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Executive Summary

What is the RNA?

The Regional Needs Assessment (RNA) is a document created by the Prevention Resource Center (PRC) in Region 1 along with Data Coordinators from PRCs across the State of Texas and supported by the City of Lubbock Health Department as well as the Texas Health and Human Services Commission (HHSC). The PRC in Region 1 serves 41 counties in the Panhandle and South Plains.

This assessment was designed to aid PRC's, HHSC, and community stakeholders in long-term strategic prevention planning based on the most current information relative to the unique needs of the diverse communities in the State of Texas. This document will present a summary of statistics relevant to risk and protective factors associated with drug use, consumption patterns and consequences data, and it will offer insight related to gaps in services and data availability challenges.

Who writes the RNA?

A team of Data Coordinators has procured national, state, regional, and local data through partnerships of collaboration with diverse agencies in sectors such as law enforcement, public health, and education, among others.

How is the RNA informed?

Qualitative data collection has been conducted in the form of surveys, focus groups, and interviews with key informants. The information obtained through these partnerships has been analyzed and synthesized in the form of this Regional Needs Assessment. PRC in Region 1 recognizes those collaborators who contributed to the creation of this RNA. Quantitative data has been extrapolated from federal and state agencies to ensure reliability and accuracy.

Key findings from this assessment:

- The rate of depression among the population in region 1 from year 2016-2017 has been the only behavioral diagnosis that has increased as time progressed, while all other behavioral diagnoses observed a decline in rates. As more data is collected, it will be crucial to review if this number and rate has continued to increase as time proceeded.
- The age at which our youth begin to experiment with substances (age of first use) has been shown to decrease as time progresses, leaving the researcher and reader to conclude that prevention efforts in this region are crucial to the outcome of our current and future population.
- The data show that as the number of homes with languages other and English spoken increases, the graduation rate decreases (a negative correlation), thus providing an opportunity to intervene with a key population in attempt to weaken this correlation of the two variables.

Demographic

The 41 counties that are included in Region 1 are very diverse, with the majority of counties being rural. A large portion of the population resides in Amarillo and Lubbock. Since these cities house the greatest amount of the people, most of the available services are also in these two locations.

The average income of the region is quite a bit less than that of the state of Texas, but the poverty level is only about 1% higher than that of the state. The median housing cost is also substantially less than the state and nations.

All counties have individuals who are receiving Supplemental Nutrition Assistant Program (SNAP) benefits and most counties have individuals receiving Temporary Assistance for Needy Families (TANF) benefits. All counties also have the majority of youth qualifying for the Free and Reduced Lunch Program.

Consumption

The primary substances consumed by youth in Region 1 are alcohol, marijuana and tobacco products, including vaping. The rates of consumption are varied, but highest among 11th and 12th grade students. Additional qualitative and quantitative information is needed to completely understand trends in use, as well as the protective and risk factors that are present across all counties in the region.

Consequences

Major consequences of substance use in the region include overdose deaths, vehicular related accidents and deaths, loss of life and major negative health consequences due to alcohol consumption, violent and property crimes, drug and alcohol related offences, and many other negative consequences. Additional information is needed to fully understand consequences of substance use on youth in the region, as well as adults, but the available data makes it clear that substance use disorders are negatively impacting the region.

Protective Factors

Known protective factors in the region include youth serving organizations and programs, as well as community coalitions. Most of the known programs and supports for youth are in Lubbock and Amarillo. Additional information and data is needed to fully understand all of the protective factors and resources in Region 1

Prevention Resource Centers

There are eleven regional Prevention Resource Centers (PRCs) servicing the State of Texas. Each PRC acts as the central data repository and substance misuse prevention training liaison for their region. Data collection efforts carried out by PRCs are focused on the state's prevention priorities of alcohol (underage drinking), marijuana, and prescription drug use, as well as other illicit drug use.

Our Purpose

Prevention Resource Centers (PRCs) are a program funded by the Texas Health and Human Services Commission (HHSC) to provide data and information related to substance use and misuse, and to support prevention collaboration efforts in the community. There is one PRC located in each of the eleven Texas Health Service Regions (see Figure 1) to provide support to prevention providers located in their region.

Prevention Resource Centers have four fundamental objectives related to services provided to partner agencies and the community in general: (1) collect data relevant to the state's prevention priorities and share findings with community partners (2) ensure the sustainability of a Regional Epidemiological Workgroup focused on identifying strategies related to data collection, gaps in data, and prevention needs, (3) coordinate regional prevention trainings and conduct media awareness activities related to risks and consequences of alcohol, tobacco, and other drugs (ATOD) use, and (4) conduct voluntary compliance checks and education on state tobacco laws to retailers.

Our Regions

Region 1	Panhandle and South Plains
Region 2	Northwest Texas
Region 3	Dallas/Fort Worth Metroplex
Region 4	Upper East Texas
Region 5	Southeast Texas
Region 6	Gulf Coast
Region 7	Central Texas
Region 8	Upper South Texas
Region 9	West Texas
Region 10	Upper Rio Grande
Region 11	Rio Grande Valley/Lower South Texas

Source: Department of State Health Services https://www.dshs.state.tx.us/IDCU/data/annual/2016-Texas-Annual-Report/2016-Annual-Report/ Accessed April 17, 2020.

What Evaluators Do

Regional PRCs are tasked with compiling and synthesizing data and disseminating findings to the community. Data collection strategies are organized around risk and protective factors, consumption data, and related consequences associated with substance use and misuse. PRCs engage in building collaborative partnerships with key community members who aid in securing access to information.

How We Help the Community

PRCs provide technical assistance and consultation to providers, community groups, and other stakeholders in identifying data and data resources related to substance use or other behavioral health



indicators. PRCs work to promote and educate the community on substance use and misuse and associated consequences through various data products, media awareness activities, and an annual Regional Needs Assessment. These resources and information provide stakeholders with knowledge and understanding of the local populations they serve, help guide programmatic decision making, and provide community awareness and education related to substance use and misuse. Additionally, the program provides a way to identify community strengths as well as gaps in services and areas of improvement.

Conceptual Framework of This Report

As one reads through this needs assessment, two guiding concepts will appear throughout the report: a focus on the youth population and the use of an empirical approach from a public health framework. For the purpose of strategic prevention planning related to drug and alcohol use among youth populations, this report is based on three main aspects: risk and protective factors, consumption patterns, and consequences of substance misuse and substance use disorders (SUDs).

Key Concepts

Adolescence

The World Health Organization (WHO) identifies adolescence as a critical transition in the life span characterized by tremendous growth and change, second only to infancy. This period of mental and physical development poses a critical point of vulnerability where the use and misuse of substances, or other risky behaviors, can have long-lasting negative effects on future health and well-being. This focus of prevention efforts on adolescence is particularly important since about 90 percent of adults who are clinically diagnosed with SUDs, began misusing substances before the age of 18.¹

The information presented in this document is compiled from multiple data sources and will therefore consist of varying demographic subsets of age which generally define adolescence as ages 10 through 17-19. 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

The WHO describes epidemiology as 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." This definition provides the theoretical framework through which this assessment discusses the overall impact of substance use and misuse. Through this lens, epidemiology frames substance use and misuse as a preventable and treatable public health concern. The Substance Abuse and Mental Health Services Administration (SAMHSA) establishes epidemiology to identify and analyze community patterns of substance misuse as well as the contributing factors influencing this behavior. SAMHSA adopted an epidemiology-based framework on a national level while this needs assessment establishes this framework on a regional level.

Socio-Ecological Model

The Socio-Ecological Model (SEM) is a conceptual framework developed to better understand the multidimensional factors that influence health behavior and to categorize health intervention strategies.² Intrapersonal factors are the internal characteristics of the individual of focus and include knowledge, skills, attitudes, and beliefs. Interpersonal factors include social norms and interactions with significant others, such as family, friends, and teachers. Organizational/institutional factors are social and physical factors that indirectly impact the individual of focus (e.g., zero tolerance school policies, classroom size, mandatory

¹ The National Center on Addiction and Substance Abuse at Columbia University. 2011. *CASA analysis of the National Survey on Drug Use and Health, 2009* [Data file]. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration.

workplace drug testing). Finally, community/societal factors include neighborhood connectedness, collaboration between organizations, and policy.

The SEM proposes that behavior is impacted by all levels of influence, from the intrapersonal to the societal, and that the effectiveness of health promotion programs is significantly enhanced through the coordination of interventions targeting multiple levels. For example, changes at the community level will create change in individuals and support of individuals in the population is essential for implementing environmental change.

Risk and Protective Factors

Researchers have examined the characteristics of effective prevention programs for more than 20 years. One component shared by effective programs is a focus on risk and protective factors that influence substance misuse among adolescents. Protective factors are characteristics that decrease an individual's risk for a SUD. Examples may include factors such as strong and positive family bonds, parental monitoring of children's activities, and access to mentoring. Risk factors are characteristics that increase the likelihood of substance use behaviors. Examples may include unstable home environments, parental use of alcohol or drugs, parental mental illnesses, poverty levels, and failure in school performance. Risk and protective factors are classified under four main domains: societal, community, relationship, and individual (see Figure 2).³





Source: Health Community Capacity Collaborative. https://healthcommcapacity.org/sbcc-capacity-ecosystem/ Accessed April 16, 2020.

Consumption Patterns

For the purpose of this needs assessment, and in following with operational definitions typically included in widely used measures of substance consumption, such as the Texas School Survey of Drug and Alcohol Use (TSS)⁴, the Texas Youth Risk Surveillance System (YRBSS)⁵, and the National Survey on Drug Use and Health

http://www.texasschoolsurvey.org/Documents/Reports/State/16State712.pdf. Accessed May 30, 2018.

⁵ Texas Department of State Health Services. 2001-2017 High School Youth Risk Behavior Surveillance System Data. 2017.

² McLeroy, KR, Bibeau, D, Steckler, A, Glanz, K. (1988). An ecological perspective on health promotion programs. Health Education & Behavior, 15(4), 351-377

³ The SBCC Capacity; Health Communication Capacity Collaborative. https://healthcommcapacity.org/sbcc-capacity-ecosystem/ Accessed April 16, 2020

⁴Texas A&M University. Texas School Survey of Drug and Alcohol Use: 2016 State Report. 2016.

http://healthdata.dshs.texas.gov/HealthRisks/YRBS. Accessed April 27, 2018.

(NSDUH)⁶, consumption patterns are generally operationalized into three categories: lifetime use (ever tried a substance, even once), school year use (past year use when surveying adults or youth outside of a school setting), and current use (use within the past 30 days). These three categories of consumption patterns are used in the TSS to elicit self-reports from adolescents on their use and misuse of tobacco, alcohol (underage drinking), marijuana, prescription drugs, and illicit drugs. The TSS, in turn, is used as the primary outcome measure in reporting on Texas youth substance use and misuse in this needs assessment.

Due to its overarching and historical hold on the United States, there exists a plethora of information on the evaluation of risk factors that contribute to Alcohol Use Disorder (AUD). According to SAMHSA, AUD is ranked as the most wide-reaching SUD in the United States, for people ages 12 and older, followed by Tobacco Use Disorder, Cannabis Use Disorder, Stimulant Use Disorder, Hallucinogen Use Disorder, and Opioid Use Disorder (presented in descending order by prevalence rates).⁷ When evaluating alcohol consumption patterns in adolescents, more descriptive information beyond the aforementioned three general consumption categories is often desired and can be tapped by adding specific quantifiers (i.e., per capita sales, frequency and trends of consumption, and definitions of binge drinking and heavy drinking), and qualifiers (i.e., consequential behaviors, drinking and driving, alcohol consumption during pregnancy) to the operationalization process. For example, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) has created very specific guidelines that are widely used in the in quantitative measurement of alcohol consumption.⁸ See Figure 3 for the NIAAA's operational definitions of the standard drink.



Image 2: National Institute on Alcohol Abuse and Alcoholism (NIAAA)

Some alcoholic drinks contain more alcohol than others. As with all matter's nutritional, you need to consider the portion size. For example, some cocktails may contain an alcohol "dose" equivalent to three standard drinks.

Source: National Institute on Alcohol Abuse and Alcoholism https://www.niaaa.nih.gov/ Accessed April 16, 2020.

Consequences

⁶ Substance Abuse and Mental Health Services Administration. *National Survey on Drug Use and Health*. 2016.

https://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs-2016/NSDUH-DetTabs-2016.pdf. Accessed May 30, 2018.

⁷ Substance Abuse and Mental Health Services Administration. Substance use disorders. https://www.samhsa.gov/disorders/substance-use. Updated October 27, 2015. Accessed May 29, 2018.

⁸ National Institute for Alcohol Abuse and Alcoholism. What is a "standard" drink? https://www.rethinkingdrinking.niaaa.nih.gov/How-much-is-toomuch/What-counts-as-a-drink/Whats-A-Standard-Drink.aspx. Accessed May 24, 2018.

One of the hallmarks of SUDs is the continued use of a substance despite harmful or negative consequences. The types of consequences most commonly associated with SUDs, the most severe of SUDs being addiction, typically fall under the categories of health consequences, physical consequences, social consequences, and consequences for adolescents. The prevention of such consequences has received priority attention as Goal 2 (out of four goals) on the 2016-2020 NIDA Strategic Plan titled Develop new and improved strategies to prevent drug use and its consequences.⁹

The consequences associated with SUDs tend to be developmentally, culturally, and contextually dependent and the measurement and conceptualization of such associations has proven to be quite difficult for various reasons, including the fact that consequences are not always caused or worsened by substance use or misuse.¹⁰ Therefore, caution should be taken in the interpretation of the data presented in this needs assessment. Caution in inferring relationships or direction of causality should be taken, also, because only secondary data is reported out and no sophisticated analytic procedures are involved once that secondary data is obtained by the PRCs and reported out in this needs assessment, which is intended to be used as a resource.

Stakeholder/Audience

Potential readers of this document include stakeholders from a variety of disciplines: substance use prevention and treatment providers; medical providers; school districts and higher education; substance use prevention community coalitions; city, county, and state leaders; and community members interested in increasing their knowledge of public health factors related to drug consumption. The information presented in this report aims to contribute to program planning, evidence-based decision making, and community education.

The executive summary found at the beginning of this report will provide highlights of the report for those seeking a brief overview. Since readers of this report will come from a variety of professional fields, each yielding specialized genres of professional terms and concepts related to substance misuse and substance use disorders prevention, a glossary of key concepts can be found in Appendix XX of this needs assessment. The core of the report focuses on risk factors, consumption patterns, consequences, and protective factors. A list of tables and figures can be found in the Appendix.

⁹ National Institute on Drug Abuse. 2016-2020 NIDA Strategic Plan. 2016.

https://d14rmgtrwzf5a.cloudfront.net/sites/default/files/nida_2016strategicplan_032316.pdf. Accessed May 29, 2018.

¹⁰ Martin, CS., Langenbucher, JW, Chung, Sher, KJ. Truth or consequences in the diagnosis of substance use disorders. *Addiction*. 2014. 109(11): 1773-1778.

Introduction

The Texas Health and Human Services Commission (HHSC) administers approximately 225 school and community-based prevention programs across 72 different providers with federal funding from the Substance Abuse Prevention and Treatment Block Grant to prevent the use and consequences of alcohol, tobacco and other drugs (ATOD) among Texas youth and families. These programs provide evidence-based curricula and effective prevention strategies identified by SAMHSA's Center for Substance Abuse Prevention (CSAP).

The Strategic Prevention Framework (SPF) provided by CSAP guides many prevention activities in Texas (see Figure 4). 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.¹¹

Strategic Prevention Framework (SPF):

- Assessment: Profile population needs, resources, and readiness to address needs and gaps.
- Capacity: Mobilize and/or build capacity to address needs.
- Planning: Develop a comprehensive strategic plan.
- Implementation: Implement the strategic plan and corresponding evidence-based prevention strategies.
- Evaluation: Monitor, evaluates, sustain, and improve or replace those that fail.

Source: Sustainability & Cultural Competence. 2020. AVPRIDE. https://avpride.com/ Accessed April 29, 2020

The Health and Human Services Commission Substance Abuse Services funds Prevention Resource Centers (PRCs) across the state of Texas. These centers are part of a larger network of youth prevention programs providing direct prevention education to youth 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 the reduction of substance use and misuse.

Our Audience

Readers of this document include stakeholders from a variety of disciplines such as substance use prevention and treatment providers; medical providers; school districts and higher education; substance use prevention community coalitions; city, county, and state leaders; and community members interested in increasing their knowledge of public health factors related to drug consumption. The information presented in this report aims to contribute to program planning, evidence-based decision making, and community education.

Methodology

This needs assessment is a review of data on substance misuse, substance use disorders, and related variables that will aid in substance misuse prevention decision making at the county, regional, and state level. In this needs assessment, the reader will find the following: primary focus on the state-delineated prevention priorities of alcohol (underage drinking), marijuana, prescription drugs, and other drug use among

SAMHSA. Strategic Prevention Framework. <u>https://avpride.com/</u> Accessed April 29, 2020.

adolescents; exploration of drug consumption trends and consequences, particularly where adolescents are concerned; and an exploration of related risk and protective factors as operationalized by CSAP.

Purpose/Relevance of the RNA

The regional needs assessment can serve in the following capacities:

- To determine patterns of substance use among adolescents and monitor changes in substance use trends over time;
- To identify gaps in data where critical substance misuse information is missing;
- To determine county-level differences and disparities;
- To identify substance use issues that are unique to specific communities;
- 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 misuse prevention, intervention, and treatment at the region and state level.

Process

The State Evaluator and the Data Coordinators collected primary and secondary data at the county, regional, and state levels between September 1, 2019 and May 30, 2020.

Between September and July, the State Evaluator meets with the Data Coordinators via bi-weekly conference calls to discuss the criteria for processing and collecting data. The information is primarily gathered through established secondary sources including federal and state government agencies. In addition, region-specific data collected through local law enforcement, community coalitions, school districts and local-level governments are included to address the unique regional needs of the community. Additionally, qualitative data is collected through primary sources such as surveys and focus groups conducted with stakeholders and participants at the regional level.

Primary and secondary data sources are identified when developing the methodology behind this document. Readers can expect to find information from the American Community Survey, Texas Department of Public Safety, Texas School Survey of Drug and Alcohol Use, and the Community Commons, among others. For the purpose of this needs assessment, adults and youth in the region were selected as primary sources.

Quantitative Data Selection

Relevant data elements were determined, and reliable data sources were identified through a collaborative process among the team of Data Coordinators.

Identification of Variables: The data collected is the most recent data available within the last five years. However, older data might be provided for comparison purposes, the data is an accurate measure of the associated indicators.

Key Data Sources: For the purpose of this Regional Needs Assessment, the Data Coordinators and the Statewide Prevention Evaluator chose data sources for this document based on specific criteria. The data provided is a measure of substance use consumption, consequence, and related risk and protective factors. Data reflects the target population in Texas and across the eleven public health regions.

Criterion for Selection: The criterion used for this document is, relevance, timeliness, methodologically sound, representative, and accuracy. The data is well-documented methodology and valid or reliable data collection tools.

Qualitative Data Selection

During the year, focus groups, surveys and interviews are conducted by the Data Coordinator to better understand what members of the communities believe their greatest need to be. The information collected by this research serves to identify avenues for further research and provide access to any quantitative data that each participant may have access to.

Key Informant Interviews

Interviews are conducted primarily with school officials and law enforcement officers. Participants are randomly selected by city and then approached to participate in an interview with the Regional Evaluator. Each participant is asked the following questions:

- What problems do you see in your community?
- What is the greatest problem you see in your community?
- What hard evidence do you have to support this as the greatest problem?
- What services do you lack in your community?

Other questions inevitably arise during the interviews, but these four are asked of each participant.

Focus Groups

Participants for the focus groups are invited from a wide selection of professionals including law enforcement, health, community leaders, clergy, high school educators, town councils, state representatives, university professors, and local business owners. In these sessions, participants discuss their perceptions of how their communities are affected by alcohol, marijuana, and prescription drugs.

Longitudinally Presented Data

In an attempt to capture a richer depiction of possible trends in the data presented in this needs assessment, data collection and reporting efforts consist of multi-year data where it is available from respective sources. Most longitudinal presentations of data in this needs assessment consist of (but are not limited to) the most recently-available data collected over three years in one-year intervals of data-collection, or the most recently-available data collected over three data-collection intervals of more than one year (e.g. data collection for the TSS is done in two-year intervals). Efforts are also made in presenting state-and national-level data with county-level data for comparison purposes. However, where it is the case that neither state-level nor national-level date are included in tables and figures, the assumption can be made by the reader that this data is not made available at the time of the data request. Such requests are made to numerous counties, state, and national-level agencies in the development of this needs assessment.

Regional Demographics

Overview of Texas

Texas is one of the most rapidly growing states in the United States, and is also among the highest ranking in regards to geography and population. Texas is the second largest state with a population estimate of 28,995,881 as of July 1, 2019. This indicates a 15.3% increase in the state's population since 2010 when the population was 25,145,561.

Texas is very diverse with large population dense cities, as well as a great deal of unincorporated rural areas throughout the state. Texas has three cities with populations over 1 million, including Houston, San Antonio and Dallas. As of 2019 six cities including Houston, San Antonio, Dallas, Austin, Fort Worth, and El Paso, had populations that exceed 500,000. Thirteen cities in Texas currently have populations exceeding 200,000. By 2017 Texas had 82 metropolitan or urban counties and 172 counties classified as rural or non-metropolitan.

Overview of Region 1: Panhandle and South Plains

Texas is split into 11 different Prevention Resource Centers. Region one is the largest geographically at 39,348.3 square miles. Region 1 encompasses 41 counties, including Armstrong, Bailey, Briscoe, Carson, Castro, Childress, Cochran, Collingsworth, Crosby, Dallam, Deaf Smith, Dickens, Donley, Floyd, Garza, Gray, Hale, Hansford, Hartley, Hemphill, Hockley, Hutchinson, King, Lamb, Lipscomb, Lynn, Moore, Motley, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher, Terry, Wheeler and Yoakum. Figure 1 highlights the counties located in Region 1.

Figure 1. Region 1 Counties.

Image 3: Region 1 County Location Map.



Population

Most of the population within Region 1 resides in either Amarillo or Lubbock, while the majority of the other counties have relatively low populations. Amarillo includes both Potter and Randall counties and has a population of 199,371 people. Lubbock is within Lubbock County and has a population of 258,862. Besides Lubbock and Amarillo there are six other counties that have populations that exceed 10,000. These counties include Deaf Smiths, Hockley, Hutchinson, Lamb, Moore and Terry. Of the remaining 33 counties King (272), Briscoe (1,546), Roberts (854) and Motley (1,200) counties have less than 2,000 individuals residing in them. The vast majority of counties within Region 1 have had a decrease in their population since the 2010 census, which is quite different than the growth experienced by the state as whole. However, since according to the

Texas Demographic Center by 2010 84.7% percent of Texans resided in urban areas, this finding would make sense due to the fact that the majority of the counties in the Panhandle and South Plains are rural, as demonstrated by the population breakdown of all the counties within the region found in Table 1 below.









Region 1, as a whole, increased in population size from year 2011 to year 2019 by 2.37 percent (see Table 1), but the majority of this increase comes from a small portion of Region 1 counties, as shown by graph 1. Only 10 of the 41 counties experienced a positive percentage change in the stated timeframe, while the remaining 31 incurred a percentage loss. Of the 10 counties that experienced an increase, Randall, Yoakum, and Lubbock were the most significant with a 12, 11, and 9 percent growth from 2011-2019. Of the 31 counties that decreased in population, Floyd, Dickens, Donley, Hall and Lamb were the most significant with a 14, 13, 12, 11, and 10 percent decline. For a detailed look at yearly population change for each county in Region 1, see Graph 2 where the top portion of the figure displays the population total for each year, and the bottom displays the yearly percentage change. Of the 41 counties, Lubbock was the only to experience continuous positive population changes from 2011-2019, while the remainder saw a fluctuation of both negative and positive population changes.



Graph 2: Yearly Population Total and Yearly Percentage Change for Region 1 Counties, 2011-2019.





As previously stated, from the year 2012 to 2019, Region 1 grew in population size by 2.37 percent, but Graph 3 displays the Region's yearly change, providing a detailed viewpoint where we see a steady growth from 2012-2016 (860,757 - 876,160), follow by two declines from 2016-2017 (876,160 - 872,455) and 2018-2019 (874,884 - 870,876), ultimately leaving the population in 2019 at less than that of the year 2015; 870,876 compared to 872,421, shown in Graphs 3 and 4.





Graph 4.





Bureau, QuickFacts. 2019.

Source: United States Census

Geography

The average population per square mile in Region 1 is 21.7 people. This is substantially less than the average of 96.3 possessed by the state of Texas, as well as the United States' average of 87.4. This number is weighted greatly by the cities of Lubbock and Amarillo, with the vast majority of Region 1 communities having less than 10 people residing in every square mile.





Source: United States Census Bureau, QuickFacts. 2010.

Figure 5 helps illustrate how just a few counties of Region 1 contain the same population of the remaining counties combined.



Image 4: Population per Square Mile, Region 1 2010.

Source: United States Census Bureau, QuickFacts. 2010.

Age

The age of the population in Region 1 is fairly similar to that of the state of Texas. Just over one quarter of the population is under 18 and 13.5% of the population is over 65. Texas as a whole has a slightly younger population than the United States (25.5 compared to 22.3 percent). Although, as a whole, Region 1 has a slightly less elderly population (only 3% below that of the United States), many of its counties contain

elderly population above the Unites States' 16.5%. Those counties include: Wheeler (19.8%), Swisher (17.6%), Roberts (22.6%), *Motley (30.7%), Lipscomb (19.1%), Lamb (17.4%), King (18.8%), Hutchinson (17.1%), Hall (24.0%), Floyd (18.7%), Donley (24.5%), Dickens (23.7%), Crosby (18.9%), Collingsworth (19.0%), Carson (21.0%), Briscoe (26.1%), and Armstrong with 24.9%. Motley County of Region 1 surpasses Texas by ~18% and the United States by ~10%. See Graph 6.



Graph 6: Age Demographics, Region 1 2019.



Source: United States Census Bureau, QuickFacts. 2019.

Race/Ethnicity

When compared to both the United States and Texas, Region 1 is less racially and ethnically diverse. A large percentage of the population is White (91.4%), which includes the 40.3% of the population which identifies as Hispanic or Latino. When separating the into two groups; Anglo and Hispanic, we see that Region 1's Hispanic population is similar to that of Texas; (39.7 vs. 40.3), while its Anglo population exceeds the Texas percentage by just over 10% (41.2 vs. 52.0.) When comparing Region 1's African American population to the average of Texas, the difference is around 8.4% (12.9 vs. 4.5), and an 8.9% (13.4 vs. 4.5) difference when compared to the United States. The Region 1 Hispanic population in 2019 exceeded the United States' by over 20% (40.3 vs. 18.5), while it's Anglo population fell below the Unites States' by 8.1% (60.1 vs. 52.0). See Graph 7 for further details.



Graph 7: Race and Ethnicity Percentages, Region 1 2019

Race in Region 1 Compared to The United States (2019)



Source: United States Census Bureau, QuickFacts. 2019.

Graph 8 displays each county's racial make-up (in percentages) for those interested in comparing Region 1's county population details. The first graph contains the entirety of the counties' racial make-up, while the remainder that follow are specific to each race, to provide effortless county comparisons.





Graph 9.

County Percentages of Anglo Population, 2019.



The Region 1 counties with the highest percentage of Anglo population are Armstrong (90.7%), Roberts (89.89%), Carson (85.94%), King (85.4%), Oldham (82.5%), Motley (81.2%), and Donley (81.2%). Counties with the lowest Anglo population include Deaf Smith (22.87%), Bailey (31.27%), Moore (31.34%), Castro (32.01%), Hale (33.1%), and Parmer (33.40%). A 67.83% change occurs when comparing the county with the lowest percentage to that with the highest.





County Percentages of African American or Black Population, 2019.

Again, we have a significant difference in the distribution of racial population percentages throughout Region 1. The counties with the highest African American population percentages include Childress (9.97%), Potter (9.38%), and Hall (9.05%), while those with the lowest percentage include Hemphill, Lipscomb, Ochiltree, Bailey, Carson, Deaf Smith, Hansford, Roberts, Sherman, and Yoakum, all of which fall below 1 percent. It's noteworthy to notice that Region 1's county with the highest African American population is still more than 10% less than the county with the lowest Anglo population, and only 3.32% higher than the county with the lowest Spanish/Hispanic population.



Graph 11.

The majority of Region 1 counties' populations are made up of at least 20% Hispanic/Spanish. Those with significantly higher percentages include Deaf Smith, which has a population made up of 74.79 percent Hispanic/Spanish, Bailey (65.49%), Castro (64.35%), and Parmer (64.17%). Meanwhile, those that contain the least Hispanic/Spanish population negatively correlate to the counties with the highest Anglo populations: Armstrong, Carson, Donley, King, Motley, Oldham, and Roberts.





County Percentages of Other Populations, 2019. (Other than Algo, African American, or Hispanic)

Races included in the "Other" population group: Asian, American Indian and Alaska Native, Native Hawaiian and other Pacific Islander, and two or more races. The county with the highest percentage of this population, by far, is Moore County with 11.58%, followed by Potter County with 8.01%. The majority of counties contain around 2% of this population, and is the least represented throughout Region 1.

The figures below show the change of each county's population make-up from 2011-2019, the majority of which show a noticeable change in population racial demographics. Most of the Region 1 counties experienced an increase in their Hispanic and Spanish population from 2011-2019, with the exception of King County and Roberts County, who all have maintained their racial population demographic. For population race percentages from year 2011-2019 specific to each county, see Graph 13.



Graph 13. County Population Race Percentages, 2011-2019.



Families and Living Arrangements

The average number of individuals per household in region 1 is 2.79, which is right in between the national and state average. Over a quarter of households in the region (26.4%) speak a language other than English at home. This percentage varied greatly throughout the region with some counties with less than 6% and others greater than 50%.

Table 2: Households, Region 1 2015-2019

Location	Households 2015-2019	Persons per Household	Living in the Same House 1 Year, Percent	Language Other than English Spoken at Home, Percent	Location	Households 2015-2019	Persons per Household	Living in the Same House 1 Year, Percent	Language Other than English Spoken at Home, Percent
United States	120,756,048	2.62	85.8	21.6	Hartley	1678	2.46	84.1	19.9
Texas	9,691,647	2.85	84.4	35.5	Hemphill	1298	3.05	88	32.5
Region1	311,594	2.79	80.7	26.4	Hockley	7997	2.79	83.2	31.4
Armstrong	694	2.76	91.8	6.4	Hutchinson	6929	3.06	87.8	11.9
Bailey	2054	3.35	92.1	48.1	King	77	3.08	96.6	33.2
Briscoe	602	2.42	86.6	24.3	Lamb	4728	2.73	84.3	41.1
Carson	2288	2.6	83.8	6.8	Lipscomb	1192	2.82	87.6	25.3
Castro	2532	3	91.3	52.3	Lubbock	113488	2.58	74.7	21.6
Childress	2407	2.39	89.2	23.4	Lynn	2154	2.68	81.3	28.9
Cochran	998	2.78	81.1	46.1	Moore	6733	3.15	87.5	51.7
Collingsworth	1035	2.81	90.6	23.4	Motley	489	2.56	81	14.7
Crosby	2061	2.79	84.5	34.7	Ochiltree	3483	2.89	86.9	45.8
Dallam	2364	3.07	78.1	43.6	Oldham	594	2.76	88.6	12.5
Deaf Smith	6145	3	90.9	55.5	Parmer	3203	3.01	88.5	51.6
Dickens	845	2.47	84.9	18.4	Potter	44380	2.54	81.9	32.7
Donley	1335	2.27	85.3	5.5	Randall	49389	2.66	81.6	11.9
Floyd	2271	2.54	93.1	37.2	Roberts	301	2.67	89.9	5.3
Garza	1543	2.72	64.9	45.5	Sherman	1019	2.97	92.9	36.4
Gray	7884	2.64	83.8	20	Swisher	2505	2.7	83.3	29.7
Hale	10933	2.89	84.1	37	Terry	4061	2.84	78.5	40.1
Hall	1267	2.35	85.2	29.6	Wheeler	2183	2.42	91	20
Hansford	1838	2.96	91	43.1	Yoakum	2617	3.3	92.6	60.9

Source: United States Census Bureau, QuickFacts. 2019.

Housing

The owner-occupied housing rate is greater than the state, and less than that of the nation, with 62.9% of homes in Region 1 being owner-occupied. The median value of occupied homes is \$84,000, which is significantly less than both the Texas average (\$172,500) and the national average (\$217,500). When applying correlations, we see that variables 2 (persons per household) and 4 (Languages other than English spoken at home, percentage), variables 1 (Number of households) and 7 (Median value of owner-occupied housing units), and 5 (Number of housing units) and 7 (Median value of owner-occupied housing units) all have strong positive correlations above 0.5. The positive correlation means that as one variable increases so does the corresponding variable, thus as the percentage of households that speak a language other than English increases, so too does the number of persons in a household, etc. All strong correlations related to Tables 2 and 3 are highlighted in Table 4.

Table 3: Housing Costs, Region 1 2015-2019

Location	Housing Units, 2019	Owner Occupied Housing Rate, Percent (2015- 2019)	Median Value of Owner Occupied Housing Units (2015- 2019)	Median Selected Monthly Owner Costs- with a Mortgage (2015-2019)	Median Selected Monthly Owner Costs- without a Mortgage (2015-2019)	Median Gross Rent(2015- 2019)	Median Household Income (2015-2019) in 2019 dollars	Location	Housing Units, 2019	Owner Occupied Housing Rate, Percent (2015- 2019)	Median Value of Owner Occupied Housing Units (2015-2019)	Median Selected Monthly Owner Costs- with a Mortgage (2015-2019)	Median Selected Monthly Owner Costs- without a Mortgage (2015-2019)	Median Gross Rent(2015- 2019)	Median Household Income (2015-2019) in 2019 dollars
United States	139,684,244	64					62,843	Hartley	2060	62.7	167200	1427	484	900	58298
Texas	11,283,353	62	172,500	1,606	514	1,045	61,874	Hemphill	1711	71.3	151700	1339	581	823	70625
Region1	369,946	62.5	84,000		401		49,701	Hockley	9434	70.5	93600	1180	417	696	48248
Armstrong	927	88	139700	1256	435	963	72500	Hutchinson	10656	80.3	78800	1105	398	758	52524
Bailey	2782	74.6	69700	784	459	591	52273	King	186	33.8	36700	0	439	658	52083
Briscoe	957	69.3	66000	935	370	675	40227	Lamb	6062	71.5	65500	999	343	719	45111
Carson	2793	81	114300	1215	442	831	74872	Lipscomb	1506	73.8	100900	1081	424	726	59091
Castro	3190	64.5	81900	873	401	627	50142	Lubbock	130773	55.2	140600	1424	514	940	52429
Childress	2856	59.9	85500	1211	448	745	43181	Lynn	2672	68.3	84000	1201	419	748	43382
Cochran	1352	78.4	38800	899	314	536	40962	Moore	8104	65.8	121900	1192	449	816	54871
Collingsworth	1598	75.3	52200	851	323	611	39120	Motley	774	68.3	56500	883	395	624	43859
Crosby	2908	75.3	60800	884	372	593	40755	Ochiltree	4163	73.4	102700	1380	436	837	50464
Dallam	2977	64.4	89200	1139	330	770	58811	Oldham	858	78.5	91400	1149	445	780	64545
Deaf Smith	7061	64	91100	1145	392	788	49701	Parmer	3808	66.9	97600	1247	348	717	55359
Dickens	1287	76.7	51100	1096	364	509	42540	Potter	50436	55.2	92500	1112	386	803	42528
Donley	2161	70.3	68700	1078	390	664	42961	Randall	55498	70.8	167800	1462	564	917	68261
Floyd	2956	74.9	64300	1022	350	724	50580	Roberts	440	79.7	133000	1354	457	780	68750
Garza	2225	70.5	78800	983	364	775	49627	Sherman	1350	72.6	99800	1301	464	790	51926
Gray	9983	73.5	77600	1256	364	742	47952	Swisher	3178	71	80600	964	396	752	39771
Hale	13381	62.3	82700	1073	364	647	48384	Terry	4861	69.6	76500	1072	410	701	44627
Hall	1910	65.3	52800	919	319	543	34673	Wheeler	2723	66.6	84000	977	420	705	49315
Hansford	2345	70.5	95300	1204	441	783	38000	Yoakum	3044	78	116400	1328	371	820	70005

Source: United States Census Bureau, QuickFacts. 2019.

Table 4: Housing Variable Correlations:

					-		-				
	1	2	3	4	5	6	7	8	9	10	11
1	1										
2	-0.08718687	1									
3	-0.00366476	0.288271	1								
4	-0.09043429	0.631749	0.052954	1							
5	0.999999865	-0.08715	-0.00369	-0.09041	1						
6	-0.10491283	0.023849	0.051435	-0.21005	-0.10498	1					
7	0.519277647	0.039185	-0.04326	-0.17495	0.519414	0.012826	1				
8	0.302502419	-0.10873	-0.19779	-0.1428	0.302637	0.319999	0.789227	1			
9	0.236072085	0.086442	0.087709	-0.26699	0.236184	-0.14308	0.755154	0.462621	1		
10	0.423357013	0.047439	-0.08546	-0.1499	0.42353	-0.05707	0.892014	0.709882	0.661831	1	
11	0.178195969	0.297585	0.155354	-0.19851	0.178262	0.237279	0.698032	0.453739	0.568083	0.639355	1

Variables:

1.	Households 2015-2019	7.	Median Value of Owner Occupied Housing Units (2015-
			2019)
2.	Persons per Household	8.	Median Selected Monthly Owner Costs- with a Mortgage
			(2015-2019)
3.	Living in the Same House 1 Year, Percent	9.	Median Selected Monthly Owner Costs- without a
			Mortgage (2015-2019)
4.	Language Other than English Spoken at Home, Percent	10.	Median Gross Rent(2015-2019)
5.	Housing Units, 2019	11	Median Household Income (2015-2019) in 2019 dollars
6.	Owner Occupied Housing Rate, Percent (2015-2019)		

Population Characteristics

Graph 14.



Region 1 County Population Percentages Diagnosed With A Disability, 2015-2019.

Region 1 has a slightly higher percentage of its under 65 years of age population diagnosed with a disability (8.8%) than the state of Texas (7.9%) and the United States (8.6%). Many Region 1 counties fall between 5 and 10 percent, while 13 are between 10 and 15 percent, and one (Lynn County) exceeds 15 percent. Region 1 houses 42,604 of the 1,453,450 veterans in Texas, and the visual below provides information on their distribution throughout the counties of Region 1, with Lubbock, Potter, and Randall making up the majority of homes for this demographic.





Source: United States Census Bureau, QuickFacts. 2019.

Region 1 contains less foreign-born persons than the state or nation, although when observing each county on its own (see Graph 16), we see that some counties of Region 1 contain higher percentages of foreign-born persons than both the state and nation, those of which include: Bailey (18.5%), Castro (20.1%), Dallam (22.4%), Garza (35.2%), Hansford (25.5%), Moore (24.9%), Ochiltree (20.4%), Parmer (21.1%), and Yoakum with 22.8% of it's population containing foreign-born persons.

Graph 16. Region 1 Foreign-Born Population.



In 2019, the percentage of persons under the age of 65 without health insurance in Region 1 was 19.3%, only 0.15% less than the state of Texas, but almost 10% more than the United States. The figure above illustrates many Region 1 counties as having over 25% of their under 65 years of age population uninsured.





Educational Attainment

While Region 1 falls behind both the nation and Texas in high school completion, it's only slight. Region 1's high school graduation rate in 2019 was 82.3%, just 1.4% less than Texas, and 5.7% below the nation. We see a more significant gap in higher education attainment. Region 1's percent of bachelor degree holders in 2019 was 23.3%, 6.6% below the state of Texas, and 8.8% below the nation. The region varies greatly when it comes to percentages of educational attainment, with some having extremely high levels of high school graduation rates, and others with much lower rates; Carson's 93.3% vs. Garza's 61.6%. The difference is stark when comparing counties' rate of University degree holders (see Graph 18) where the county with the highest rate is almost a guarter more than the county with the lowest percent; Randall with 32% vs. Cochran with 8%. See graphs below.

Graph 18.





Graph 19.

High School Dropout Percentage Compared to Impoverished Population Percentage, Region 1. 2015-2019 (Ages 25+).



Source: Quick Facts, United States Census Bureau. 2019.

Region 1, as a whole, showed a higher percentage of population that dropped out of high school (17.6%) when compared to the state of Texas (16.3%) and the nation (12%). After running the correlation on the data in Graph 19, the output (.646) indicates a strong relationship between the percentage of the population that did not graduate, and the percentage of persons without health insurance, meaning that as one percentage increases, so does the other. Of the Region 1 counties, Yoakum and Garza contain the highest dropout populations (36.5% and 38.4%).

Graph 20.

Dropout Percentages Per County, Region 1. 2015-2019 (Ages 25+).



Further analysis on education: When comparing the percentage of the population who obtained a bachelor's degree with that of the community in poverty, there is no noticeable negative correlation one might expect to see (as percentage of bachelor's degrees increases, the percentage of the population in poverty decreases). If this were the case, we'd see poverty at its lowest in Lubbock; Region 1's county with the highest percentage of bachelor's degrees, but instead that figure is at 17.9%, similar to that of Lamb County, where the percentage of population that holds an advanced degree is 15.7% below that of Lubbock (30.10% vs 14.4%). When running a correlation on the two variables, the output is (-0.4), again revealing no strong relationship between the two, contrary to what one might assume.

Graph 21.



Bachelor's Degree Holders (Ages 25+), and Persons in Poverty, Region 1 2015-2019.

Graph 22 displays the counties' dropout rates compared to the counties' median household incomes. When running a correlation on the two variables, the output of -0.3512 indicates no strong correlation or relationship between the two. This can be observed by comparing Armstrong and Yoakum's similar median incomes, and their differing dropout rates.

Graph 22.



A strong correlation exists between the variables 'Language Other than English Spoken at Home', 'Did not graduate high school' (+0.86), and 'Persons without health insurance' (+0.63), meaning that as the percentage of households that speak a language other than English increases, the percentage of those that did not complete high school and those without health insurance also increases. See Graph 23 and 24.

Graph 23.



Graph 24.

Percentage of County Households with Languages Other Than English Spoken vs. Persons Without Health Insurance, 2015-2019.



Measure Names
Language Other than English Spoken at Home, Percent
Persons without health insurance, under age 65 years, percent

Income and Poverty

The Median Household Income for the counties housed in Region 1 is \$50,970, less than Texas (\$59,570) and the United States (\$60,293). The Per Capita Income was also lower than that of the national and state average at \$23,804. However, the percent of individuals living in poverty in Region 1 is only about one percent greater than in the state average. The correlation between the percentage of population in poverty and the number of employment establishments in the county is -0.156 (shown in Graph 25), meaning there is no strong relationship between the two, contrary to what one might assume. There does exist a strong correlation between Median Household Income of the population, and its percentage of population in Poverty; -0.76, meaning that as one variable increases (Median Household Income) the other decreases (Percentage of Persons in Poverty.)

Graph 25.









The median household income across Region 1 varies, with Carson taking the lead with \$74,872 and Hall coming in last with \$34,673. While the nation and the state of Texas have similar median incomes (\$62,843 vs. \$61,874), Region 1 was more than \$10,000 below both with a median income of \$49,701. Graph 27 displays the percentage of persons in poverty related to median household income for all counties.



Graph 28.

Region 1 Median Household Income vs. Percentage of Population in Poverty, 2015-2019.



Source: United States Census Bureau, QuickFacts. 2019.

Unemployment/Employment

Of the Region 1 counties, Lamb and Hale have the highest rates of unemployment within the data collection years of 2014-2019, with Hale county's unemployment rate at 9.4 in 2014 and Lamb county's rate at 8.9 in 2015. Both were able to recover and reduced their percentages to 4.5 and 3.8 by 2019 as shown in Graph 29, which visualizes the unemployment details for each county of Region 1 from 2014-2019. To compare the counties' unemployment rates specifically in 2019, see Graph 30. Region 1, as a whole in 2019, had an unemployment rate of 2.8, while the state of Texas recorded 3.5, and the United States: 3.7. Two counties were able to keep unemployment below 2%; Dallam and Hartley, and just 5 counties in the region exceed 4% unemployment; Dickens, Floyd, Hale, Hall, and Hutchinson. The remainder of counties' percentages fell in between these two figures.

Graph 29.



Graph 29. Region 1 Counties' Unemployment Rates, 2014-2019.



Source: U.S. Bureau of Labor Statistics. 2018. https://www.bls.gov/lau/#tables



Source: U.S. Bureau of Labor Statistics. 2018. https://www.bls.gov/lau/#tables

Temporary Assistance for Needy Families (TANF) Recipients

The Temporary Assistance for Needy Families (TANF) program, assists families in meeting their basic needs when the parents or other responsible relatives are unable to provide for the basic needs of the family. In Region 11,027 families received basic TANF assistance and 65 received state TANF assistance. After converting the total number of Region 1 county recipients by a population of 1000, we see that Dickens' population has the highest percentage of population receiving TANF assistance, with over 6 persons per 1000 population marked as recipients. Thus, even though Lubbock contains the highest number of individuals on TANF benefits, it actually has a lower percentage of its population in this category than many of the other Region's counties, and the majority of Region 1 counties have below 2 per 1000 population on TANF benefits. See the Graph 31 for further details.

Graph 31.



Number of Region 1 TANF Recipients per 1000 Population, 2019. (combination of Basic and State TANF recipients)

Source: Texas Health and Human Services. 2019. <u>http://hhs.texas.gov/</u>

Supplemental Nutritional Assistance Program (SNAP) Recipients

The Supplemental Nutrition Assistance Program (SNAP) is the largest federal nutrition assistance program. SNAP provides nutrition benefits to supplement the food budget of needy families so they can purchase healthy food and move towards self-sufficiency.

Every county in Region 1 has individuals who receive SNAP payments, with the majority of recipients being between the ages of 18 and 59. As would be expected, the number of payments per county is heavily influenced by the population density, with Lubbock County having the largest number of payments, but as noted above with TANF benefits, when we look at recipients per 1000 population, another county (Crosby in this instance) is shown to utilize SNAP at a higher rate. On average, Crosby County contains the highest percentage of population in Region 1 receiving some form of SNAP benefit, with over 200 persons per 1000 population recorded as a recipient, while the majority of Region 1 counties have below 150 per 1000 population receiving this benefit.

County	Number of	Recipients	Recipients	Recipients	Recipients	Average Paymont	
	Recipients	Under 5	5-1/	18-59	Over 60	Payment	
Armstrong	125	22	43	48	17	\$243.89	
Bailey	851	168	346	249	119	\$276.98	
Briscoe	140	11	51	54	32	\$232.86	
Carson	310	44	103	145	35	\$257.03	
Castro	999	136	424	343	123	\$279.72	
Childress	797	111	250	342	136	\$223.39	
Cochran	499	54	176	191	95	\$249.13	
Collingsworth	401	42	159	198	46	\$269.26	
Crosby	1,185	176	420	482	166	\$259.42	
Dallam	572	113	221	194	64	\$268.53	
Deaf Smith	2,643	471	1,000	917	348	\$282.55	

Table 5: Supplemental Nutritional Assistance Program (SNAP) Recipients, Region 1 2019.
County	Number of	Recipients	Recipients	Recipients	Recipients	Average
	Recipients	Under 5	5-17	18-59	Over 6o	Payment
Dickens	241	26	81	88	58	\$220.26
Donley	343	41	106	145	61	\$225.42
Floyd	1,101	156	419	418	148	\$280.36
Garza	592	85	211	224	97	\$268.08
Gray	2,748	370	961	1,198	348	\$257.04
Hale	5,331	783	2,016	2,024	715	\$267.42
Hall	519	58	189	207	84	\$235.71
Hansford	275	53	133	74	27	\$267.10
Hartley	98	17	36	37	14	\$231.96
Hemphill	190	40	77	57	20	\$305.78
Hockley	2,734	460	959	1,068	351	\$259.73
Hutchinson	2,734	339	788	956	260	\$272.99
King	2	0	1	0	1	\$551.92
Lamb	2,139	288	770	829	340	\$247.42
Lipscomb	209	28	94	69	21	\$286.64
Lubbock	38,964	6,221	13,776	15,740	4,712	\$260.77
Lynn	825	113	299	322	122	\$256.72
Moore	1,715	331	694	583	190	\$249.19
Motley	100	13	26	41	28	\$169.42
Ochiltree	583	98	248	188	81	\$275.88
Oldham	80	16	20	33	14	\$276.75
Parmer	733	130	310	229	92	\$276.16

Source: Texas Health and Human Services. 2019. https://hhs.texas.gov/about-hhs/records-statistics/data-statistics/supplemental-nutritional-assistance-program-snap-statistics



Graph 32.

Source: Texas Health and Human Services. 2019. https://hhs.texas.gov/about-hhs/records-statistics/data-statistics/supplemental-nutritional-

assistance-program-snap-statistics

Free and Reduced School Lunch Program

The National School Lunch Program (NSLP) is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day. In most counties in Region 1 the majority of youth qualify for free and reduced lunches. Only 7 counties have less than 50% of students receiving free & reduced lunches.





Source: National Center for Education Statistics. 2019. https://nces.ed.gov

Every Region 1 County had at least 20% of its student population qualifying for a free or reduced lunch, the majority with at least 50% qualifying. From 2018-2019, only 7 counties had less than 50% qualifying for this assistance. See Figure 24 above for individual county percentages.

Uninsured Children

The average number of uninsured children in Region 1 is 6% greater than that of the state. The county with the least uninsured children is Randall County at 7%, while the county with the highest percentage of uninsured children is Briscoe at 25%, followed by Sherman and Collingsworth both having 24 percent of their populations children uninsured. While all Region 1 counties have at least 7% of their child population uninsured, the majority of counties exceed this number. See Figure 25 for further county details.







Demographic Summary

The majority of the population of the 41 counties in Region 1 reside in either Lubbock or Amarillo, while the remainder resides in rural communities throughout the south plains and panhandle of Texas. The average population per square mile in the region is 21.7, which demonstrates how rural this area is when compared to the state average of 96.3 people per square mile. About one quarter of the population in Region 1 is under 18 years old. The population is less diverse than the state with 91.4% identifying as white, including the 40.3% of the population which is Hispanic or Latino.

Educational attainment in Region 1 varies greatly by each individual county. 82.3% of the population graduated High School, and 23.3% of the population holds a degree of higher education.

A majority of the homes in Region 1 (62.9%) are owner-occupied, with the average value of occupied homes (\$84,000) being substantially less than the Texas average (\$172,500). The average median household income in Region 1 was \$49,701, which is slightly less than that of the state's \$61,874. The unemployment rate for the region (32.8%) is also below Texas's average (3.5%).

About 1,027 families in Region 1 receive basic Temporary Assistance for Needy Families (TANF) assistance and 63 receive this form of assistance from the state. There are also individuals in every county in the region who receive payments from the Supplemental Nutritional Assistance Program (SNAP). In all but two counties in the region the majority of youth received Free and Reduced Lunch.

Over 15% of the region's population is in poverty, which is slightly above that of the state and over 5% over that of the United States.

Source: U.S. Census Bureau, Small Area Health Insurance Estimates (SAHIE). 2018. <u>http://www.countyhealthrankings.org/</u>

Environmental Risk Factors

Overview of Risk Factors

A variety of factors influence whether or not an individual will develop a substance use disorder. The Substance Abuse and Mental Health Services Administration (SAMSHA) defines risk factors as characteristics at the biological, psychological, family, community or cultural level that precede and are associated with a higher likelihood of negative outcomes.

Retail Access- Alcohol Retailers

The region has a total of 1,767 liquor licenses, with an average density of 2.17. Lubbock, Potter and Randall counties have the greatest number of retailers, but when density is calculated per 1,000 citizens, Ochiltree has the highest density of retailers in the region with 17.5 per 1,000. See Graph 35 for individual county liquor license numbers.

Graph 35. Alcohol Retailers, Region 1 2019



Region 1 Counties' Number of Liquor Licenses per 1000 Population.

Source: Texas Health and Human Services: Open Records Request. 2019. www.hhs.texas.gov

Alcohol Sales

Alcohol sales to minors have fluctuated over the past three years with the region totaling 33 in 2017, 24 in 2018 and 34 in 2019. Lubbock had the highest number of sales all three years, with the decrease in 2018 taking place in this county. Other counties with recent sales to minors include Carson, Childress, Deaf Smith, Hale, Hansford, Lamb, Lynn, Moore, Ochiltree, Potter, and Randall. Graph 36 shows the counties' exact number of violation distributions.

Graph 36.







Source: HHSC - Alcohol Sales to Minors by County. 2019. https://www.tabc.texas.gov/PublicInquiry/RosterSummary.aspx.

Retail Access- Tobacco Licenses

Region 1 has 1,100 tobacco licenses with an average of 1.95 licenses per 1000. The counties with the greatest density per 1,000 individuals include Briscoe (4.5), Donley (3.1), Hall (3.4), King (3.7), Motely (3.3), and Oldham (3.3), while the remainder of the 41 counties fell below 3 liquor licenses per 1000 population. Of which, Terry (0.9), Hartley (0.9) and Randall (0.7) had the lowest number. See Graph 37 for county specifics.

Graph 37.



Source: Texas Health and Human Services: Open Records Request. 2019. www.hhs.texas.gov

Tobacco Sales

In 2017 there were 11 tobacco sales to minors recorded (Potter: 9, Lubbock: 2), and only 1 recorded in both 2018 (Lubbock) and 2019 (Hale).

Graph 38.



Source: Open Record Request - HHSC - Tobacco Violations by County. 2020. https://www.tabc.texas.gov/PublicInquiry/RosterSummary.aspx

Prescription Drugs

There are five schedules that drugs are classified into depending on the substances medical use and the potential for dependency or abuse. The United States Drug Enforcement Administration (DEA) provides the following information on each schedule of drug:

Schedule I drugs, substances, or chemicals are defined as drugs with no currently acceptable medical use and a high potential for abuse. Examples include: heroin, lysergic acid diethylamide (LSD), marijuana (cannabis), methylenedioxymethamphetamine (ecstasy), methaqualone, and peyote.

Schedule II drugs, substances, or chemicals are defined as drugs with a high potential for abuse, with use potentially leading to severe psychological or physical dependence. These drugs are also considered dangerous. Examples include: combination products with less than 15 milligrams of hydrocodone per dosage unit (Vicodin), cocaine, methamphetamine, methadone, hydromorphone (Deluded), meperidine (Demerol), oxycodone (OxyContin), fentanyl, Dexedrine, Adderall, and Ritalin.

Schedule III drugs, substances, or chemicals are defined as drugs with a moderate to low potential for physical and psychological dependence. Schedule III drugs abuse potential is less than Schedule I and Schedule II drugs but more than Schedule IV. Examples include: products containing less than 90 milligrams of codeine per dosage unit (Tylenol with codeine), ketamine, anabolic steroids, and testosterone.

Schedule IV drugs, substances, or chemicals are defined as drugs with a low potential for abuse and low risk of dependence. Examples include: Xanax, Soma, Darvon, Darvocet, Valium, Ativan, Talwin, Ambien, and Tramadol.

Schedule V drugs, substances, or chemicals are defined as drugs with lower potential for abuse than Schedule IV and consist of preparations containing limited quantities of certain narcotics. Schedule V drugs are generally used for antidiarrheal, antitussive, and analgesic purposes. Examples include: cough preparations with less than 200 milligrams of codeine or per 100 milliliters (Robitussin AC), Lomotil, Motofen, Lyrica, and Parepectolin.

When comparing the Region 1 scheduled drug dispensing rate to Texas', Region 1 surpasses Texas when the scheduled drugs are combined as well as when they are separated into their categories: Schedule 2 - Schedule 5. See Figures 30-34.

In Region 1 1,452.80 total scheduled prescriptions were dispensed per 1,000 people. Schedule 4 drugs were dispensed at the highest rate, followed by schedule 2 drugs. Childress (2,067.3) had the highest rate of prescriptions dispensed per 1,000, followed by Potter County (1,986.0), while Cochran County (77.8) had the lowest rate of total scheduled prescriptions dispensed per 1,000. See Graphs 39-43.



Graph 39.



Of the Schedule 2 Prescription Drugs (those in the dataset with the highest potential of abuse), Childress was prescribed 745.1 per 1000 population, compared to the second highest prescribed county; Lubbock, at 560 schedule 2 prescriptions per 1000 population. It's important to note that the measure is of scheduled prescription dispensation counts, not total number of persons being prescribed these medications, meaning that multiple counts were likely given to the same people in this timeframe. This is true for Graphs 39-43.



Region 1 Counties Schedule 2 Prescription Drug Rates per 1000 Population, 2019.

Although Childress had the highest overall count of dispensed scheduled prescription drugs, Potter was dispensed schedule 3 drugs at a rate of 332.2, compared to Childress' 169.4 rate. In this category, Region 1 had a higher rate than the state of Texas by 23.3, and while many Region 1 counties fall below Texas' rate of 186.5, 8 of them surpass it. See Figure 32 to compare the dispensing rates of the Region 1 counties.



Graph 41.

Graph 40.



When comparing Schedule 4 prescription drug dispenses (Graph42), Gray County exceeds the other 40 counties including the dispensed rate of Texas and Region 1 as a whole, with 1045 per 1000 population. Childress and Potter follow Gray, with 1027 and 982 per 1000 population. The Region 1 Counties that document a rate above 100 dispensed schedule 5 prescriptions are: Bailey (138.4), Childress (126.2), Donley (112.0), Gray (113), Hemphill (135.6), Hutchinson (103.3), Potter (125.4), Sherman (102.6), Wheeler (114.1), and Yoakum (113.5).





Graph 43. Region 1 Counties Schedule 5 Prescription Drug Rates per 1000 Population, 2019.



Access to Care

Graph 42.

There are two forms of treatment available in Region 1 include outpatient and inpatient treatment. SAMSHA defines these types of programs as:

Inpatient treatment offers both detoxification and rehabilitation services and is generally provided in a medical setting. Individuals who have a mental disorder or other serious medical problem as well as a substance use disorder are more likely to receive inpatient treatment. Youth may also benefit from the additional structure and support of inpatient treatment services.

In some cases, inpatient treatment includes **residential programs** which are a living environment with treatment services. Residential programs all differ, but generally have different phases of treatment with

different expectations and activities. Residential treatment may be beneficial for people with very serious substance use disorders who may be unable to get and stay sober in other treatment settings.

Outpatient and intensive outpatient programs provide services at a program site, but the individual still lives at home. These programs have different structures and attendance requirements, for example some meet in the evening so individuals can attend work or school.

Region 1 has a few different treatment options for individuals, but the majority are in Amarillo or Lubbock. The only other options are Plainview, Pampa and Floydada. Of the treatment options available, only five offer some kind of services to youth in the region. Outpatient treatment is much more available in the area, when compared to inpatient treatment options.

Name	Facility Type	Location
Amarillo Council of Alcoholism and Drug Abuse	Adult Outpatient	Amarillo
Cenikor Foundation	Adult Outpatient	Amarillo
Cenikor Foundation	Adult Inpatient	Amarillo
Lidia Dailey LCDC	Adult Outpatient	Amarillo
Lidia Dailey LCDC	Adolescent Outpatient	Amarillo
My Next Step PLLC	Adult Outpatient	Amarillo
My Next Step PLLC	Adolescent Outpatient	Amarillo
Plainview Serenity Center Inc.	Adult Inpatient	Amarillo
Plainview Serenity Center Inc.	Adult Outpatient	Amarillo
Texas Panhandle Mental Health	Adult Outpatient	Amarillo
The TAF Group, LLC	Adult Outpatient	Amarillo
Aspire Addiction Recovery Center LLC	Adult Outpatient	Lubbock
Aspire Addiction Recovery Center LLC	Adolescent Outpatient	Lubbock
Clover House Inc	Adult Outpatient	Lubbock
Lubbock Regional Mental Health, MR Center	Adult Outpatient	Lubbock
Stages of Recovery Inc	Adult Outpatient	Lubbock
The Ranch at Dovetree LLC	Adult Detox	Lubbock
The Ranch at Dovetree LLC	Adult Outpatient	Lubbock
The Ranch at Dovetree LLC	Adult Inpatient	Lubbock
Lidia Dailey LCDC	Adult Outpatient	Pampa
Central Plains Center	Adolescent Outpatient	Plainview
Central Plains Center	Adolescent Inpatient	Plainview
Plainview Serenity Center Inc.	Adult Inpatient	Plainview
Plainview Serenity Center Inc.	Adult Outpatient	Plainview
Central Plains Center	Adolescent Outpatient	Plainview
Plainview Serenity Center Inc.	Adult Outpatient	Plainview

Table 6: Treatment Programs, Region 1 2020

Source: Texas Health and Human Services. Treatment Providers. 2020. <u>www.hhs.texas.gov</u>

Image 5. Adolescent Outpatient Facilities, Region 1 2020 Image 6. Adult Outpatient Facilities, Region 1 2020





Image 9. Adolescent Inpatient Facilities, Region 1 2020.



Source: Texas Health and Human Services. Treatment Providers. 2020. <u>www.hhs.texas.gov</u>

Environmental Risk Factor Summary

The prevalence of alcohol retailers in Region 1 is 2.17 per 1,000 residents and tobacco retailer density is 1.95 per 1,000. The number of retailers varies greatly across the region. Ochiltree far surpasses all other counties with 17.5 licenses per 1,000. There is less variation in the number of tobacco licenses with Briscoe County having the highest density with 4.5 licenses per 1,000.

There were alcohol and tobacco sales recorded across the region from 2017-2019. The majority of sales of alcohol to minors took place in Lubbock, while Potter was the county with the most tobacco sales to minors.

Prescription disbursement rates greatly vary across the region. Category 4 prescriptions were dispensed at the highest rate in Region 1. Examples of schedule 4 drugs include Xanax, Soma, Darvocet, Valium, Ativan,

Talvin, Ambien and Tramadol. The second most common schedule of drugs dispensed was schedule 2, which includes Vicodin, Cocaine, Methamphetamine, Methadone, Hydromorphone, Meperidine, Oxycodone, Fentanyl, Dexedrine, Adderall and Ritalin.

Treatment options in the Region are primarily located in Amarillo and Lubbock. There are very limited adolescent programs across the panhandle and the south plains with the only available options being located in Amarillo, Lubbock, Plainview and Floydada.

This analysis of the environmental risk factors prevalent in Region 1 is limited due to the current existing data available. A major area of focus for the Region 1 Prevention Resource Center over the next year will be identifying additional existing data sets, as well as developing and implementing new methods of collecting substance use data across all 41 counties in the region. To fully understand the environmental risk factors present in the region additional data is needed on a variety of issues including: perception of harm among adults, youth and the community; peer and parental views on the use of substances; social norms around substance use; and the availability of alcohol and substances socially.

Regional Consumption

Overview of Consumption

There is limited consumption data available for Region 1. The current data sets available include the Youth Risk Behavior Survey, the Texas School Survey, and the Texas College Survey. The substances included in these data sets include alcohol, marijuana, tobacco, prescriptions, and other illicit drugs.

Alcohol

Drinking too much, on a single occasion or over time, can take a serious toll on health. NIDA lists the following effects alcohol can have:

- **Brain:** Alcohol interferes with the brain's communication pathways, and can affect the way the brain looks and works. These disruptions can change mood and behavior and make it harder to think clearly and move with coordination.
- Heart: Drinking a lot over a long time or too much on a single occasion can damage the heart, causing problems including: Cardiomyopathy (stretching and drooping of the heart muscle), arrhythmias (irregular heart beat), stroke, and high blood pressure.
- Liver: Heavy drinking takes a toll on the liver, and can lead to a variety of problems and liver inflammations including: steatosis (fatty liver), alcoholic hepatitis, fibrosis, and cirrhosis.
- **Pancreas:** Alcohol causes the pancreas to produce toxic substances that can eventually lead to pancreatitis, a dangerous inflammation and swelling of the blood vessels in the pancreas that prevents proper digestion.
- **Cancer:** Based on extensive reviews of research studies, there is a strong scientific consensus of an association between alcohol drinking and several types of cancer. The National Toxicology Program of the US Department of Health and Human Services lists consumption of alcoholic beverages as a known human carcinogen. The research evidence indicates that the more alcohol a person drinks-particularly the more alcohol a person drinks regularly over time- the higher his or her risk of developing an alcohol- associated cancer.

Current Use

The Texas Health and Human Services Dashboard Data on the Youth Risk Behavior Survey breaks down youth use of alcohol by age, grade, race/ethnicity and sex. Based on this data the average use rate for all youth is 27.8%. Youth over the age of 18 are shown to use at a higher rate (38.9%), but their peers between 16-17 used at a comparable rate (31.0%). Twelfth grade students drank over 10% more than those in 11th grade. Females surpassed males in use. White individuals consumed alcohol at a much higher rate (36.4%) when compared to Black (16.45%), Hispanic (26.65), and Other (20.75%) races.

When time trends are taken into consideration all age groups were steadily decreasing in use from around 2007 to 2017. Though this decrease in overall use continued for youth under the age of 15, there was an obvious increase in current use for both 16 and 17 year-old youth, as well as those over 18.



Graph 44. Current Youth Drinking-Texas School Survey, 2018.

Graph 45. Current Drinking, Texas Youth Risk Behavior Survey, 2019.



Source: Texas Youth Risk Behavior Survey (YRBS) Results. 2018-2019. <u>http://healthdata.dshs.texas.gov/dashboard/surveys-and-profiles/youth-risk-behavior-survey</u>

Binge Drinking

The NIAAA's standard definition of **binge drinking** is drinking behaviors that raise an individual's Blood Alcohol Concentration (BAC) up to or above the level of .08gm%, which is typically five or more drinks for men and four or more drinks for women, within a two-hour time span. At-risk or heavy drinking is defined as more than four drinks a day or 14 drinks per week for men and more than three drinks a day or seven drinks per week for women. "Benders" are considered two or more days of sustained heavy drinking.

According to the data binge drinking rates among youth in the region were relatively low, the vast majority of respondents to the Texas School Survey of Drug and Alcohol Use had not engaged in binge drinking in the last 30 days. As would be expected the rates of use were the highest among 12th grade youth, especially for 1 day of binge drinking in the last 30 days. The response rates for 10 or more days of heavy drinking in the past 30 days, was greater in most cases than 2-9 days. These results demonstrate that most respondents either engaged in binge drinking one day or over 10 days in the last month, showing that heavy use among those who did in fact use was at a high prevalence.

Grade	Never	1 Day	2 Day	3 to 5 Days	6 to 9 Days	10+ Days
7 th	95.3%	1.8%	0.6%	0.3%	0.4%	1.5%
8 th	90.4%	3.8%	1.9%	1.7%	0.5%	1.7%
9 th	86.2%	4.5%	4.0%	2.1%	0.5%	2.7%
10 th	83.3%	5.7%	4.4%	3.0%	1.1%	2.5%
11 th	79.2%	7.6%	3.5%	5.5%	1.9%	2.4%
12 th	79.2%	6.8%	3.5%	5.8%	1.7%	3.0%

Table 7: Binge Drinking in Last 30 Days- Texas School Survey, Region 1 2018

Source: Texas A&M University. Texas School Survey of Drug and Alcohol Use. 2018. HHSC Region 1 Report. http://www.texasschoolsurvey.org/Documents/Reports/Region1.pdf



Graph 46: Binge Drinking in Last 30 Days- Texas School Survey, Region 1 2018

Source: Texas A&M University. Texas School Survey of Drug and Alcohol Use: 2018 HHSC Region 1 Report. http://www.texasschoolsurvey.org/Documents/Reports/Region1.pdf

College Age Binge Drinking

College aged binge drinking has slightly decreased from 2013-2017. College males tend to average higher rates of binge drinking, with 37% engaging in this consumption pattern in 2017 compared to 34% for female college students. Throughout the time trend analyzed the majority of college students did not engage in binge drinking activities.



Graph 47: College Age Binge Drinking- Texas College Survey, Region 1 2017

Source: M.P. Trey Marchbanks III, PhD. Texas College Survey. Public Policy Research Institute (PPRI). https://texascollegesurvey.org.

Age of Onset

A variety of studies have found that starting alcohol use at a younger age increases both the risk of binge and heavy drinking behaviors, as well as alcohol use and misuse later in life.

According to the Youth Risk Behavior Survey 17% of the youth surveyed had consumed alcohol before the age of 13. More males had used before 13 (18.8%), with a similar use rate for White (17.7%), Hispanic (17.0%) and Black (17.8%) races. When time trends are analyzed the amount of youth who had used prior to 13 has steadily decreased from 2001 to 2013 and then remained relatively stable from 2015-2019.

Graph 48: Alcohol Use Prior to Age 13- Youth Risk Behavior Survey, Region 1 2019



Source: Texas Youth Risk Behavior Survey (YRBS) Results. 2018-2019. <u>http://healthdata.dshs.texas.gov/dashboard/surveys-and-profiles/youth-risk-behavior-survey</u>

Marijuana

Marijuana is derived from the hemp plant Cannabis sativa. The main psychoactive chemical in marijuana is delta-9-tetrahydrocannabinol or THC.

The possible health effects provided by National Institute on Drug Abuse (NIDA) include:

- Short-term: Enhanced sensory perception and euphoria followed by drowsiness/ relaxation; slowed reaction time; problems with balance and coordination; increased heart rate and appetite; problems with learning and memory; anxiety.
- Long-term: Mental health problems, chronic cough, frequent respiratory infections.
- Other Health-related Issues: THC vaping products mixed with the filler Vitamin E acetate (and possibly other chemicals) has led to serious lung illnesses and deaths. Pregnancy: babies born with problems with attention, memory and problem solving.
- In Combination with Alcohol: Increased heart rate, blood pressure; further slowing of mental processing and reaction time.
- Withdrawal Symptoms: Irritability, trouble sleeping, decreased appetite, anxiety.

The current marijuana use trends identified by the Texas School Survey show that the majority of youth in Region 1 are not currently using marijuana. However, there is a pretty drastic increase in current use from 7^{th} (5.5%) to 12th (16.6%) grade.

Graph 49. Current Marijuana Use- Texas School Survey, Region 1 2018



Source: Texas A&M University. Texas School Survey of Drug and Alcohol Use: 2018 HHSC Region 1 Report.

Table 8. Current Marijuana Use /percentages, Region1 2018.					
Grade	Past Month	School Year	Ever Used	Never Used	
7th	5.5	5.9	7.6	92.4	
8 th	11.9	13.3	17.6	82.4	
9 th	11.5	14.2	18.4	81.6	
10 th	14.4	19.4	27.3	72.7	
11 th	18.6	21.9	31.6	68.4	
12 th	16.6	21.7	34.9	65.1	
http://www.texasschoolsurvey.org/Documents/Reports/Region/18Region1.pdf					





Source: Texas A&M University. Texas School Survey of Drug and Alcohol Use: 2018 HHSC Region 1 Report. http://www.texasschoolsurvey.org/Documents/Reports/Region1.pdf

The Youth Risk Behavior Survey identifies similar trends in youth marijuana use. The highest levels of use regular use (within the past 30 days) are within the 11th grade population. Time trends demonstrate that there was a decrease among the 18 and over population with a steady drop in use from 2013 to 2017, but use has been on the rise since 2017. Hispanic (19.0%) and Black (19.0%) youth used at a slightly higher rate than White (16.2%) youth, while those who identified as other races had the lowest rate of use (13.9%).

Graph 51. Current Marijuana Use-Youth Risk Behavior Survey, Region 1 2019



Source: Texas Youth Risk Behavior Survey (YRBS) Results. 2018-2019. http://healthdata.dshs.texas.gov/dashboard/surveys-and-profiles/youth-risk-behavior-survey

Age of Onset

A low percentage of youth, only 6.7% have used marijuana before the age of 13 in Region 1. Time trends show that since 2011 there has been a steady decrease in the number of youth who utilize marijuana prior to the age of 13, with a spike from year 2009-2010, followed by another decline. Of the youth whose age of onset was prior to 13 8.9% were Black, 7.2% Hispanic, 5.6% white, and 3.2% other.



Graph 52. Marijuana Use Before 13-Youth Risk Behavior Survey, Region 1 2019

Source: Texas Youth Risk Behavior Survey (YRBS) Results. 2018-2019. <u>http://healthdata.dshs.texas.gov/dashboard/surveys-and-profiles/youth-risk-behavior-survey</u>

Tobacco and Vaping Products

Tobacco is a plant grown for its leaves, which are dried and fermented before use. Nicotine is an addictive chemical contained in tobacco. Nicotine can be extracted and utilized in vaping devices. The possible health effects provided by National Institute on Drug Abuse (NIDA) include:

- Short-term: Increased blood pressure, breathing, and heart rate. Exposes lungs to a variety of chemicals. Vaping also exposes lungs to metallic vapors created by heating the coils in the device.
- Long-term: Greatly increased risk of cancer, especially lung cancer when smoked and oral cancers when chewed; chronic bronchitis; emphysema; heart disease; leukemia; cataracts; pneumonia.
- Other Health-related Issues: Nicotine: in teens it can affect the development of brain circuits that control attention and learning.

- **Tobacco products:** use while pregnant can lead to miscarriage, low birth weight, stillbirth, learning and behavior problems.
- Vaping products: some are mixed with the filler Vitamin E acetate ad other chemicals, leading to serious lung illnesses and deaths.
- Withdrawal Symptoms: Irritability, attention and sleep problems, depression, and increases appetite.

Current Use

According to the Youth Risk Behavior Survey, as of 2019 the current use rate of electronic vapor products is highest among 16-17 year olds (22.9%). The demographic of youth utilizing these products at the highest rate are White (30.9%), while all other races utilize these products at half that rate or less.

Graph 53: Electronic Vapor Product Use-Youth Risk Behavior Survey, Region 1 2019



Source: Texas Youth Risk Behavior Survey (YRBS) Results. 2018-2019. <u>http://healthdata.dshs.texas.gov/dashboard/surveys-and-profiles/youth-risk-behavior-survey</u>

Age of Onset

According to the findings of the Youth Risk Behavior Survey 10.6% of the youth in Region 1 smoked a whole cigarette before they were 13 years old. This age of onset was similar for all races and across all students surveyed. Males were slightly more likely (11.4%) than females (9.65) to have smoked a whole cigarette before they were 13.



Graph 54: Smoked Before 13-Youth Risk Behavior Survey, Region 1 2019

Smoked before age

Source: Texas Youth Risk Behavior Survey (YRBS) Results. 2018-2019. http://healthdata.dshs.texas.gov/dashboard/surveys-and-profiles/youth-riskbehavior-survey

Prescriptions

Prescription Opioids

Opioid pain relievers have an origin similar to heroin and can cause euphoria. The nonmedical use has the potential to lead to overdose deaths.

The possible health effects provided by National Institute on Drug Abuse (NIDA) include:

- Short-term: Pain relief, drowsiness, nausea, constipation, euphoria, slowed breathing, death.
- Long-term: Increased risk of overdose or addiction if misused.
- Other Health-related Issues: Risk of HIV, hepatitis, and other infectious diseases from share needles. • Pregnancy: Miscarriage, low birth weight, neonatal abstinence syndrome. Older adults: higher risk of accidental misuse because many older adults have multiple prescriptions, increasing the risk of drug-drug interactions, and breakdown of drugs slows with age; also, many older adults are treated with prescription medications for pain.
- In Combination with Alcohol: Dangerous slowing of heart rate and breathing leading to coma or death.

• Withdrawal Symptoms: Restless, muscle and bone pain, insomnia, diarrhea, vomiting, cold flashes with goose bumps, leg movements.

Prescription Stimulants

Prescription stimulants increase alertness, attention, energy, blood pressure, heart rate, and breathing rate. The possible health effects provided by National Institute on Drug Abuse (NIDA) include:

- Short-term: Increased alertness, attention, energy; increased blood pressure and heart rate; narrowed blood vessels; increased blood sugar; opened-up breathing passages. High doses: dangerously high body temperature and irregular heartbeat; heart disease; seizures.
- Long-term: heart problems, psychosis, anger, paranoia.
- Other Health-related Issues: Risk of HIV, hepatitis, and other infectious disease from shared needles.
- In Combination with Alcohol: Masks the depressant action of alcohol, increasing risk or alcohol overdose; may increase blood pressure
- Withdrawal Symptoms: Depression, tiredness, sleep problems.

Lifetime Use

The Youth Risk Behavior Survey found that 16.6% of the youth surveyed took prescription pain medications without a doctor's prescription one or more times during their lifetime. The percentage of use for this substance was highest among students less than 15 (17.6%), as well as females (19.3%). The highest percentage of use was among Black youth (18.3%), followed by Hispanic youth (16.8%).

Graph 55: Prescription Misuse-Youth Risk Behavior Survey, Region 1 2019



Source: Texas Youth Risk Behavior Survey (YRBS) Results. 2018-2019. <u>http://healthdata.dshs.texas.gov/dashboard/surveys-and-profiles/youth-risk-behavior-survey</u>

Illicit Drug Use

The majority of the youth who responded to the Texas School Survey have never used illicit drugs. Use rates were the highest among 12th grade youth with 36.1% using in their lifetime and 24.7% using this year. The use rate among 11th grade students was close to 12th grade use, with 32.1% using in their lifetime and 23.9% using this school year. The rate of use in the last month was actually greater for 11th grade students (19.7%), when compared to 12th grade students (17.2%).

Grade	Past Month	School Year	Ever Used	Never Used
Grade 7	5.9	7.3	9.4	90.6
Grade 8	11.9	16.4	20.6	79.4
Grade 9	11.7	16.1	20.1	79.9
Grade 10	15	21.7	28.7	71.3
Grade 11	19.7	23.9	32.3	67.7
Grade 12	17.2	24.7	36.1	63.9
Source: Texas A http://www.texassch	A&M University. Texas Su noolsurvey.org/Documents/Rep	chool Survey of Drug and orts/Region/18Region1.pdf	Alcohol Use: 2018 HHSC	Region 1 Report.

Table 9: Illicit Drug Use- Texas School Survey, Region 1 2018

Graph 56: Illicit Drug Use- Texas School Survey, Region 1 2018



Source: Texas A&M University. Texas School Survey of Drug and Alcohol Use: 2018 HHSC Region 1 Report. http://www.texasschoolsurvey.org/Documents/Reports/Region198Region19df

All Substances

The Texas School Survey results clearly illustrate the rates of first use for tobacco, marijuana, and alcohol. Across all age ranges alcohol was used at the highest rate, with the age of onset for tobacco being more prevalent than marijuana for youth less than 8 years old through 12 years old. The age of first use for marijuana is more common for 13 to 17 year-olds. The most prevalent age for youth to utilize alcohol for the

first time is 15. The most common age of onset for marijuana use was 14-15 years old. Of the youth surveyed the most common age of first use for tobacco was 15 years old.

Current Use: All Substances.

The current substance use trends identified by the Texas School Survey show the main substance of use among all grade levels to be alcohol, followed by tobacco, and illicit drugs. Of the alcoholic beverages, beer and liquor are the most commonly used for grades 7-12 students. Of the current use of illicit drugs, marijuana curent use among all grades is significantly higher than other illict drugs in the same category. 8th graders have the highest current use percentages for most prescription drug categories, see graph 57.



Graph 57. Current Use Percentages Among 7th-12th Grade, 2018.



Specific Inhalant Substance Current Use Percentages, Grade 7-12, 2018.

http://www.texasschoolsurvey.org/Documents/Reports/Region/18Region1.pdf

Graph 58 visualizes the data from the 2018 Texas School Survey of Drugs and Alcohol Use, and displays the average ages of initial substance use for each specific substance and each grade level. Notice that the average age of first use deceases for most substances from Grades 12-7th. For example, when reviewing student's average age of first use for cocaine, 12th grade recorded an average age of ~16, 11th grade: ~16, 10th grade: ~15, 9th grade: 13.4, 8th: 11.2, 7th: 11 years of age, thus indicating that as time progresses, children are being introduced to substances at an earlier age. The substances with the lowest average age of introduction were ecstasy (10 years of age), heroin (10 years of age), and methamphetamine (10.8 years of age), all of which were averages for the 2018 7th grade class of Region 1.



Graph 58. Age of First Use, Grades 7-12, Region 1 2018.

http://www.texasschoolsurvey.org/Documents/Reports/Region/18Region1.pdf

Regional Consumption Summary

Current Region 1 consumption data sets include the Youth Behavior Survey, the Texas School Survey, and the Texas College Survey. These data sets provide a limited amount of insight, but additional qualitative and quantitative data would allow for a more comprehensive understanding of regional consumption.

Alcohol is the most commonly used substance among youth in Region 1 and was used most prevalently by those 16 years and older. The most common age of onset for alcohol was 15 years old. For all grade levels one day of binge drinking a month was the most common use trend, but the majority of junior high and high school youth did not engage in binge drinking. College aged binge drinking has decreased from 2013 to 2017, with a slight increase in 2015 before tapering off again. The majority of college students in Region 1 do not engage in binge drinking. Of the youth surveyed 17% consumed alcohol prior to the age of 13. Trends with regards to individuals using alcohol have remained stable since 2013.

Most youth in Region 1 have never used marijuana. Use rates increase with age and 34% of 12th grade youth have used marijuana, with 16.6% using in the last month. More 11th grade students had used marijuana in the past month when compared to 12th grade youth. A low percent of youth (6.7%) had used marijuana before the age of 13 in Region 1.

Electronic Vapor Product Use was highest among 16-17 year olds with 22.9% of them using these products. Region 1 data illustrated that 10.6% of youth had tried one whole cigarette prior to 13.

Of youth surveyed 16.6% took prescription pain medication without a doctor's prescription one or more times during their lifetime. Most youth surveyed had not used illicit drugs. The highest use rate was among 12th grade students at 36.1%. Eleventh grade youth had utilized illicit drugs at the highest rate in the past month.

Consequences

Overview of Consequences

Substance abuse and misuse has a variety of negative consequences for both individuals and society. Consequence data currently available in Region 1 includes arrests, illegal drug seizures, driving under the influence of drugs and alcohol, vehicular fatalities, loss of life due to excessive alcohol use, minor in possession charges, violent and property crimes, suicide rates, overdose deaths, poison center calls for marijuana, and adults receiving substance use disorder treatment.

Drug Seizures/Trafficking

In 2019 3,792.93 total pounds of drugs were seized in Region 1, of which included 2,685.375 pounds of marijuana, 3.88 pounds of opioids, 242.22 pounds of cocaine, 46.97 pounds of amphetamines, 128.44 pounds of hallucinogens, 3.25 pounds of Tranquilizers, 593.583 pounds of hashish, and 89.18 pounds of methamphetamines. Marijuana was the most prevalent substance seized as the total amount seized demonstrates. It was the most common across all counties, though the amount seized varied greatly from 1 ounce in Dickens County to 1,427 pounds in Oldham. Cocaine was the substance seized at the second most frequent rate. The county with the largest amount seized was Wheeler with 205 pounds, while six counties in the region had a seizure rate of one gram. Graph 59 displays the ounces and doses of substances seized in each Region 1 county per 100 population. Using this method, the graphs clearly reveal which counties have the highest rate of substances for their population size.





Source: Texas Department of Public Safety. 2019. https://txucr.nibrs.com/Home/Index

Alcohol and Drug Related Arrests

After making the necessary conversion to display the number of drug and alcohol-related arrests per 1000 population. It becomes apparent that Oldham County exceeds all other Region 1 counties in drug-related arrests for years 2018-2019. This noted county had 271 drug-related arrests per 1000 population, while the county with the second highest rate recorded 112 per 1000 population; a difference of 159. During the 2017-2019 timeframe, Briscoe County recorded the highest number of alcohol-related arrests per 1000 population, with a rate of 20.4 per 1000. For further drug and alcohol-related arrests specific to each county, see Graph 60.

Group A = Drug-Related Arrests.

Group H = Alcohol-Related Arrests.



Graph 6o.





Number of Drug-Related (A) and Alcohol-Related (H) Crimes per 1000 population. 2017-2019

Source: Texas Department of Public Safety. https://txucr.nibrs.com/SRSReport/ArresteeSummary.

Alcohol Related Vehicular Fatalities

The highest rate of alcohol fatalities was in 2019 with 50 total in the region, while there were 42 total in both 2017 and 2018. The highest rate of fatalities took place in Lubbock with 18 in 2017, 10 in 2018, and 21 in 2019. Of the counties in Region 1, 13 of the counties did not have any alcohol related vehicular fatalities recorded.

Graph 61: Alcohol Related Vehicular Fatalities, Region 1 2017-2019



Number of Vehicular Fatalities and Rates per 1,000 Population.



Source: Texas Department of Transportation. 2020. https://www.txdot.gov/government/enforcement/annual-summary.html

Years of Potential Life Lost Due to Excessive Alcohol Use

Overall there were 19,741 causes of death due to excessive alcohol use in 2011-2015. Of these causes 14,380 fall in the 0-19 category and 5,361 in 20-34. Alcoholic liver disease was the only 100% alcohol attributable case with 11 total. Alcohol related poisoning totals was 1,869, motor vehicle crashes total was 9,227, and the suicide total was 3,144. Other causes included cancer, heart disease and stroke, and liver, gallbladder and pancreas related issues, as well as infant death.

Graph 62: Mortality- Years of Potential Life Lost Due to Excessive Alcohol Use, Region 1 2011-2015



Excessive Alcohol Use Related Deaths, Region 1 . 2011-2015. Grouped by Chronic and Acute Causes.













Graph 64.



Causes and Number of of Alcohol-Related Lives Lost in Region 1, by Age Range. 2011-2015

Source: Center for Disease Control. 2011-2015. <u>https://nccd.cdc.gov</u>

Minor in Possession (MIP) and Drug Possession

Between 2017 and 2019 there were 245 liquor law violations and 712 drug possession charges recorded in the region by the Texas Department of Public Safety. Lubbock possessed the most of both charges with 66 liquor law violations and 221 drug cases. Potter followed with 65 liquor law violations and 135 drug possession charges.

Graph 65.



Graph 66.



Minor in Possesssion Charges Per 1,000 Population.

Source: Texas Department of Public Safety. 2017-2019. https://txucr.nibrs.com/SRSReport/ArresteeSummary.

Crimes

The Texas Department of Public Safety recorded 5,262 violent crimes and 26,463 property crimes in Region 1. Lubbock had the highest rate for both property (12,504) and violent (2,639) crimes with a total of 15,143 crimes recorded in 2018. Of the 41 counties, 13 had less than a total of 25 crimes in 2018.



Graph 67. Violent and Property Crimes, Region 1 2018.

Graph 67. Violent and Property Crimes, Region 1 2018.



Region 1 Counties' Property and Violent Crime Per 1,000 Population.

Source: Texas Department of Public Safety. 2018. https://www.dps.texas.gov/administration/crime_records/pages/crimestatistics.htm

Suicide Rates

Between 2018 and 2019 Lubbock, Potter and Randall counties had the only recorded suicides, thus we assume a lack of data for the other, less populated counties. Since 2013 there has a steady increase in the amount of suicides in the region. Lubbock recorded the highest suicide rate from 2009 to 2018, while rates fluctuated in Potter and Randall counties over the given timeframe.



Graph 68: Suicide Rates, Region 1 2012-2018.

Source: CDC Wonder Online. 2009-2018. http://wonder.cdc.gov/ucd-icd10

Graph 69: Suicide Rates, Region 1 Counties 2012-2018.



Region 1 Suicides per 10,000 Population. 2011-2018
Overdose Deaths

The only counties with recorded overdose deaths between the period of 1999 and 2018 are Lubbock, Potter, Randall, and Moore. With this in mind, the region has experienced a total of 1,076 overdose deaths during this time, with over half of them taking place in Lubbock. Rates have fluctuated greatly with the highest death rate being 68 in one year, and the lowest being 30.



Graph 70: Overdose Deaths, Counties. 2011-2018

Graph 71: Overdose Deaths, Region 1. 2011-2018



Source: CDC Wonder: Online Data Request Tool. 1999-2018. http://wonder.cdc.gov/ucd-icd10.html

EMS Runs for Overdose

Statewide 11.4% of the total EMS runs for overdoses were for individuals under the age of 18. The majority of counties in Region 1 do not have any EMS runs due to overdose recorded in 2018. However, Deaf Smith, Gray, Hutchinson, Ochiltree, Potter and Randall counties al had cases contributing to the regional total of 427.

Report Area	EMS Runs for Overdose 2018
Armstrong	0
Bailey	*
Briscoe	0
Carson	0
Castro	0
Childress	0
Cochran	0
Collingsworth	0
Crosby	0
Dallam	*
Deaf Smith	13
Dickens	0
Donley	0
Floyd	0
Garza	0
Gray	12
Hale	*
Hall	*
Hansford	0
Hartlev	0
Hemphill	*
Hockley	0
Hutchinson	40
King	0
Lamb	0
Lipscomb	0
Lubbock	0
Lynn	0
Moore	*
Motley	0
Ochiltree	5
Oldham	0
Parmer	*
Potter	320
Randall	25
Roberts	0
Sherman	*
Swisher	0
Terry	0
Wheeler	0
Yoakum	0

Table 10: EMS Runs for Overdose or Poisoning Toxic Ingestion, Region 1 2018

Report Area	EMS Runs for Overdose 2018
Region 1	427
Source: Office of Injury Prevention and FMS & Trauma registries. Texas De	partment of State Health Services. FMS Runs and Overdose or Poisoning

Source: Office of Injury Prevention and EMS & I rauma registries, Texas Department of State Health Services. EMS Runs and Overdose or Poisoning Toxic Ingestion. 2018.

Poison Center Marijuana Calls

Region 1 had 44 total calls to the poison center related to marijuana from 2017 and 2019. The majority of calls over this timeframe came from both Lubbock (16) and Potter (14), followed by Childress (2), Hale (2), Hockley (1), Castro (1) and Hutchinson (1). See the graph below for the number of calls per year for each county.



Graph 72. Poison Center Marijuana Calls, Region 1 2017- 2019

Source: Texas Health Data. 2017-2019. http://healthdata.dsha.texas.gov/

Adults Receiving Substance Use Disorder Treatment

The recorded number for adults in region 1 who were receiving treatment for a substance-use disorder from 2017-2019 is 5,019. While the number and rate of those in treatment fell from 1,790 - 1,382 (rates: 1.027-0.790) from 2017-2018, we saw an increase from 2018-2019, peaking on the last year with 1,847 individuals and a rate of 1.06 per 1000 population. It is unclear if the total percentage of persons in the region who misuse substances are receiving treatment at a higher rate, but the data shows that per 1000 adult population the rate of those in treatment has increased (not specific to the total population who misuse substances, which is unknown). It is also unclear if the number of disorders decreased in 2018, or if a lack of access caused the rate of those in treatment to decease.

When rates are calculated per 1,000 population, the counties with the highest rate of individuals receiving treatment include Potter, Gray, and Lamb, all of which have yearly rates above 4, as shown in graphs 71 and 72. Of the 41 counties, Lamb exceeded the other's rate of persons receiving treatment for a substance-use disorder in the years 2017 to 2019. While the majority were around 2 per 1000 population, Lamb recorded over 7 per 1000 population in 2019. Dickens, Floyd, Gray, Wheeler, Hutchinson, and Lamb all document steady increases from year to year, while Oldham, Parmer, Crosby, Sherman, Carson, Collingsworth, and Hale showed a constant yearly decrease in population in treatment for a substance-use disorder. The remainder of counties experienced fluctuations for the 3 years documented.





The data show the most treated substance abuse drug for the majority of Region 1 counties to be methamphetamine, followed by alcohol and marijuana. Crosby, Armstrong, Dickens, and Sherman were the only counties of Region 1 to see a constant yearly decrease in those being treated for a methamphetamine SUD. Those that show a constant yearly decrease in persons being treated for an alcohol SUD include: Deaf Smith, Moore, Ochiltree, Swisher, Collingsworth, Dickens and Motley. To see how the number of persons in treatment for Alcohol, Benzodiazepine, Cocaine, Heroin, Marijuana, Methamphetamine, Prescription Opioids, Synthetic Cannabinoids, and Synthetic Stimulants vary across the Region 1 counties from year 2017-2019, see Graph 72 below.

Graph 74.





Treatment Numbers by Specific Substance, Region 1 2017-2019.



Treatment Numbers by Specific Substance, Region 1 2017-2019.





Treatment Numbers by Specific Substance, Region 1 2017-2019.



Treatment Numbers by Specific Substance, Region 1 2017-2019.





Treatment Numbers by Specific Substance, Region 1 2017-2019.

Treatment Numbers by Specific Substance, Region 1 2017-2019.



Behavioral Health

The number of Region 1 clients in treatment for a behavioral disorder increased from 1654 in 2016 to 1934 in 2017, with the most treated disorder in both 2016 and 2017 being Attention Deficit Disorder, making up 33.35% of treatment patients in 2017, and 36.46% in 2016, down by around 3%. The second most treated disorder; Major Depression (and the only treatment disorder that experienced an increase from 2016-2017) increased from 15.96%-18.98%, showing again a change of around 3%. Adjustment Disorder, Bipolar Disorder, Other Affective Disorders, ADD, Autism, Disruptive Behavior Disorder all showed modest deceases as the years progressed.

Graph 75.







The graphs above clearly displays the increase in Major Depression from 2016-2017, and the indistinct change in the remaining and majority of treatment diagnoses. For further details related to county treatment specifics (ages and race), see graph 74.



Graph 76. Age Ranges and Races of SUD Treatment Client, 2017-2019.





Age Ranges of Individuals Treated for Substance Use Disorders, By County. 2017-2019







Measure Names

Over45

Bw 26 44



Number of Individuals Treated for Substance Use Disorder, by Race. 2017-2019





Number of Individuals Treated for Substance Use Disorder, by Race. 2017-2019

















Number of Individuals Treated for Substance Use Disorder, by Race. 2017-2019





Number of Individuals Treated for Substance Use Disorder, by Race. 2017-2019



Regional Consequence Summary

There are a variety of regional consequences due to substance use. Current available arrests total 3, 257 with Lubbock, Potter, Randall and Moore counties having the highest rate of arrests. Eight counties didn't have a single drug related arrest and 10 counties had less than 20 arrests.

Marijuana was the substance seized at the highest rate in 2019 across the region. The second most prevalent drug seized was cocaine. The amount seized for all substances varied greatly across all counties.

There were 1,627 drug and DWI related offenses in 2019 across the region, which was slightly less than the 1,723 in 2018. Lubbock and Potter counties had the largest number of cases. In 2019 the region had 50 alcohol related vehicular fatalities. A great deal of the counties averaged less than one alcohol related fatality per year. Lubbock had the greatest number of deaths, followed by Randall county.

For the years of potential life loss due to excessive alcohol use across the region that total was 9,471. Common causes included alcoholic liver disease, cancer, heart disease and stroke, liver cirrhosis, unprovoked seizures, epilepsy, or seizure disorder, alcohol related poisonings, motor vehicle crashes, and other injuries.

The Texas Department of Public Safety recorded 245 liquor law violations and 712 drug possession charges in the region between 2017 and 2019. Lubbock and Potter counties were the top two for both types of charges.

Lubbock had the highest number of both violent and property crimes across the region with a total of 15,145 crimes in 2018. Of the 41 counties in the region, 13 had less than a total of 25 property or violent crimes in 2018.

From 2018-2019 Lubbock, Potter and Randall were the only Region 1 counties that recorded suicides. Since 2013 there has a steady increase in the amount of suicides in the region.

The only counties with recorded overdose deaths between 1999 and 2018 are Lubbock, Potter, Randall and Moore, with a total of 1,076 deaths. Counties with EMS runs for overdose include Deaf Smith, Gray, Hutchinson, Ochiltree, Potter, and Randall with a total of 427 calls.

Over the past three years in Region 1, 5,029 adults have received substance use disorder treatment. Every single county in the region had individuals in treatment. When treatment rates are calculated per 1,000 the counties with the highest rates of individuals receiving treatment include Gray, Lamb and Potter.

Environmental Protective Factors

Overview of Protective Factors

SAMSHA defines protective factors as characteristics associated with a lower likelihood of negative outcomes or that reduce a risk factor's impact. Protective factors may be seen as positive countering events. Protective factors known to exist in Region 1 include a great deal of community coalitions, some substance use treatment services, limited education about alcohol, tobacco and other drugs,

Community Coalitions

The HEARD Coalition is housed in the City of Lubbock Health Department along with the PRC. The coalition is funded by the Texas Department of Health Services, established for the purpose of building the capacity of the community to prevent youth alcohol, marijuana, prescription drugs and other illicit drugs.

The mission of the coalition is to empower communities to create positive changes in attitudes, behaviors and policies to prevent and reduce at-risk behavior in youth with a unified focus on alcohol, marijuana and prescription drug prevention. Members of the coalition include the YWCA, Hub City Outreach, the Texas Tech Collegiate Recovery Program, faith based partners, community activists, medical students, those working in criminal justice, treatment providers, United Way, hospital representatives and nurses. The coalition is hoping to expand in the next year to include even more representatives from the community such as high school students, college aged youth, law enforcement, and members of the business community.

The VOICES of Hockley County Community Coalition's purpose is to encourage community mobilization to implement evidence-based environmental strategies with a primary focus on changing policies and social norms in Hockley County to prevent underage drinking, marijuana use, and prescription drug misuse. Their mission is to empower communities to create positive changes in attitudes, behaviors, and policies to prevent and reduce at risk-behaviors in youth with a unified focus on alcohol, marijuana, and prescription drugs.

Other Coalitions

University Medical Center's Nurses Educating on Illegal Drugs & Synthetics (NEIDS) is an outreach group of registered nurses, with the mission to provide education to the public on the health risks and hazards of the use of synthetic marijuana and harmful drugs.

This group utilizes public service announcements, education to school aged children, point of care education, and works with local coalitions against marijuana. They support new or revised legislation to stop the sale, distribution and manufacturing of these synthetic compounds and other illegal drugs.

The **East Lubbock Community Alliance's** vision is to ensure that people in Lubbock have equal opportunities and support to improve their outlook on the future.

The **South Plains Coalition for Child Abuse Prevention** aims to fight the high rates of child abuse in the region through education, advocacy and collaboration. They promote a variety of media campaigns focusing on recognizing and combatting child abuse.

The **South Plains Homeless Consortium** revolves around identifying issues in homelessness and developing homelessness prevention strategies. They advocate for the marginalized and educate the community about the causes of homelessness.

The **South Plains Suicide Prevention Coalition** works with local stakeholders to educate about suicide and how to identify warning signs. They host an annual regional symposium aimed at strengthening mental health protective factors and preventing suicide.

The Lubbock Area Teen Pregnancy Coalition strives for collaborative partnerships that work to educate and engage families and their communities about sexuality, health and unintended teen pregnancy.

Lubbock Compact was formed in June 2020 with the goal combatting wealth disparity in Lubbock and protecting and preserving north and east Lubbock communities.

Texans Standing Tall is a statewide coalition that focuses on delivering and implementing evidence based environmental strategies targeted at eliminating social hosting and underage drinking.

StarCare Specialty Health Systems is currently the regional MHMR. They have a variety of programs focusing on parent education, SUD screening and assessment, veteran services, and suboxone services.

Texas Panhandle Poison Center is housed at the Texas Tech Health Sciences Center Amarillo Pharmacy School. They provide education to children and adults to prevent poisonings.

Community Programs and Services

Communities in Schools (CIS) has offices located on campuses and provides direct resources to help at risk youth succeed. They assist youth with meals, clothes, and healthy extracurricular activities.

The **Boys and Girl's Club (BGC)** aims to provide a safe recreation space for adolescents outside of school hours. Lubbock county has 6 different BGC locations, but additional information on other locations within the region is needed.

The Young Women's Christian Association provides after school programs for Lubbock ISD and Lubbock-Cooper ISD and is focused on involving youth in community youth development programs.

The **Parenting Cottage** works to offer in home parent education across the region.

The **Salvation Army** provides a great deal of community services ranging from emergency shelter to utility assistance.

Mothers Against Drunk Driving (MADD) is one of the region's most vocal advocates for the prevention of drunk driving, as well as education, victim assistance and other information about driving under the influence.

Behavioral Health Treatment Providers

Graph 77: Behavioral Health Treatment Providers, Region 1 2018



Source: U.S. Department of Health and Human Services. 2020 SAMSHA. Behavioral Health Treatment Services Locator. https://findtreatment.samhsa.gov The data shows a lack of both mental health providers and substance use providers in most of the Region 1 counties, leaving those with substance use disorder and mental health disorders with a lack of resources and the barrier of distant access. The graph below shows how far each county would need to travel in order to reach the closest mental health and substance use provider.

Education about Alcohol, Tobacco and Other Drugs

It was most common for students to receive education about alcohol, tobacco and other drugs in the 8th grade. Youth were least likely to obtain education about alcohol, tobacco, and other drugs in the 10th grade.



Graph 78: Education about Alcohol, Tobacco and Other Drugs- Texas School Survey, Region 1 2018

Source: Texas A&M University. Texas School Survey of Drug and Alcohol Use: 2018 HHSC Region 1 Report. http://www.texasschoolsurvey.org/Documents/Reports/Region1.pdf

In Region 1, 69.6% of students received some form of education about alcohol, tobacco and other drugs. The majority of students (50%) received information from an assembly. Other ways for obtaining education included school health class, guidance counselor, school nurse, science or social studies class, student group or club at school, invited guests and other sources.

Table 11: Education about Alcohol, Tobacco and Other Drugs- Texas School Survey, Region 1 2018

Sources	Grade	Received Info
School Health Class	All	40.5%
Assembly Program	All	50.0%
Guidance Counselor	All	25.2%
School Nurse	All	19.1%
Science or Social Studies Class	All	26.0%
Sources	Grade	Received Info
Student Group or Club at School	All	13.9%
Invited Guest	All	33.8%
Another Source at School	All	27.3%

Anys	School	Sourc	e				A								6	8.6%
Source:	Texas	A&M	University.	Texas	School	Survey	of	Drug	and	Alcohol	Use:	2018	HHSC	Region	1	Report.
http://wv	vw texass	choolsu	rvev ora/Doci	iments/R	enorts/Re	nion/18Re	noin	1 ndf								

YP Programs

In Region 1, 68.6% of students had received some form of information regarding alcohol, tobacco, and other drug use. However, most of this information was disbursed by an assembly, instead of an evidence based practice. The youth prevention programs funded by the Texas Department of Health and Human Services include Hub City Outreach and Cennikor. These programs are located in Lubbock and Amarillo.

Hub City Outreach is a youth prevention provider focusing on substance use prevention and education. The agency partners with local schools to deliver a holistic and empowering approach to direct prevention services.

Cenikor's Prevention Services provide age-appropriate evidenced-based curriculum to students of all ages. Students are taught the skills necessary to develop good self-esteem, resist peer and media pressure, and explore activities free from substance use.

Summary of Environmental Protective Factors

There is an abundance of coalitions present in Region 1, however most listed in this assessment are in the Lubbock area. Additional information about the areas and populations these coalitions serve, as well as other coalitions in all 41 counties is needed to fully understand how each community is working together to address the issue of substance use disorders.

Additional information on the mission, goals and scope of known youth serving organizations is needed to fully understand how they contribute to providing protective factors to youth. Over the next year the Region 1 PRC will work to collaborate and support the organizations included in this report, as well as other organizations across the region.

Region in Focus

Overview of Community Readiness

A community survey distributed to coalition members identified the following trends:

What problems do you see in your community regarding substance use prevention and treatment?

- Lack of free or affordable, quality addiction treatment
- Vaping-black market product; illicit prescription pill use
- Lack of harm reduction
- If you are insured, there isn't anything readily available
- Stigma against those with drug use and substance use disorders is pervasive in West Texas culture making the topic very difficult to approach
- There is a severe lack of resources in regards to detox facilities and treatments like methadone maintenance and Suboxone, lack of access to vivitrol or naltrexone for alcohol use disorder
- Lack of knowledge regarding what services are available to youth and adults
- People becoming involved in the criminal justice system instead of receiving treatment

- No detox center in the region
- Limited aftercare resources for adolescents
- Denial there is a problem
- Racial and cultural inequities

If you had to choose the single most pervasive problem in your community regarding substance use prevention and treatment, what would it be?

- Lack of access to treatment for the under privileged
- Marijuana
- Lack of free/ affordable inpatient treatment
- Education and treatment
- Lack of access to resources
- Lack of accountability to resources
- Addiction is not seen as a disease
- Open access
- Lack of open access to information about substance abuse, prevention, and treatment information
- Denial and stigma
- Access to drugs
- A community response to substance use
- Illegal drugs

What services is your community lacking?

- Addiction education
- Treatment, aftercare, alternative peer groups, recovery high school, places for youth to hang out and be safe, places for non-traditional youth to find a home, etc.
- Inpatient treatment
- Harm reduction services like needle exchange and education on safe injection
- Counseling Services
- Methadone maintenance and Suboxone prescribers
- Substance Use Disorder programs for adolescents
- Lack of coordination
- Easy access to substances

What substance use prevention resources currently exist in our community?

- Hub City, Cenikor, Teen Summit, school efforts
- Private inpatient and private (faith-based) sober living
- Plenty of AA resources; many residential treatment programs
- Limited information in public schools and universities
- PRC, CCP, ASAS, private pay treatment centers, health department, MADD, MAPDA, Sunrise Canyon, Rise, Dream Center

What facets of the community are slowing down positive change?

• Stigma around addiction and criminalization of the disease

- Lack of ongoing commitment and support from schools, churches, businesses, political entities and agencies
- State having a low budget
- COVID-19
- Funding for housing
- Severe stigma against substance use disorders
- Lack of communication and willingness to revitalize the area
- Lack of education on addiction
- Lack of awareness

What facets of the community are encouraging positive change?

- Texas Tech and the Center for the Study of Addiction and Recovery
- YWCA, City Health department, TTU, CFAS, HEARD
- People in recovery, social workers, medical professionals, faith leaders and some city officials
- AA groups
- Faith based organizations
- Activists
- LARA, Lubbock Compact, LASER, East Lubbock Art House
- YWCA, the Community Foundation
- Nonprofits, college students and religious organizations
- Medical community
- Law Enforcement

Of all survey respondents, the majority of individuals believed that the community is ready for positive change concerning substance use prevention.

Gaps in Services

There is definitely room for additional services in Region 1 across the spectrum of substance use disorders from prevention to treatment. In regards to treatment there is a need for additional inpatient treatment for both youth and adults, as well as outpatient services across the region. Community stakeholders were especially concerned with the lack of low cost or no cost treatment in the area. Additional prevention resources and training materials should be disbursed throughout all counties across the region. The PRC will work to include all counties across the region in future trainings, and enhance collaboration to build a more sustainable continuum of prevention services. Formal and informal youth serving agencies need to be identified across the region for future collaboration on prevention efforts focusing on substance use disorders.

Gaps in Data

Over the next year a major focus of the PRC will be the collection of additional data across all counties in the region. A variety of data relating to risk and protective factors, use, and consequences is still needed to fully understand the full scope of substance use disorders in Region 1. Additional data sets needed to fully assess the region include, but are not limited to:

- Social access
- Parental views on use and parental monitoring

- Social norms regarding use
- Peer acceptance and use
- Youth arrests and probation rates
- Youth participation in extracurricular activities and youth development programs
- Overdose and suicide rates across all 41 counties
- Coalitions and youth serving programs across the entire region
- College substance use rates
- The existence of policies in each county, such as social host ordinances or flavored tobacco bans

Moving Forward

Region 1 will work to build capacity to effectively address substance misuse in the panhandle and south plains. Risk and protective factors will continue to be prioritized in a manner that is both effective and sustainable. The Prevention Resource Center will continue to work with the community and stakeholders to collect data and better understand the needs of the 41 counties in Region 1. As risk and protective factors in the community are better understood appropriate interventions, resources and trainings will be sought out and implemented in the area to effectively increase the overall health and wellness of the region.

Conclusion

What have you identified as your region's primary substance use behaviors issue and the intervening variables associated with the identified issue? Why?

Alcohol is the most prevalently used and abused substance in Region 1. Though use decreased for quite some time, over the last three years use among junior high and high school students has increased. Additional data is needed to fully understand how alcohol is being used and abused throughout the region, as well as its effects on each community. However, there is adequate data available to understand that alcohol has had significant negative impacts on each county in Region 1.

What have you identified as your secondary or tertiary substance use behavior issues and respective intervening variables associated with them? Why?

Instead of addressing a second substance use behavior issue, this needs assessment identified the need for capacity building in the region. Before effective prevention services can take place at a regional level, additional collaboration is needed. Over the next year additional trainings and resources will be provided to key stakeholders in all 41 counties. This is a major first step in implementing and growing sustainable prevention programs regionally. These partnerships will also enhance the amount of data collected, which will in turn allow for an additional understanding of the needs of the region as a whole.

What are your key findings?

This needs assessment serves as an analysis of where to start in building an effective PRC and enhancing prevention resources throughout the south plains and panhandle. A major theme throughout the assessment was the need for additional data. Once there is additional qualitative and quantitative data for each county and the region as a whole, it will be easier to fully understand all of the needs of the population being served. The formation of partnerships and collaboration across the region will also serve to be beneficial, and allow for additional needs assessments to be more comprehensive.

Key Findings

- The rate of depression among the population in region 1 from year 2016-2017 has been the only behavioral diagnosis that has increased as time progressed, while all other behavioral diagnoses observed a decline in rates. As more data is collected, it will be crucial to review if this number and rate has continued to increase as time proceeded.
- The age at which our youth begin to experiment with substances (age of first use) has been shown to decrease as time progresses, leaving the researcher and reader to conclude that prevention efforts in this region are crucial to the outcome of our current and future population.
- The data show that as the number of homes with languages other and English spoken increases, the graduation rate decreases (a negative correlation), thus providing an opportunity to intervene with a key population in attempt to weaken this correlation of the two variables.

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Glossary of Terms

30 Day Use	The percentage of people who have used a substance in the 30 days before they participated in the survey.
ATOD	Alcohol, tobacco, and other drugs.
Adolescent	An individual between the ages of 12 and 17 years.
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.
Incidence	A measure of the risk for new substance abuse cases within the region.
PRC	Prevention Resource Center
Prevalence	The proportion of the population within the region found to already have a certain substance abuse problem.
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.
SPF	Strategic Prevention Framework. The idea behind the SPF is to use 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
TPII	Texas Prevention Impact Index
TSS	Texas Student Survey
VOICES	Volunteers Offering Involvement in Communities to Expand Services. Essentially, VOICES is a community coalition dedicated to create positive changes in attitudes, behaviors, and policies to prevent and reduce at-risk behavior in youth. They focus on changes in alcohol, marijuana, and prescription drugs.
YRBS	Youth Risk Behavior Surveillance Survey