use.

- Nationally, one in twenty high school students used synthetic marijuana in the last year (5%).
- Lifetime use among Region 6 high school students ranges from 7.7% to 11%, varying by grade level.
- Among students in our region who have used synthetic marijuana, the average age of first use is 14.2 years old. Fifteen percent started using at age 12 or younger.

Synthetic Marijuana Initiation, Grades 6-12, Region 6 and Texas		
Report Area	Age of Initiation	Early Initiation (<13)
Texas	14.2	14.7%
Region 6	14.2	14.9%

The following table provides grade-level detail of lifetime use rates in Region 6, via the Texas School Survey (2014)⁹⁸:

Synthetic Marijuana Current and Lifetime Use, Region 6, By Grade		
Grade	Current Use (last 30 days)	Lifetime Use (ever used)
All Grades	1.80%	6.3%
6th	0.6%	2.9%
7th	1.1%	1.9%
8th	0.7%	3.3%
9th	2.6%	7.7%
10th	2.2%	7.9%
11th	3.1%	11.0%
12th	2.0%	9.5%

Note that current and lifetime use are higher among 11th graders than 12th graders in these data.

Synthetic drugs or designer drugs cause severe physical and behavioral health effects. The documented health effects of synthetic marijuana are:

- Extreme anxiety, delusions, and hallucinations
- Violent behavior
- Temporary and persistent psychosis
- Rapid fever
- Tachycardia (rapid heartbeat)
- Stroke
- Death

The PRC 6 Epidemiology Workgroup quickly identified the resurgence in synthetic drugs in 2015. The PRC organized and hosted an educational symposium on synthetic marijuana in July 2015 to facilitate training on this critical public health risk. Regional partners from the Drug Enforcement Administration, the Houston High-Intensity Drug Trafficking Area program, University of Texas Health Science Center, and The Council on Recovery assisted to provide current, interdisciplinary information on synthetic marijuana to approximately 350 professionals in clinical practice, law enforcement, education, social work, and substance abuse prevention.

New state laws restricting synthetic drug possession, sales, and use go into effect September 1, 2015.

E-Cigarettes and Hookah

E-cigarette and hookah use continue to increase rapidly among youth, nationwide and in Region 6. This section presents national data from the National Youth Tobacco Survey (2011-2014) and regional/state data from the Texas Poison Centers (2011-2014).

The Centers for Disease Control and Prevention reports that in the United States⁹⁹:

- E-cigarette use by high school students has increased nearly 800% from 2011 to 2014.
- More than one in eight high school students in the U.S., 13.4%, report current use of e-cigarettes (used in the last 30 days).
- In 2014 e-cigarette use surpassed current use of every other type of tobacco product.
- Hookah use by high school students has more than doubled from 2011 to 2014.
- Almost one in ten high school students, 9.4%, report current use of hookah (used in last 30 days).
- From 2013 to 2014, e-cigarette and hookah use increased substantially among middle school and high school students, resulting in an estimated 2.4 million youth e-cigarette users and 1.6 million youth hookah users.

Using a waterpipe is not a safe alternative to cigarette smoking. Health research on hookah use supports the following conclusions¹⁰⁰:

- Short-term effects include nausea and vomiting.
- Long-term effects include addiction and absorption of cancer-causing chemicals.
- Second-hand smoke from waterpipes is a mixture of tobacco smoke and fuel smoke, both of which contain cancer-causing chemicals and pose a health risk to users and nearby non-users.
- Sharing a hookah mouthpiece poses serious risk of transmitting communicable diseases such as tuberculosis and hepatitis.

The Texas Poison Centers reports the following about e-cigarettes in Texas¹⁰¹:

- Over 500 exposures to concentrated nicotine via e-cigarettes were reported in Texas in the last five years.
- E-cigarette exposures reported to poison control have approximately tripled year over year for the last four years in Texas.
- 67% of reported e-cigarette exposures are patients under the age of 20.

There are no regulations, codes or laws requiring that e-cigarettes be subject to product safety testing.¹⁰² E-cigarettes are not recommended as a smoking cessation or safe alternative to smoking. Long-term health effects of e-cigarettes are currently unknown because the products have not been on the market long enough for longitudinal studies to be completed. However, e-cigarettes using liquid nicotine pose the following documented health risks¹⁰³:

- Addiction to nicotine
- Nicotine poisoning when exposed to skin or ingested
- Hindered brain development among children and fetuses exposed to nicotine
- Levels of toxicants and nicotine vary widely by product. Some brands of e-cigarettes contain the same cancer-causing agents found in cigarettes.

E-cigarettes are also used to vaporize marijuana hash oil (a.k.a. honey oil, BHO, wax, butter). Vaping cannabis oil is gaining in popularity, in part because e-cigarettes produce less odor and are easily concealed.¹⁰⁴ It is recommended that parents and decision makers be made aware of the alternative uses and health risks of e-cigarettes in order to help curb youth use.

Consequences

The following sections will explore the consequences of substance use in Region 6, including health effects, car crashes, and community economic impact.

Mortality

Fatal Drug Overdose and Alcohol Poisoning

The Centers for Disease Control provide data on the average number and rate of drug and alcohol-induced deaths. Averages are calculated as an annual rate based on years 1999-2013.¹⁰⁵

Annual Drug and Alcohol-Induced Death Rate, Region 6		
Report Area	Deaths	Rate per 100,000
Austin County, TX	48	11.74
Brazoria County, TX	634	14.76
Chambers County, TX	81	17.54
Colorado County, TX	36	12.04
Fort Bend County, TX	491	6.69
Galveston County, TX	912	21.21
Harris County, TX	8772	15.95
Liberty County, TX	244	21.78
Matagorda County, TX	74	13.42
Montgomery County, TX	1011	17.01
Walker County, TX	98	10.35
Waller County, TX	79	14.46
Wharton County, TX	10	Unreliable
TEXAS	52,352	15.29

- The rate of drug or alcohol induced mortality in Region 6 is 14.79, slightly less than the Texas rate of 15.29.
- Five of Region 6's counties have a drug or alcohol induced death rate above the state average: Chambers, Galveston, Harris, Liberty, and Montgomery Counties.

Recent figures on death by overdose reveal a strong increase in prescription drug abuse and its tragic consequences. The Centers for Disease Control announced in 2011 that, nationally, deaths from opioid pain relievers exceed those from illegal drugs.¹⁰⁶ Adolescents and adults may perceive prescription drugs to be safer than illegal drugs; however, they can be highly addictive and are the leading cause of accidental death in Texas and the United States.

Driving Under the Influence Fatalities

The Texas County with the highest number of DUI related fatalities in 2012 was Harris County of Region 6. Additional findings on DUI related fatalities in Harris County and Region 6 are below, from the Texas Department of Transportation, 2010-2014¹⁰⁷:

- There have been 1,207 DUI fatalities in Region 6 in the past five years.
- There have been 5,281 DUI fatalities in Texas in the past five years.

- 23% of the state's DUI fatalities occur in Region 6.

County	Total DUI Fatalities	DUI Fatality Rate per 100K
Austin	10	6.84
Brazoria	54	3.33
Chambers	12	6.59
Colorado	10	9.50
Fort Bend	83	2.70
Galveston	57	3.83
Harris	780	3.71
Liberty	23	5.92
Matagorda	18	9.66
Montgomery	108	4.54
Walker	24	6.99
Waller	16	7.13
Wharton	12	unreliable
Texas	5,281	4.08

- Eight of Region 6's 13 counties have a DUI fatality rate greater than the state average: Austin, Chambers, Colorado, Liberty, Matagorda, Montgomery, Walker, and Waller Counties.
- Colorado and Matagorda counties have DUI fatality rates over twice the state rate.

Non-fatal DUI Crashes

The Texas Department of Transportation provides the following information on non-fatal automobile crashes involving driving under the influence¹⁰⁸:

County	Total DUI Crashes	DUI Crash Rate per 100,000
Austin	168	114.92
Brazoria	1349	83.09
Chambers	389	213.68
Colorado	176	167.12
Fort Bend	1402	45.55
Galveston	1188	79.90
Harris	14082	66.90
Liberty	331	85.27
Matagorda	219	117.57
Montgomery	2697	113.27
Walker	391	113.83
Waller	281	125.19
Wharton	46	168.60
Texas	124,569	96.34

- Most of Region 6 counties have a greater rate of DUI non-fatal crashes than the state average (96.34): Austin, Chambers, Colorado, Matagorda, Montgomery, Walker, Waller, and Wharton.
- Chambers County of Region 6 has a DUI crash rate more than twice the state rate.

Health Effects

Alcohol, marijuana, prescription drugs, and synthetic drugs each may cause addiction, developmental impairments, and other serious health effects among adolescents.

Adolescent Brain Development

The two most prevalent substances of abuse in our region are alcohol and marijuana. Neuroscience research finds that alcohol and marijuana are detrimental to adolescent brain development. Numerous studies have found that alcohol and/or marijuana use hinder growth of neurocognitive functioning, particularly learning and memory retrieval, attention span development, and visuospatial reasoning.¹⁰⁹

Addiction and Withdrawal

The Substance Abuse and Mental Health Administration reports that people who begin drinking before age 21 are four times more likely to become alcoholic adults than people who do not drink underage. The rate of substance dependency among marijuana users is 10%, comparable to rates of alcohol dependence. The rate of substance dependency increases to 17% among marijuana users who started using during adolescence.¹¹⁰

Marijuana is the most common substance for which youth under age 21 seek substance abuse treatment, in Texas and the U.S.¹¹¹ Numerous studies have reported withdrawal symptoms among adolescents trying to stop using marijuana.¹¹²

Prescription Drugs

Among prescription drugs, addiction and withdrawal vary depending on the class of drug. Opioid prescription drugs in particular are highly addictive and cause serious withdrawal symptoms. Studies show that more than 50% of patients taking opioids for at least three months are still taking the drugs five years later.¹¹³

Prevalence of prescription opioid addiction may impact local heroin availability and use. Approximately half of adolescent heroin users used prescription pain killers before starting heroin.¹¹⁴ As access to prescription drugs decreases, users may replace prescription opioids with illicit opiates to avoid withdrawal.¹¹⁵

Opioid use may cause hypoxia which can induce a coma, permanent brain damage, or death.¹¹⁶

- Opioid prescription drug overdose is the number-one cause of accidental deaths in Texas and the U.S. More deaths result from overdoses involving opioids than from car crashes or violence.
- Opioid prescription drugs cause more overdoses than all other drugs combined.

Marijuana

A literature review of marijuana research over the last twenty years provides the following conclusions¹¹⁷:

- Regular marijuana use in adolescence approximately doubles the risk of having schizophrenia or other psychotic symptoms in adulthood.
- Regular marijuana users can develop substance dependence, the risk of which increases among those who start in adolescence.
- Regular marijuana use that begins in adolescence causes intellectual impairment.
- Regular marijuana smokers have a higher risk for chronic bronchitis.
- Marijuana use causes impaired driving ability. Driving while cannabis-intoxicated doubles the risk of car crash. The risk increases substantially if users are also alcohol-intoxicated.
- Marijuana use during pregnancy reduces baby birth weight.

Binge Drinking

Binge drinking in adolescence has several negative health effects, including significantly disrupting the immune system and permanently reducing cognitive and memory functioning.^{118,119} Binge drinking increases the risk for the following¹²⁰:

- Accidental death and injury by car crashes, falls, burns, and drownings.
- Alcohol poisoning and death by alcohol poisoning
- Sexual dysfunction and sexually transmitted disease
- Fetal alcohol spectrum disorders
- Liver disease
- Neurological damage

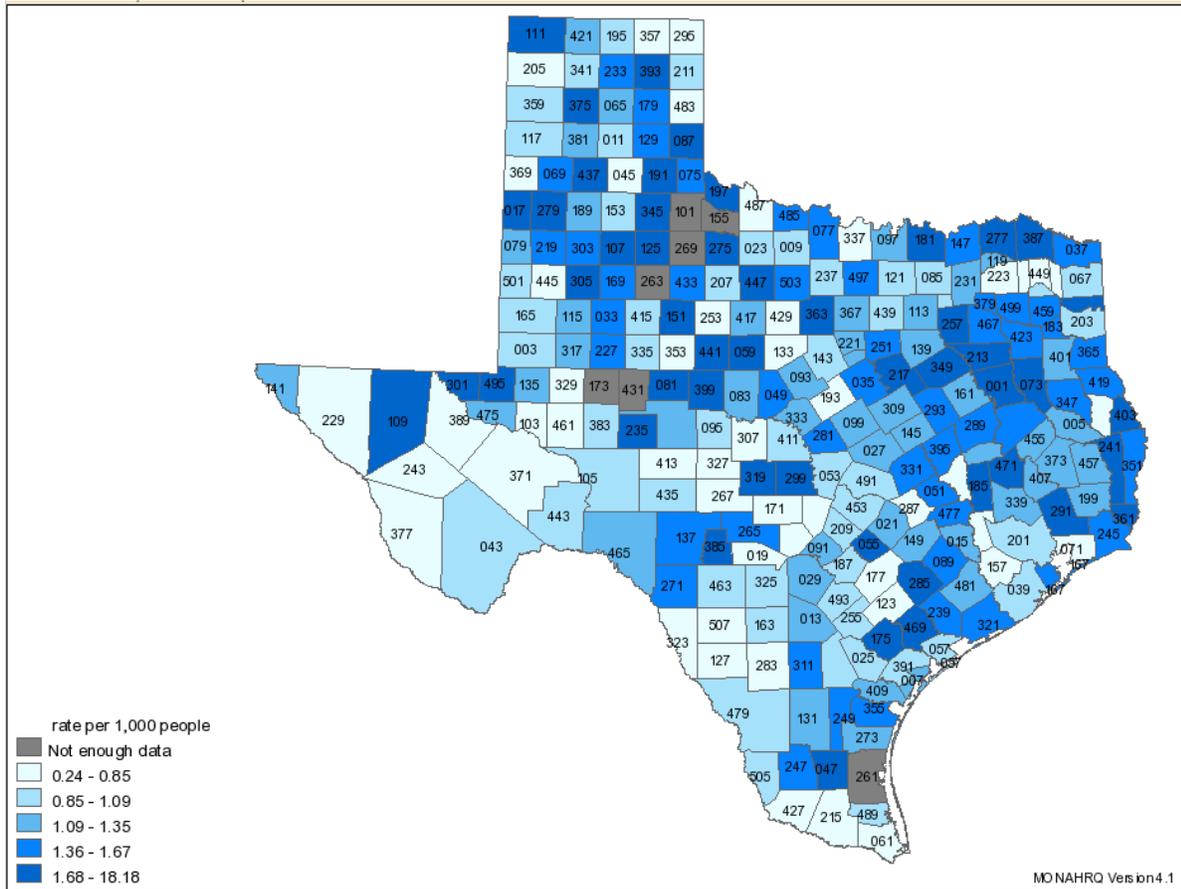
Hospitalization and Treatment

The following sections present information on hospitalization utilization related to alcohol and drugs, as well as substance abuse treatment utilization.

Hospital Use due to AOD

The Agency on Health Research and Quality provides data on hospital utilization due to drug poisoning across Texas using the latest data available (2012), via the MONAHRQ database¹²¹:

- Liberty County, Galveston County, and Matagorda County have the highest rate of hospital utilization due to drug poisonings in Region 6.



The Agency on Health Research and Quality also provides data on hospital utilization for substance related disorders. Patient discharge data (2012) via the MONAHRQ database¹²²:

- In Region 6, 243 patients were treated in hospitals for substance related disorders.
- The mean cost for hospital treatment for substance related disorders in Region 6 is \$59,367.

Substance Abuse Treatment

Findings from the Department of State Health Services, 2014¹²³:

- A total of 34,622 adolescents and adults were admitted for substance abuse treatment last year in Texas.

In Texas last year, 29,714 adults and 4,908 adolescents initiated substance abuse treatment. The top five substances for which adults and youth, respectively, entered substance abuse treatment in Texas are¹²⁴:

Adults: Primary Substances of Treatment in Texas	
Substance	Percent of all treatment admissions
Alcohol	29.48%
Marijuana	17.19%
Methamphetamine	14.27%
Heroin	11.70%
Prescription Drugs	9.23%

Youth: Primary Substances of Treatment in Texas	
Substance	Percent of all treatment admissions
Marijuana	85.2%
Alcohol	3.7%
Prescription Drugs	2.6%
Other Cannabinoids (Synthetic Marijuana)	2.5%
Methamphetamine	2.0%

Regional findings about substance abuse treatment, from the Department of State Health Services¹²⁵⁻¹²⁶:

- 6,530 adult residents of Region 6 were admitted for substance abuse treatment last year.

Adult Substance Abuse Treatment Admissions in Region 6	
Client County	Number of Admissions
Austin	24
Brazoria	451
Chambers	§
Colorado	
Fort Bend	331
Galveston	583
Harris	4,756
Liberty	62
Matagorda	26
Montgomery	230
Walker	12
Waller	40
Wharton	15
REGION 6	6,530

§ Chambers and Colorado Counties were not reported in this data set.

- 4,908 adolescents were admitted for substance abuse treatment in Texas last year.
- 1,277 adolescents living in Region 6 were admitted for substance abuse treatment last year.**
- 26% of Texas adolescents entering substance abuse treatment are from Region 6.

Legal Consequences

This section presents data on legal consequences for youth drug and alcohol use.

Findings from arrest data provided by the Texas Department of Public Safety, Uniform Crime Reporting¹²⁷:

- 4,161 juvenile arrests were made in 2013 in Region 6 for drug and alcohol offenses.
- Rates of arrests for boys are significantly higher than girls for substance use related crimes in Region 6.
- 83.5% of juvenile arrests related to drug or alcohol violations are for marijuana possession.

County	Drug Violations (possession, sale)	DUI (substance not specified)	Alcohol Offenses (liquor law violation, drunkenness)
Austin	16	1	0
Brazoria	161	7	58
Chambers	4	1	4
Colorado	14	0	7
Fort Bend	278	4	43
Galveston	218	4	193
Harris	2,399	40	408
Liberty	15	0	8
Matagorda	22	1	23
Montgomery	155	1	23
Walker	11	0	4
Waller	5	1	1
Wharton	23	3	4
Region 6	3,321	63	776

Note: Arrest rates are presented here as consequences data only and are not recommended as a comparative measure of local youth substance use. Some areas may have great consumption rates but few arrests, or vice versa, depending on the resources and priorities of local law enforcement.

** Data is insufficient to provide county-level detail on adolescent treatment admissions.

Economic Impacts

The Pacific Institute for Research and Evaluation provides calculations of the economic impacts of underage drinking.¹²⁸ The following figures include impacts of medical costs, work loss, criminal justice costs, and property damage resulting from youth alcohol use in Texas:

- In 2013, underage drinking cost Texas citizens \$1.78 billion dollars.
- In 2012, underage drinkers consumed 13% of all alcohol sold in Texas, totaling \$1.22 billion in sales and \$599 million in profit to the alcohol industry.

Environmental Protective Factors

The following data reflect regional and state protective factors that prevent or reduce youth substance use, such as community awareness, preventative information in schools, parental involvement, positive peer influence, and peer and adult confidants.

Community Domain

Region 6 is home to many agencies and coalitions that provide prevention services for the community, especially adolescents. The following list of providers offer a number of services including individual counseling and school-based prevention classes. The coalitions and collaborative groups listed serve the community on a macro level, advocating for the changing of laws, social policies and social norms in an effort to reduce substance use in youth and young adults.

It would require more space than is available in this needs assessment to describe the vital efforts of each of the service providers and community coalitions listed here.

Community Coalitions

There are several community coalitions for substance abuse prevention in Region 6. They provide invaluable services to the community, including:

- Organizing environmental changes to reduce youth drug and alcohol use.
- Community education of the facts of drugs and alcohol via public service announcements and community events.
- Early warning network: identifying emerging issues related to substance abuse within communities and communicating them to coalition members.
- Organizing and supporting prescription drug take-backs and permanent drop-boxes.
- Building capacity for community change in terms of access to alcohol and drugs for youth, as well as awareness of youth drug and alcohol use and their impacts to the wider community.

School Domain

Students Receiving AOD Education in School

Preventative education is increasing in Texas schools. The majority of students in Region 6 now receive information in a school setting about healthy choices and the risks of alcohol and drugs. Findings from the Texas School Survey (2014)^{129, 130}:

- 72% of students grades 6-12 report having received information about drugs or alcohol from a school source.
- The rate of students reporting they received drug or alcohol education in school increased in the 2014 survey by approximately 20% since the previous survey year (2012).

Peer Attitudes

Findings on peer attitudes toward alcohol, in Region 6 and statewide, indicate that substance dependence would cause peer disapproval. From the National Survey on Drug Use and Health¹³¹:

- 85.7% of adolescents across the state of Texas reported that their close friends would strongly or somewhat disapprove of having one or two alcoholic beverages nearly every day.
- 86% of adolescents in Region 6 reported that their close friends would strongly or somewhat disapprove of having one or two alcoholic beverages nearly every day.

Sober Schools

There are thirty-six sober schools in the United States, and Region 6 is home to two of them. A national study of the impacts on adolescent substance abuse recovery in sober schools, including Houston's Archway Academy, found "significant reduction in substance use as well as in mental health symptoms among the students."¹³² Archway Academy and Three Oaks Academy are private charter high schools that provide education and support to students in recovery within a sober environment.^{133,134} Three Oaks Academy also requires its students to participate in alternative peer groups (APGs), such as Lifeway.

Region 6 has been recognized as a nationally leading community for alternative peer groups. The city of Houston is featured in two documentaries about sober schools and community support for people in recovery. It is possible to find a continuum of recovery support after high school as well. Texas has more collegiate recovery services than any other state.

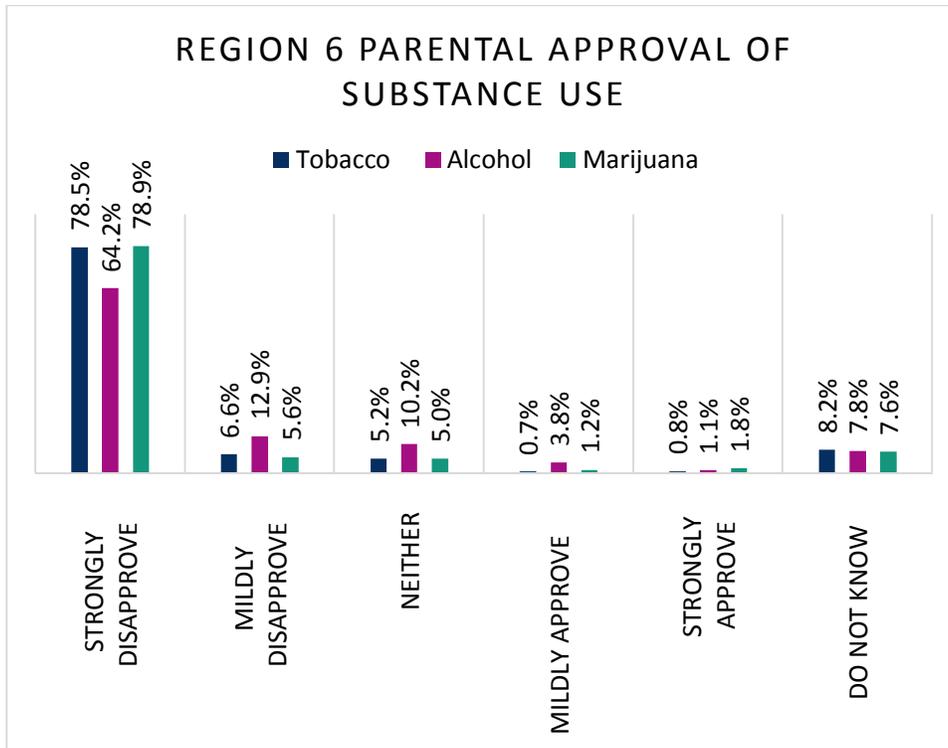
Family Domain

Parental Attitudes toward Alcohol and Drugs

As stated earlier, one of the most effective protective factors are parental involvement and clear expectations of behavior.

Information on how teens perceive their parent's approval or disapproval of substance use are provided by the Texas School Survey (2014)^{135, 136}:

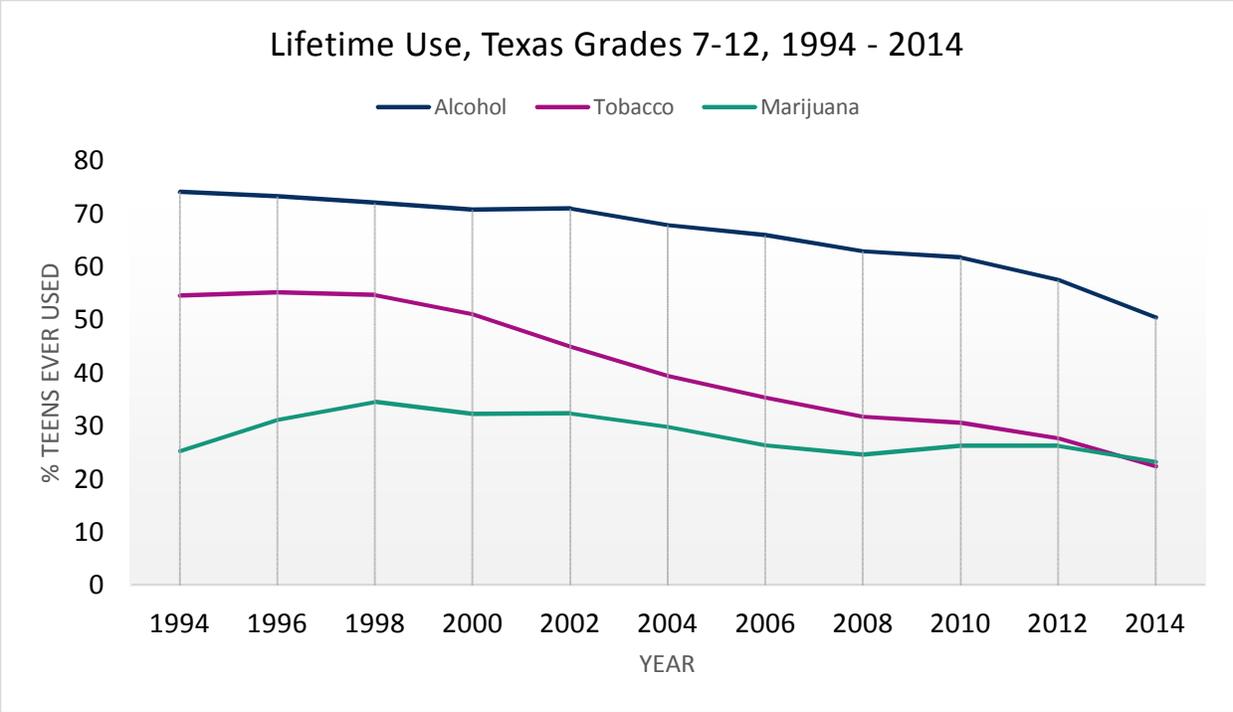
- 85.1% of students grades 7-12 report their parents would disapprove of tobacco use, in Region 6. This is slightly higher than the Texas average of 84.8%.
- 77.1% of students grades 7-12 report their parents would disapprove of alcohol use, in Region 6. This is slightly lower than the state average of 78%.
- 84.5% of students grades 7-12 report their parents would disapprove of marijuana use, in Region 6. This is in line with the state average of 84.8%.



Trends of Declining Use

Prevention efforts in Texas and nation-wide have had an impact on rates of youth substance use. The Texas School Survey provided the PRCs with 20-year data that demonstrate overall decline in teen substance use, particularly tobacco and alcohol.¹³⁷

- In the last 20 years in Texas, the rate of teens having ever used alcohol has declined by almost one-third. Lifetime use dropped from 74.1% in 1994 to 50.5% in 2014.
- The rate of lifetime tobacco use by teens in Texas has declined by more than half in the last 20 years, from 54.5% in 1994 to 22.4% in 2014.
- The rate of teen marijuana use has declined only slightly in the past 20 years in Texas, from 25.3% in 1994 to 23.2% in 2014.



Detailed rates by year are provided in the Appendix of this report.

Region in Focus

Gaps in Services

Access to services is crucial for substance abuse treatment. Several counties in Region 6 do not have treatment or recovery services.¹³⁸ For some residents, a distance of 30 miles is insurmountable due to lack of transportation, childcare, or conflicts with work schedules. Most areas lacking treatment options are also lacking prevention services.

- Austin County has no treatment services. The closest services are 20 miles away.
- Chambers County has no treatment services. The closest services are 18 miles away.
- Colorado County has no treatment services. The closest services are 43 miles away.
- Matagorda County has no treatment services. The closest services are 40 miles away.
- Wharton County has no treatment services. The closest services are 26 miles away.
- Waller County has no prevention services. Waller Co. has the highest rate of adolescents per total population in Region 6.

Gaps in Data

The research for this regional needs assessment would greatly benefit from centralized access to data that is already being reported to the Department of State Health Services (DSHS) from around the state and region. The PRC Evaluators look forward to the opportunity to join the Texas State Epidemiology Workgroup to help identify and coordinate data where possible. As the PRC 6 continues to grow our regional Epi-Workgroup, access to rich data from a variety of community sectors will improve.

Regional schools are strongly encouraged to participate in the Texas School Survey and the Texas College Survey to help move toward community level detail in survey results.

Regional Partners

The Prevention Resource Center 6 has been fortunate to partner with the following agencies in 2014-2015. This is not an exhaustive list, but some key stakeholders and regional partners are recognized here.

Bay Area Alliance for Youth and Families (Coalition)	Houston Harris County Office of Drug Policy (Coalition)
Phoenix House Coalition for Substance Abuse Prevention	Galveston County Community Resource Coordination Group
Brazoria County Community Coalition	Southeast Harris County Community Coalition
Change Happens	Tri-County Services
Coalition for Behavioral Health Services	Hello Hempstead
Communities in Schools	Houston Community College
Family Services of Greater Houston	Galveston Police Department
Fort Bend County Community Prevention Coalition	Drug Enforcement Administration Houston Division
Galveston County Community Coalition	Houston Crackdown
Gulf Coast Center	Community Family Centers
Harris County Institute of Forensic Sciences	Houston Recovery Initiative
Houston-Galveston Area Council	Harris County Sherriff's Department
Baytown Police Department	DePelchin Children's Center
The Behavioral Health Institute	Harris County Juvenile Probation Department
Houston High Intensity Drug Trafficking Area program	Public Policy Research Institute of Texas A&M University
Tri-County Community Coalition	Texas A&M Transportation Institute
University of Texas Harris County Psychiatric Center	UTHealth Center for Neurobehavioral Research on Addiction

Conclusion

Key Findings

- The top prevention priorities identified by DSHS -- alcohol, marijuana, prescription drugs -- continue to match regional indicators for substances of choice among youth and local prevention and treatment needs.
- Teens' perception of the risks of alcohol and marijuana are lower in Region 6 than state averages. Research consistently indicates that as perceived risk of harm decreases, use increases.
- Region 6's rural and semi-rural areas remain underserved by prevention and treatment services: Austin, Chambers, Liberty, Matagorda, Waller, and Wharton Counties.
- Synthetic drug use and availability is rising in Region 6 in 2014-2015, with very serious health effects. Community awareness of this public health threat is needed, as well as enforcement of new state laws prohibiting synthetic drug sales or possession.
- More education for parents is needed, in terms of the health and developmental risks of underage drinking and drug use, age of first use, and evidence-based protective factors.
- Prevention materials and public service announcements are needed in multiple languages in this diverse region.

Moving Forward

With the conclusion of this second annual PRC-6 Regional Needs Assessment, we look forward to expanding our efforts in the coming years as the RNA grows. Our goal, again, is to gather data from around the region and provide it as a resource to community stakeholders, residents, policy makers, and program planners.

Your continued efforts to celebrate the accomplishments of those in recovery and to reduce the incidence of adolescent substance abuse are appreciated. Thank you for joining us as a partner in addressing this preventable and treatable public health issue.

Appendix

Suggested Citation

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The Council on Recovery. *Regional Needs Assessment 2015: Prevention Resource Center 6*. Austin, TX: Texas Department of State Health Services; 2015.

Tables

Rates of Declining Teen Substance Use

Lifetime Use, Grades 7-12, Texas, 1994 - 2014

	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014	20-year Avg	Rate of Decline
Alcohol	74.1	73.3	72.1	70.7	71.0	67.9	65.9	62.9	61.8	57.5	50.5	66.2	31.8%
Tobacco	54.5	55.2	54.7	51.1	44.9	39.4	35.4	31.7	30.5	27.7	22.4	40.7	58.9%
Marijuana	25.3	31.2	34.5	32.2	32.3	29.8	26.4	24.6	26.2	26.2	23.2	28.4	8.3%

PRC Regions and Counties

PRC Region	Counties
1	Armstrong, Bailey, Briscoe, Carson, Castro, Childress, Cochran, Collingsworth, Crosby, Dallam, Deaf Smith, Dickens, Donley, Floyd, Garza, Gray, Hale, Hall, Hansford, Hartley, Hemphill, Hockley, Hutchinson, King, Lamb, Lipscomb, Lubbock, Lynn, Moore, Motley, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher, Terry, Wheeler, and Yoakum (41)
2	Archer, Baylor, Brown, Callahan, Clay, Coleman, Comanche, Cottle, Eastland, Fisher, Foard, Hardeman, Haskell, Jack, Jones, Kent, Knox, Mitchell, Montague, Nolan, Runnels, Scurry, Shackelford, Stonewall, Stephens, Taylor, Throckmorton, Wichita, Wilbarger, and Young (30)
3	Collin, Cooke, Dallas, Denton, Ellis, Erath, Fannin, Grayson, Hood, Hunt, Johnson, Kaufman, Navarro, Palo Pinto, Parker, Rockwall, Somervell, Tarrant, and Wise (19)
4	Anderson, Bowie, Camp, Cass, Cherokee, Delta, Franklin, Gregg, Harrison, Henderson, Hopkins, Lamar, Marion, Morris, Panola, Rains, Red River, Rusk, Smith, Titus, Upshur, Van Zandt, and Wood (23)
6	Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Waller, and Wharton (13)

7	Bastrop, Bell, Blanco, Bosque, Brazos, Burlison, Burnet, Caldwell, Coryell, Falls, Fayette, Freestone, Grimes, Hamilton, Hays, Hill, Lampasas, Lee, Leon, Limestone, Llano, Madison, McLennan, Milam, Mills, Robertson, San Saba, Travis, Washington, and Williamson (30)
8	Atacosa, Bandera, Bexar, Calhoun, Comal, DeWitt, Dimmit, Edwards, Frio, Gillespie, Goliad, Gonzales, Guadalupe, Jackson, Karnes, Kendall, Kerr, Kinney, La Salle, Lavaca, Maverick, Medina, Real, Uvalde, Val Verde, Victoria, Wilson, and Zavala (28)
9	Andrews, Borden, Coke, Concho, Crane, Crockett, Dawson, Ector, Gaines, Glasscock, Howard, Irion, Kimble, Loving, Martin, Mason, McCulloch, Menard, Midland, Pecos, Reagan, Reeves, Schleicher, Sterling, Sutton, Terrell, Tom Green, Upton, Ward, and Winkler (30)
10	Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio (6)
11	Aransas, Bee, Brooks, Cameron, Duval, Hidalgo, Jim Hogg, Jim Wells, Kenedy, Kleberg, Live Oak, McMullen, Nueces, Refugio, San Patricio, Starr, Webb, Willacy, and Zapata (19)

Glossary of Terms

ATOD	Alcohol, tobacco, and other drugs.
Adolescent	An individual between the ages of 12 and 17 years.
Current Use	Use of a substance in the last 30 days prior to being surveyed.
DSHS	Department of State Health Services
Epidemiology	Epidemiology is concerned with the distribution and determinants of health and diseases, sickness, injuries, disabilities, and death in populations.
Evaluation	Systematic application of scientific and statistical procedures for measuring program conceptualization, design, implementation, and utility; making comparisons based on these measurements; and the use of the resulting information to optimize program outcomes.
Exposure	The condition of being subjected to something, as to toxic agents which may have a harmful effect.
Houston MSA	Houston Metropolitan Statistical Area: Includes 9 of PRC Region 6's 13 counties (Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller).
Incidence	A measure of the probability of new occurrences of a health condition within a population.
Lifetime Use	Use of a substance at any point prior to being surveyed.
PRC	Prevention Resource Center
Prevalence	The proportion of a population found to have a health condition or health risk factor.

Protective Factor	Conditions or attributes (skills, strengths, resources, supports or coping strategies) in individuals, families, communities or the larger society that help people deal more effectively with stressful events and mitigate or eliminate risk in families and communities.
Risk Factor	Conditions, behaviors, or attributes in individuals, families, communities or the larger society that contribute to or increase the risk in families and communities.
Strategic Prevention Framework	Strategic Prevention Framework uses findings from public health research along with evidence-based prevention programs to build capacity and sustainable prevention. This, in turn, promotes resilience and decreases risk factors in individuals, families, and communities.
Substance Abuse	When alcohol or drug use adversely affects the health of the user or when the use of a substance imposes social and personal costs. Abuse might be used to describe the behavior of a woman who has four glasses of wine one evening and wakes up the next day with a hangover.
Substance Misuse	The use of a substance for a purpose not consistent with legal or medical guidelines. This term often describes the use of a prescription drug in a way that varies from the medical direction, such as taking more than the prescribed amount of a drug or using someone else's prescribed drug for medical or recreational use.
Substance Use	The consumption of low and/or infrequent doses of alcohol and other drugs such that damaging consequences may be rare or minor. Substance use might include an occasional glass of wine or beer with dinner, or the legal use of prescription medication as directed by a doctor to relieve pain or to treat a behavioral health disorder.
SUD	Substance Use Disorder
TSS	Texas School Survey
YRBS	Youth Risk Behavior Surveillance Survey

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