



State of Texas Drug Use Patterns and Trends, 2019

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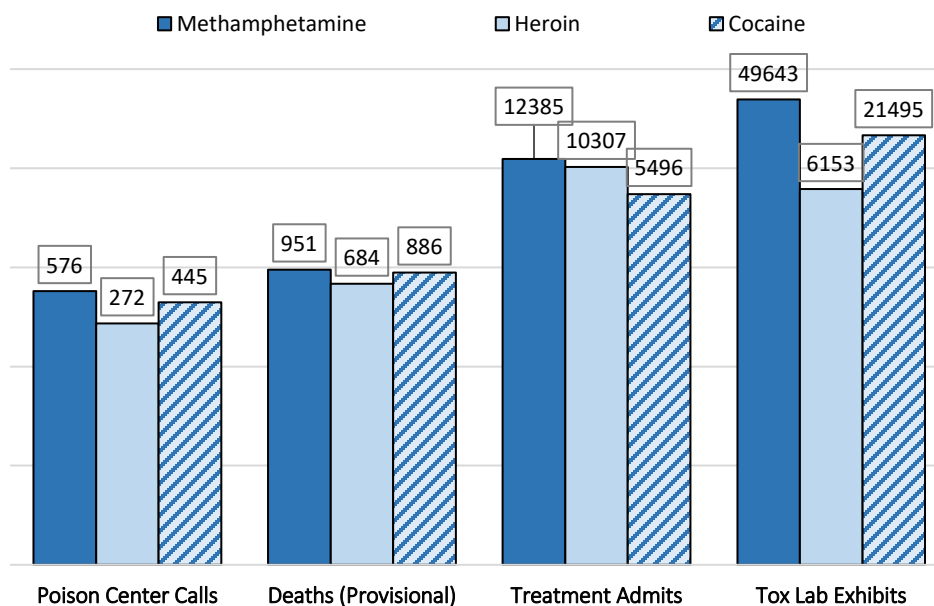
Highlights

- Methamphetamine is the top drug threat reported by the three DEA Field Divisions that cover Texas.
- Methamphetamine and cocaine problems continue to increase, with no FDA-approved Medication Assisted Treatment (MAT) available
- The Texas Prescription Monitoring Program (PMP) and overdose prevention programs have led to decreases in the number of other opiate, synthetic narcotic, and benzodiazepine drugs prescribed. The Texas PMP was moved from the state law enforcement agency to the pharmacy board in 2016.
- Heroin indicators are mixed. Since fentanyl cannot be easily mixed with gummy black tar heroin, the combination has not resulted in the number of deaths with heroin and fentanyl as in the Northeast. Fentanyl remains a concern about deaths involving other drugs, including speedballs. The number of tramadol pills identified in toxicological laboratories continue to rise.
- In the past, cannabis indicators had involved monitoring the quantity and quality of the drug imported from Mexico. Now, cannabis indicators focus on effects of CBD oils, edibles, and other products brought in from states where they are legal.
- The State's response to the opioid epidemic has resulted in additional outreach and training to prevent overdoses, but changes in use patterns will require monitoring. Of the drugs used in Medication Assisted Treatment in Texas, the amount of methadone dosage per 100,000 used has dropped while the amount of buprenorphine has increased, although there is increased need for MAT.

Introduction

Texas in 2018 has 254 counties and a population of 28,304,596, with 42% White, 39% Hispanic, and 13% Black. Fifty percent of the population is female, and 26% is younger than 18 years of age. Exhibit 1 shows methamphetamine is the major drug problem.

Exhibit 1. Indicators of Methamphetamine, Heroin, and Cocaine Trends in Texas, 2018



Because of the length of the U.S.–Mexico border, the drug patterns in Texas can vary depending on the trafficking pattern. There are three DEA field divisions covering Texas and adjoining states. The Dallas Field Division covers Dallas, Fort Worth, Lubbock, Tyler, and Oklahoma. The Houston Field Division covers Houston, Austin, Waco, the South Texas cities, and Galveston. The El Paso Field Division covers Alpine, El Paso, Midland, and New Mexico. The Field Divisions publish annual reports on drug trafficking organizations and drug threats. Exhibit 2 shows the threat rankings for 2019.

Exhibit 2. Top 5 Drug Threats from DEA Field Divisions Covering Texas: 2019

	1	2	3	4	5
Dallas	Methamphetamine	Heroin	Pharmaceuticals	Cocaine	Cannabis
Houston	Methamphetamine	Cocaine	Heroin & Opioids	Cannabis	Synthetic Cannabinoids
El Paso	Methamphetamine	Heroin	Cocaine	Cannabis	Pharmaceuticals

Overview of Key Texas Drug Indicators

While heroin is a major problem nationally, the clustering of methamphetamine and cocaine items in Exhibits 2 and 3 highlight the problems Texas faces with the abuse of these stimulant drugs, for which there are no FDA-approved medications. Conversely, the number of deaths due to other opiates and synthetic narcotics (fentanyl) having decreased, which may be a sign of the impact of the State’s Prescription Monitoring Program (PMP).

Mortality statistics for 2018 are provisional, which means that some have not yet been edited and may be incomplete, so they are subject to change and are not final. Please note that if a death involved more than one drug, the individual death would be counted in each of the death categories. See Exhibit 3 for data on drug deaths.

Exhibit 3. Drug Deaths in Texas: 1999-2018 (provisional)

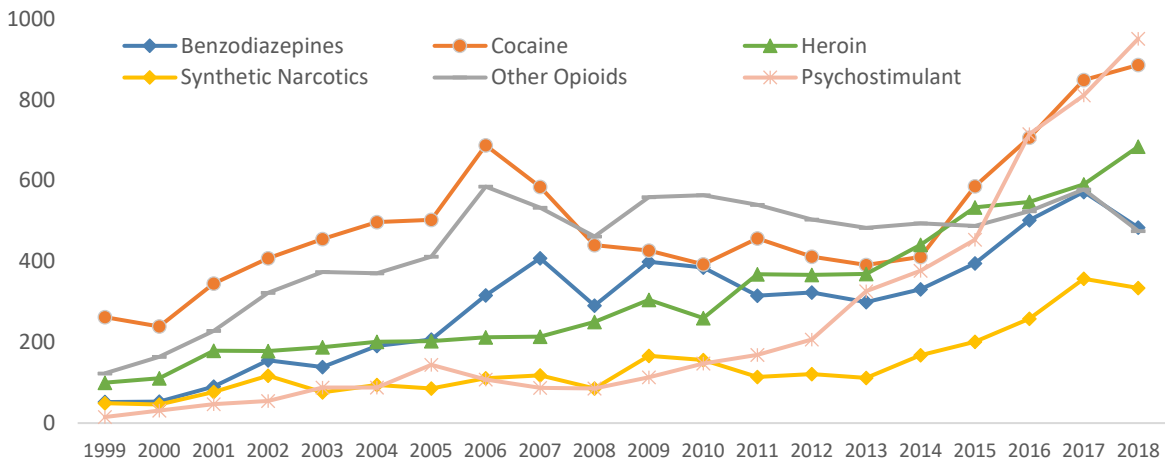
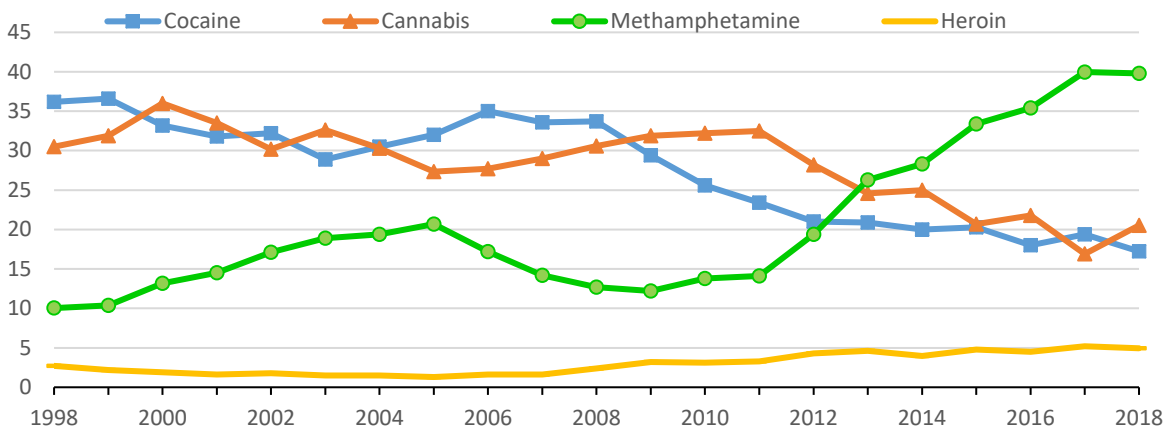


Exhibit 4 shows the items seized by law enforcement and identified by forensic laboratories reporting to the National Forensic Laboratory Identification System (NFLIS), with continuing increases in methamphetamine items.

Exhibit 4. Percent of Selected Items Seized and Identified in Forensic Laboratories in Texas: 1998-2018



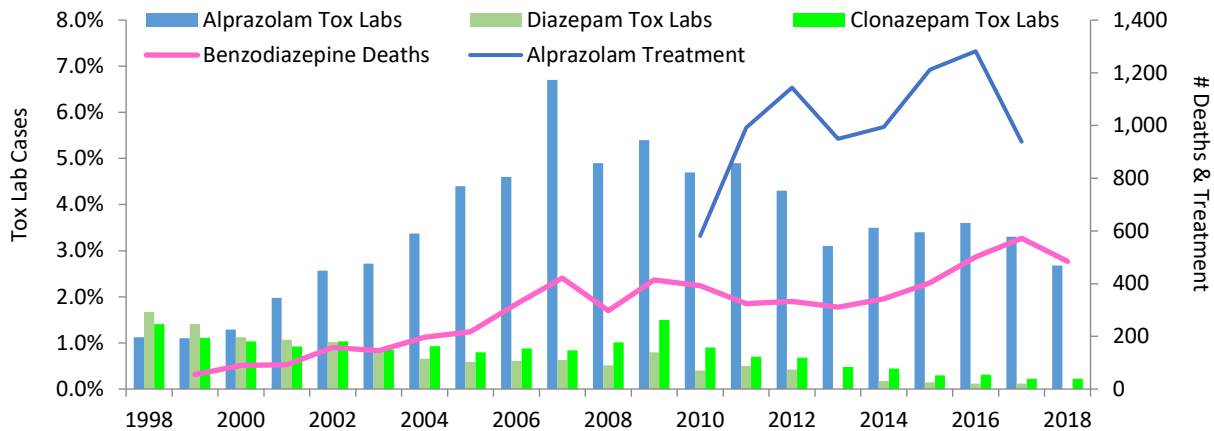
Drug Use Patterns and Trends

BENZODIAZEPINES

Benzodiazepines include flunitrazepam (Rohypnol®), clonazepam (Klonopin® or Rivotril®), flurazepam (Dalmane®), lorazepam (Ativan®), and chlordiazepoxide (Librium® and Librax®).

Exhibit 5, with data retrieved from NFLIS and the Texas Department of State Health Services (DSHS), show the most popular benzodiazepines identified in forensic laboratories in Texas, as well as the number of benzodiazepine deaths and number of treatment admissions for alprazolam. Alprazolam (Xanax) continues to be widely abused. It is the most abused benzodiazepine in terms of calls to poison centers as well as the abuse of “The Houston Cocktail” or “Holy Trinity”, which contains alprazolam, carisoprodol, and hydrocodone.

Exhibit 5. Benzodiazepines as Percent of All Items Identified by Tox Labs, Number of Benzodiazepine Deaths, & Alprazolam Cases Admitted to Treatment: 1998-2018



The Texas PMP has reported that the dispensing of benzodiazepines per 1,000 has remained level since 2015 and that number of days when a prescription of opioids and benzodiazepines overlapped has dropped from 11.4 days out of 30 in 2015 to 10.6 days in 2017. The number of deaths in Texas that involved benzodiazepines dropped from 572 in 2017 to 484 in 2018. Some 53% of the 2018 benzodiazepine deaths also involved use of fentanyl and 22% involved tramadol.

Of those entering treatment programs for problems with benzodiazepines in 2018, 51% were female, 60% were White, 30% were Hispanic, and the average age was 29. Other drugs of abuse taken with benzodiazepines included marijuana.

COCAINE/CRACK

Cocaine is ranked as the #2 (Houston), #3 (El Paso), and #4 (Dallas) threat by the DEA Field Divisions covering Texas. Cocaine is primarily produced in Colombia, and since the peace treaty between the Colombian government and the Revolutionary Armed Forces of Colombia in 2016, the cultivation of cocaine has increased due to less spraying of herbicides. According to the DEA, the average retail price per pure gram has decreased and average gram purity is 85.5% in 2019. The amount of coca bush cultivated worldwide increased from 185,000 hectares in 2009 to 289,800 in 2017, according to the U.S. Department of State (Maxwell, 2019).

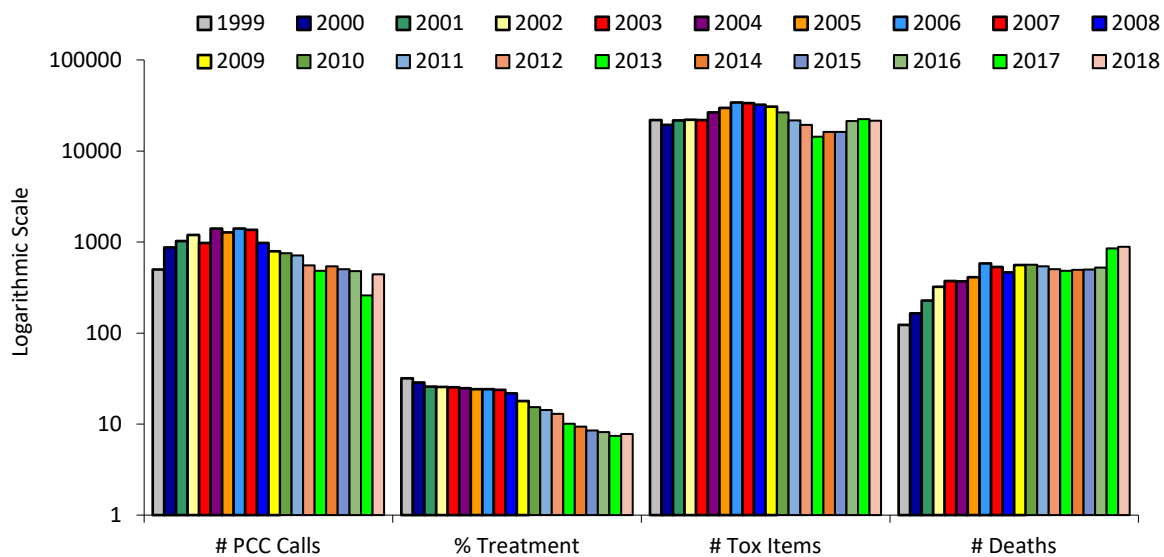
Preliminary analysis of Texas admission data shows that in 1995, 76% of the cocaine admissions smoked crack, while in 2018, the proportion of crack smokers was 46%. The proportion of cocaine admissions who are

Hispanic has risen from 13% in 1995 to 30% in 2018 and the proportion of Black admissions has dropped from 57% to 43% admissions over the same time. In 2018, cocaine users are slightly more likely to inhale rather than smoke cocaine, to be Hispanic, and to be older. They are not using daily, but as their dependence increases, they may shift to smoking cocaine.

The increases in supply have been seen in the seizure of ships carrying large quantities of cocaine in ports in the U.S. and waters around the U.S. Preliminary 2018 mortality data show increases in cocaine deaths, which with the increase in supply, may be the first indicators that the expected flood of cocaine from Colombia is beginning to be seen (Exhibit 6). The supply is increasing as shown by the recent seizures of cocaine on ships off the east and west coasts.

Smoking cocaine continues among marginalized populations using “safe smoke” kits. Inhaling cocaine has increased in Anglo and Hispanic populations with a decrease in the use of crack cocaine. However, there is a concern that those inhaling cocaine may move to smoking the drug as their dependence increases.

Exhibit 6. Texas Poison Center Calls, Treatment Admissions, Tox Lab Exhibit, & Deaths: Cocaine, 1999-2018



Cocaine (both crack and powder) represented 8% of all admissions to Texas treatment programs in 2018, which is down from a high of 35% in 1994. A comparison of client characteristics in 1994 compared to 2018 underscores the differences in the client population over the years. In 1994, 77% smoked crack, but in 2018, 46% smoked crack. Earlier Texas data has shown that of cocaine admissions, crack smokers are the most likely to have problems with employment, the criminal justice system, and social and physical problems. In 2018, 26% of the admissions were White, 43% were Black, and 30% were Hispanic; as compared to 1994 when 28% were White, 58% were Black, and 13% Hispanic.

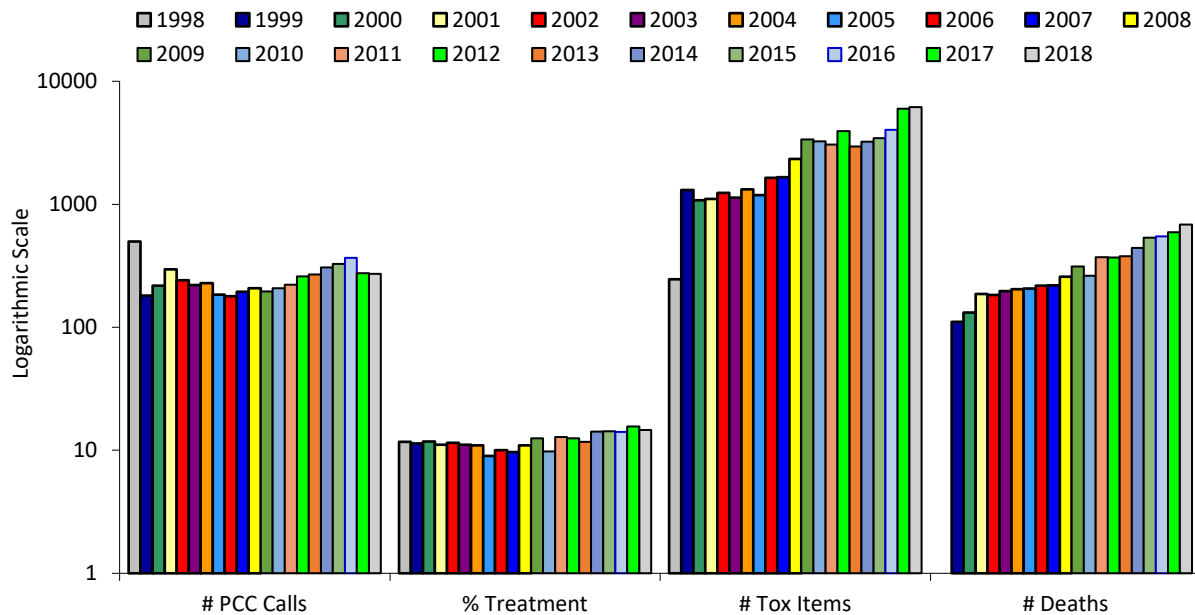
HEROIN

Heroin in Texas is either black tar heroin or powdered brown heroin (diluted with diphenhydramine or other filler), which makes it weaker. In Texas, “tar” is sold in small balloons and the user then extracts the tar from the balloon, mixes it with water over heat, and then draws it up and injects it. In states north and east of Texas, the heroin tends to be a white or grey powder when it reaches the dealer, who then packages it (with or without powdered fentanyl) in cellophane envelopes to sell to the user.

To prevent an overdose, fentanyl test strips can be used to determine whether the package contains fentanyl. Of the top 25 items seized and identified in Texas laboratories reporting to NFLIS 2018, heroin ranks #4, at 5% of all items identified, and fentanyl is not included in the top 25 drugs seized and identified in Texas.

Exhibit 7 shows the changes in poison center calls, treatment admissions, toxicology reports on substances seized and identified, and deaths. Texas has not suffered the epidemic of overdoses seen in the Northeast because the heroin in Texas is Mexican black tar, which cannot be easily mixed with fentanyl. In areas where the heroin is powdered, the dealer can mix in fentanyl to increase its potency (and price) and then package the mixture in a glassine bag. Test strips can be used to test for the presence of fentanyl.

Exhibit 7. Texas Poison Center Calls, Treatment Admissions, Tox Lab Exhibits, & Deaths: Heroin, 1998-2018



In Texas, heroin is normally sold in small party balloons as small pieces of black tar and then mixed with water over heat by the users. However, “white” heroin made in Mexico is becoming increasingly available. The primary types of heroin in Texas are Mexican black tar, powdered brown, which is black tar turned into a powder by combining it with diphenhydramine or Tylenol or other ingredient, and the Mexican white heroin. The Mexican-South American heroin is 80% to 85% pure, while the Mexican black tar is 29% pure. Analysis of the 2018 provisional data on heroin deaths found only 12% of the heroin deaths also involved fentanyl.

The Dallas, El Paso, and Houston DEA field divisions all report that heroin is moderately available and is stable. Mexican black tar heroin is the most prevalent, followed by Mexican brown; China white heroin is rare in Texas.

The proportion of treatment admissions who are White has increased from 40% in 1974 to 63% in 2018, with 28% Hispanic and 7% African American. The average age of those seeking treatment in 2018 was 36 years old, as compared with 27 in 1974. Route of administration was injection (82%) and inhaling (14%).

Of the substances most often found with heroin in toxicological analysis in Texas in the first half of 2019, 54% of the combinations involved heroin and diphenhydramine, which is used to turn tar heroin into a powder. Other combinations included heroin and methamphetamine (15%) and heroin and fentanyl (3%). Individuals who entered treatment for problems with heroin also reported use of methamphetamine (19%), cocaine/crack (13%), or marijuana (10%).

Analysis of the 2018 provisional overdose death data found that of 684 heroin deaths, 80 also had consumed fentanyl at the time of death and 11 had used tramadol.

PRESCRIPTION OPIOIDS

Compared with other NDEWS sites in the U.S., the number of fentanyl items seized and identified in Texas is low because most of the heroin in Texas is gummy black tar and not efficient for dealers to mix with fentanyl. It was not listed in the top 25 Texas drugs identified in NFLIS toxicological reports. The “medical product” forms of fentanyl include a sublingual tablet, a lozenge or "lollipop", transdermal patch, a buccal tablet, a transdermal device, nasal spray, and a sublingual spray. The rest of the fentanyl is a powder illegally obtained from China. In 2016, 66% of the poison cases reported the fentanyl used had been a medical product, but by 2018, only 28% percent reported that it had been a medical product, which is evidence that more of the illicit fentanyl powder could have been imported from Mexico.

As of September 1, 2019, pharmacists and prescribers are required to report all dispensed controlled substances to the Texas PMP and as of March 1, 2020, to check the patient’s PMP history before dispensing all Schedule II, III, IV, and V controlled substances, including opioids, benzodiazepines, barbiturates, or carisoprodol muscle relaxant.

Exhibit 8 shows the changes in the use of different prescription opioids over time, with increases in pharmaceutical quantities of buprenorphine and decreases in the distribution of hydrocodone, oxycodone, and methadone. Given the State’s efforts to increase participation in medically-approved treatment, the decrease in the distribution of buprenorphine and methadone is a concern.

The Texas PMP reported that the percentage of patients dispensed an opioid daily dosage equal to or more than 90 morphine milligram equivalents had dropped from 7.3% in 2014 to 6.7% in 2017, and the mean daily dose of opioids prescriber per patient per day (MME) had decreased from 58.1 MME in 2015 to 56.2 in 2017.

The number of tramadol items identified in toxicology laboratories has increased from 197 in 2013 to 485 in 2018. According to the Texas PMP, tramadol was the #2 controlled substance dispensed in Texas in fiscal year 2019. Hydrocodone was the #1 substance dispensed. Fentanyl did not rank in the top 15. Qualitative information from those who work with elderly patients reported concerns with the volume of tramadol being prescribed for these patients.

Although users reported they have taken heroin and fentanyl combined, combining black tar/gummy heroin with fentanyl is not efficient and ethnographic queries have not provided a reliable method for combining the substances. Exhibit 9 shows the drugs found in combination with fentanyl or tramadol in death records.

A scan of the death certificates involving other opiates found many deaths involved combinations of various opiate drugs, benzodiazepines, muscle relaxants, fentanyl, and methadone. Some involved up to seven different drugs. The Texas PMP on September 1, 2019 required pharmacists and physicians to check for drugs already prescribed to patients to lessen the ability of drug-seekers to access other drugs. This pattern of using multiple drugs should be a target of harm reduction campaigns targeting users of prescribed pain medications and families who need to be educated about the signs of opioid overdose and have naloxone present in the home if overdoses occur.

Exhibit 8. Indicators of Abuse of Opiates in Texas: 2008-2018

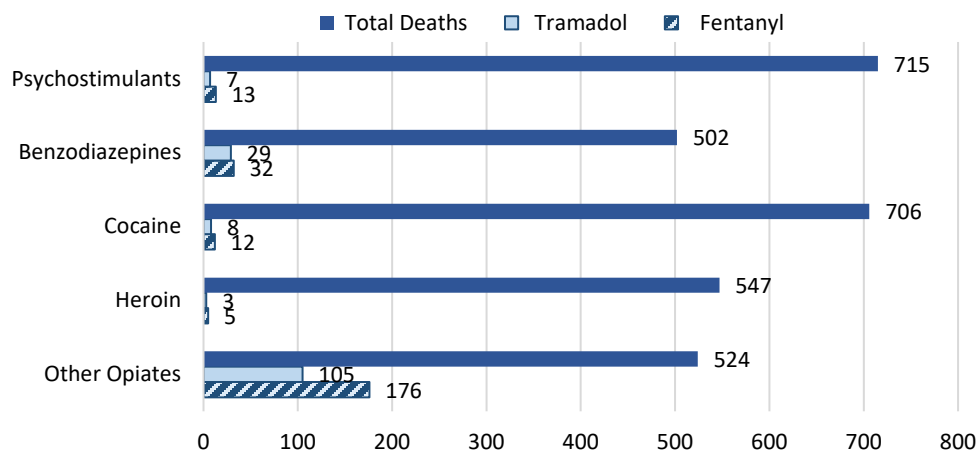
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Poison Control Center Calls of Abuse and Misuse											
Buprenorphine	83	109	130	138	116	303	269	216	193	252	94
Fentanyl	120	143	109	132	110	98	120	100	94	86	65
Heroin	208	196	208	222	259	268	307	327	368	276	272
Hydrocodone	723	748	838	869	814	645	530	351	295	282	171
Methadone	218	187	214	159	174	151	168	153	210	167	91
Oxycodone	81	74	101	95	129	74	63	82	74	80	63
DSHS Treatment Admissions											
Methadone ^a	160	145	132	180	193	170	178	167	166	109	73
"Other Opiates" ^a	5221	5844	2679	2047	1851	1972	3445	2861	2554	3097	2372
Codeine ^a				109	102	81	99	110	94	69	38
Hydrocodone ^a				3102	3277	2972	2583	2272	1896	1426	953
Hydromorphone ^a				222	275	211	188	195	184	112	66
Oxycodone				342	323	326	323	282	351	278	231
Heroin				9542	9416	10459	10950	10734	10349	11910	10307
Deaths with Mention of Substance (DSHS)^b											
Other Opioids	462	558	563	540	504	483	494	498	524	578	475
Synthetic Narcotics	92	170	162	118	130	125	168	201	258	357	334
Methadone	177	182	190	190	149	138	132	151	145	142	116
Heroin	250	305	260	368	367	369	441	534	547	591	684
Benzodiazepines	291	399	385	315	323	299	331	395	502	572	484
Cocaine	440	427	393	457	412	391	411	586	706	849	886
Psychostimulant	86	113	147	169	207	326	377	454	715	811	951
Drug Exhibits Identified by Forensic Toxicology Laboratories (NFLIS)^c											
Buprenorphine	42	89	136	133	89	71	100	107	88	108	118
Fentanyl	47	15	12	27	21	16	34	51	146	246	263
Heroin	2338	3364	3247	3052	3934	2946	3224	3447	4023	5967	6153
Hydrocodone	3597	4079	5229	4856	4016	2681	3018	1869	1493	1197	1215
Methadone	302	319	288	318	320	269	232	251	247	211	154
Oxycodone	390	448	514	451	451	369	432	512	634	530	489
Tramadol	144	176	240	238	260	197	277	264	326	308	485
Distribution of Controlled Substances by Manufacturer (ARCOS)-Dosage/100K Texas Population											
Buprenorphine	176	231	230	274	315	360	379	393	402	419	455
Hydrocodone	17861	19290	16887	18695	17835	12889	16001	12140	11471	10591	9271
Oxycodone	4935	5107	4464	4669	4739	4660	4757	5177	5329	5256	4738
Methadone	2700	2743	2373	2272	2108	2378	2385	2401	2221	2235	2063

^a"Other Opiates" refers to all other opioids until 2010; starting in 2011 specific opioids are reported.

^bThe 2017 mortality data from DSHS Center for Health Statistics are provisional and preliminary and subject to change before the data

^cNFLIS data were run on 10/30/2019.

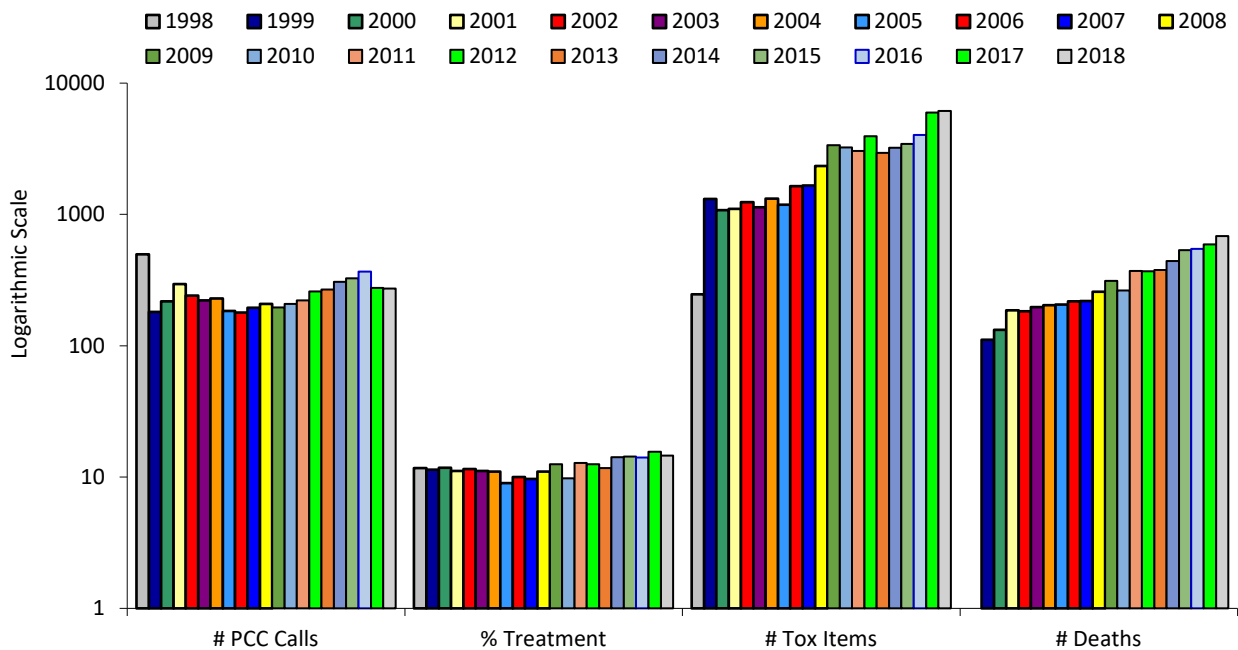
Exhibit 9. 2018 Deaths in Texas Mentioning Drugs in Combination with Fentanyl or Tramadol



METHAMPHETAMINE

Methamphetamine is perceived to be the #1 drug threat in 2019 by the three DEA Field Divisions covering Texas. Mexican drug organizations have continued to transport substantial quantities of the drug into and through Texas. There is high availability and reduced price. The drug may be in crystalline form (“ice”) or in a suspended form in solution and trafficked in U.S. because the basic ingredient, phenyl-2-propanone (P2P), is illegal in the U.S. and the production of methamphetamine using this chemical requires a significant level of expertise. In 2018, 98.4% of the samples were made from P2P. The liquid form of methamphetamine is brought in from Mexico and turned into solid crystalline form in “dry houses” in Texas. The average purity of methamphetamine from Mexico is 97.5%, which is an increase from a year ago and DEA’s Methamphetamine Profiling Program reports the overall average potency was 95.6%.

Exhibit 10. Texas Poison Center Calls, Treatment Admissions, Tox Lab Exhibits, & Deaths: Methamphetamine, 1998-2018



NOTE: PCC calls include amphetamine and methamphetamine.

One of the methamphetamine problem areas reported by DEA involves the oil boom in West Texas. Much of this population comprises young men, single or unaccompanied, who work the oil field. They have few ties to the community, are well paid, and their lives consist largely of hard and dangerous work in the oilfield and partying when off duty.

Methamphetamine has two isomers: the l and d forms. The d form is a more powerful psychostimulant, with three to five times the central nervous system activity as the l form. Methamphetamine made with pseudoephedrine never had more than 50% d form, but when made with P2P, the potency in 2018 is over 97%.

Methamphetamine seizures on the Texas–Mexico border are increasing. In Austin in May 2018, an estimated 93 pounds of methamphetamine was found in a car’s gas tank and spare tire in a traffic stop. In addition, the El Paso Intelligence Center predicts a possible correlation between heroin and methamphetamine seizures as Mexican transnational criminal organizations and drug trafficking organizations actively pursue new user markets and expand into supplemental product lines to ensure their operating costs remain low and their profit margins high.

According to the DEA, Mexican traffickers have been switching their focus from methamphetamine to cocaine and heroin primarily because of the current low price of methamphetamine in the U.S. This has enabled the Mexican dealers to explore product diversification and new market areas where methamphetamine has not been widely used. There is increased availability caused by movement of methamphetamine in a solution that looks like an icy sludge (“liquid meth”) and the use of local conversion laboratories (“dry houses”) on the U.S. side to reconstitute the drug from liquid to crystalline form.

Methamphetamine admissions to treatment programs increased from 3% of all admissions in 1995 to 11% in 2007, dropped to 8% in 2009, and then rose to 18% of admissions in 2018 (Table 1). Route of administration in 1995 was primarily injecting (68%), but by 2018, it was smoking (59%), injecting (27%), and inhaling (9%). The race/ethnic composition changed over time. In 1995, 91% were White, 5% were Hispanic, and 2% were Black. Of the 2018 admissions, 72% were White, 21% were Hispanic, and 5% were Black. In 1994, 59% of the clients were male, as compared to 44% male in 2018. Based on the results of the author’s previous research, females use methamphetamine for energy, to lose weight, and to counter depression, and there is a significant need to consider gender issues in methamphetamine treatment (Maxwell, 2014).

Methamphetamine represented 21% of all items analyzed by Texas forensic laboratories in 2005; in 2018, it comprised 40% of all the items examined.

Of treatment admissions in 2018 with a primary problem of methamphetamine, 43% reported no use of another drug, 28% reported use of marijuana, and 13% reported use of alcohol. Use of “speed balls” to counter an excess of a stimulant also occurs. In 2018, 189 of the 957 methamphetamine deaths in Texas also involved heroin and 66 deaths involved fentanyl.

MARIJUANA/CANNABIS/CANNABIDIOL

Cannabis sativa is the correct term for the whole marijuana plant. Individual cannabinoid chemicals may be isolated and purified from the marijuana plant or synthesized in the laboratory, or they may be naturally occurring (endogenous) *cannabinoids* found in the body.

Cannabis indicators are changing with trafficking of cannabis products from states that have decriminalized cannabis, such as Colorado and other states. In addition, multi-ton marijuana seizures of marijuana continue to occur at border ports of entry.

As Exhibit 11 shows, there has been little change in the basic indicators of marijuana use except for the number of items seized by law enforcement and identified by toxicology laboratories.

One-half (51%) of marijuana treatment admissions with a primary problem with cannabis in 2018 reported no other drug use, although 20% also reported use of alcohol. For the first half of 2019, cannabis ranked as the #2 drug seized and identified by toxicology laboratories at 26% of all drugs.

Exhibit 11. Texas Poison Center Calls, Treatment Admissions, & Tox Lab Exhibits: Marijuana, 1998-2018

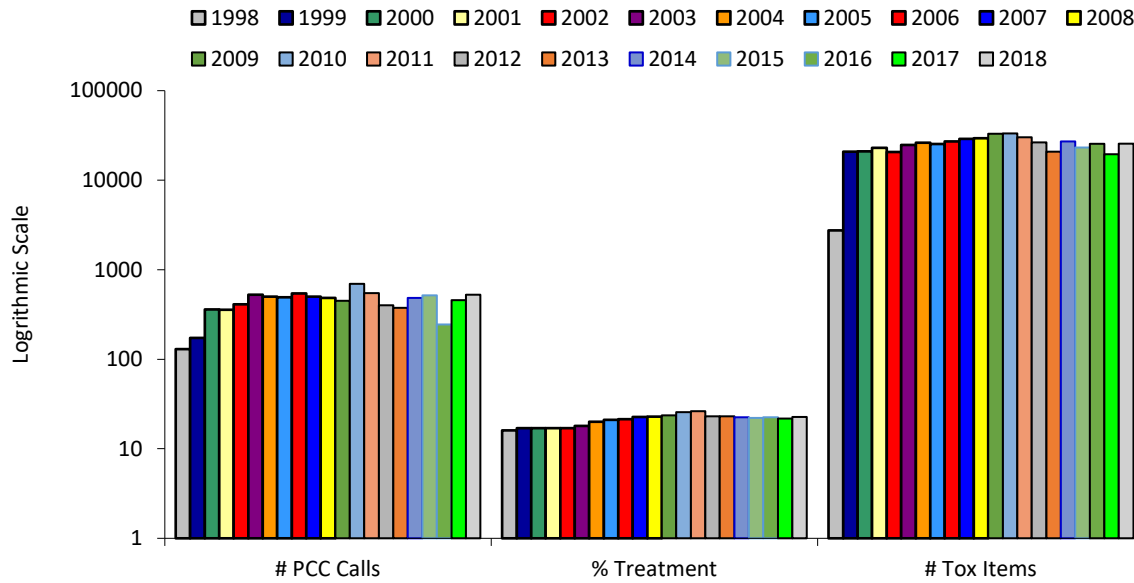


Exhibit 11 shows the traditional measure of marijuana use, such as treatment admissions and toxicology reports. The poison center dataset has been expanded to include information on individuals who had called a Texas poison center after taking a cannabis or cannabinoid preparation such as a pharmaceutical preparation, oils, oral capsules, pills, or edible preparations (Exhibit 12). In 2018, there were 84 cases of edible preparations, 39 of concentrated extract (including oils and tinctures), and 7 of oral capsules or pill preparations. The “oil” category included those who reported use of “dabs”, “shatter”, and “wax”. Persons who ate an edible portion such as a marijuana-laced candy were the youngest (average age of 18 years) and were more likely to have suffered moderate or major effects. There was one death in 2017 due to consuming an edible product and two deaths in 2018, with one having consumed an oral capsule and the other consumed plant material. It is against Texas law to possess any amount of marijuana/cannabis; however, medicinal use of one cannabinoid product is legal.

Exhibit 12. Texas Poison Center Reports on Cases Who Used Cannabinoids, 2015-2018

	Minor	Moderate	Major	Death
Concentrated Extract (Oils)	4%	7%	0%	0%
Oral Capsule or Pill	33%	33%	0%	33%
Pharmaceutical Preparation	12%	27%	0%	0%
Edible Preparation	29%	38%	2%	2%
Other/Unknown	21%	42%	5%	0%

Minor effects: patient had symptoms but were minimally bothersome and resolved rapidly.

Moderate effects: more pronounced or prolonged but not life-threatening and patient returned to a pre-exposure state with no residual disability.

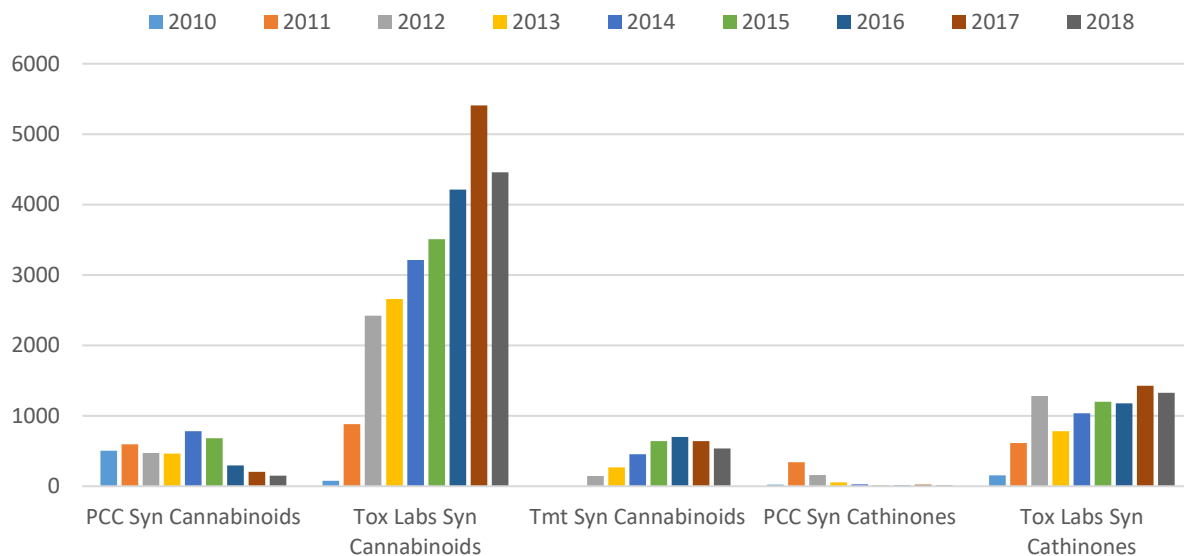
Major effects: life-threatening or with significant or residual disability that was long-term or permanent.

There were 73 Texas death certificates in 2018 which listed cannabis or a cannabinoid as one of the causes of death. Seven of the deaths were caused by drownings, automobile accidents, or gunshot wounds. Another 39 involved overdoses with other drugs such as psychostimulants (12), cocaine (8), other opiates (5), benzodiazepines, heroin, other synthetic narcotics, etc.

SYNTHETIC CANNABINOIDS AND CATHINONES

The number and type of synthetic cannabinoid compounds has increased as users attempt to get a marijuana “high” while avoiding a positive drug test (Maxwell, 2018). Treatment records, poison center reports, and NFLIS items identified were examined to see the changes in use and behaviors that have been reported in synthetic cannabinoid cases in Texas over time (Exhibit 13). The number of poison center calls and treatment admissions have fallen over the years and toxicology laboratory identifications decreased for the first time from 2017 to 2018. Note that the reports on synthetic cathinones have decreased and are being replaced by new chemicals such as 4-MDPHP (3,4-Methylenedioxy-Alpha-Pyrrolidinohexanophenone).

Exhibit 13. Texas Poison Center Calls, Treatment Admissions, & Tox Lab Exhibits: Synthetic Cannabinoids and Cathinones, 2010-2018



In the treatment dataset, statistically significant trends showed the mean ages of users in treatment and poison center datasets had increased, and the gender of the users varied. The overall proportion of those admitted to treatment who were White increased from 2011 to 2016, the proportion of Black/African-Americans decreased, and the proportion of Hispanic/Latino was stable. Those who came to treatment with a primary problem with synthetic cannabinoids were less likely to be high school graduates and more likely to be unemployed, and experiencing homelessness or living in a shelter or unknown living situation.

Synthetic cannabinoids such as 5F-ADB were listed on 46 death certificates, sometimes in combination with alcohol or with other drugs.

The characteristics of synthetic cannabinoid users and the varieties of these drugs in Texas have changed. Data document the need for targeted prevention and treatment efforts for an aging population experiencing homeless along with co-morbid substance use and psychiatric problems, as well as the needs of females using these drugs (Maxwell, 2018).

Synthetic cannabinoid drugs such as “Spice” have decreased due to public awareness of the adverse effects. The user population has changed from younger males trying to use a cannabinoid product that would not show positive in drug tests to an older population who is more likely to be experiencing homelessness and comorbid psychological problems.

Marijuana was the second drug of choice among synthetic cannabinoid users in Texas, but its use, as well as the use of alcohol, decreased over time. Use of cocaine and/or crack increased. Because of the economic conditions of this population, polydrug use was limited. Many reported using synthetic cannabinoids because the price was as low as \$2 (Maxwell, 2018).

INFECTIOUS DISEASES RELATED TO SUBSTANCE USE

HEPATITIS C

Infection with hepatitis C virus (HCV) is the most common blood-borne disease in the U.S. Some 1.8 percent of Texans are infected with HCV, which equals approximately 368,000 cases of HCV in Texas, 80 percent of which (about 300,000) are chronic (long-lasting) infections. Persons in the 19-22 age group had the highest number of cases, followed by those ages 30-39 age group.

In Texas, estimates also indicate that there may be a greater disease burden among Blacks (8%), Hispanics (32%), and Whites (50%). Sixty-two percent of the cases were female. Although most cases of infection occur in and around large urban areas, a disproportionate amount of the disease happens along the Texas/Mexico border.

SEXUALLY TRANSMITTED DISEASES

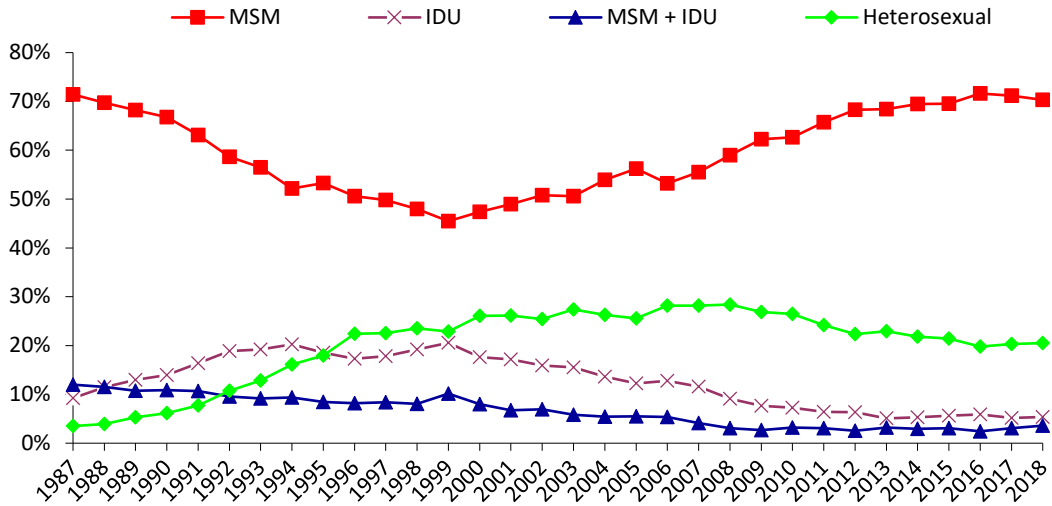
The case rate statewide for chlamydia increased from 356.3 per 100,000 in 2007 to 507.4 in 2018. The rates were higher for females than for males, highest for persons between 15 and 24 years of age in 2018, and highest for Black Texans in 2017. Rates by race were not available in 2018.

The case rates for gonorrhea increased from 132.1 in 2007 to 163.3 in 2018. In 2018, gonorrhea rates were highest for males and those between 15 and 24 years of age. Black Texans had the highest number of gonorrhea cases reported in 2018.

The case rate per 100,000 for early syphilis increased from 11.1 in 2007 to 14.7 in 2018, and they were higher for males, Blacks Texans, and for those between 20–24 and 25–29 years of age. Men who reported having sexual contact with other men (MSM) comprised 28% of all persons diagnosed with early syphilis, which encompasses primary, secondary, and early latent stages of syphilis, which are the stages of syphilis acquired within the last 12 months.

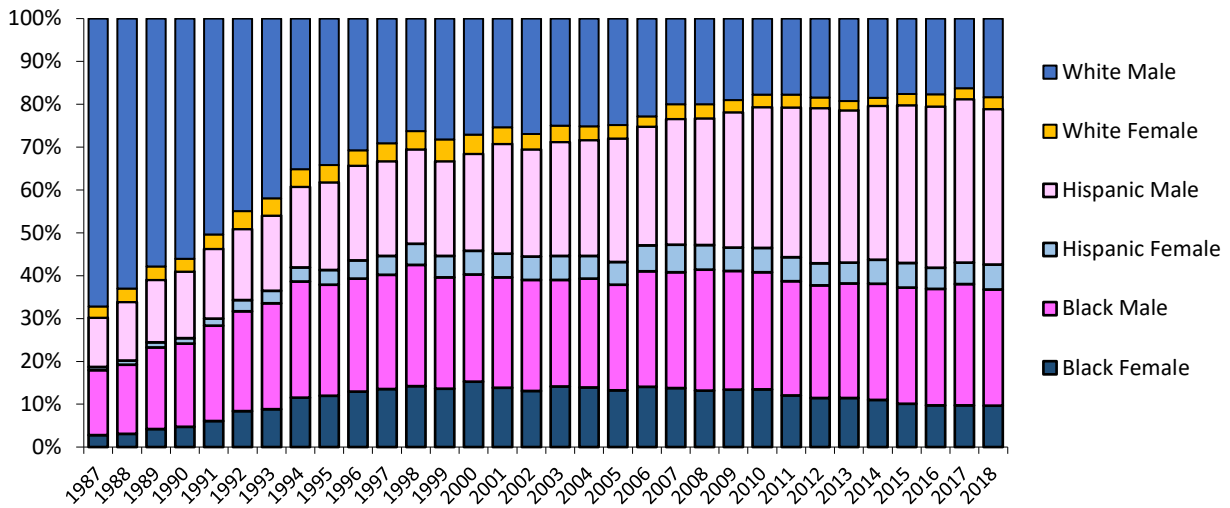
The proportion of new HIV diagnoses among MSM decreased from 70% in 1989 to 46% in 1999 before returning to 70% in 2018. Of cases diagnosed in 2018 cases, 21% reported heterosexual mode of exposure and 5% reported intravenous drug use (IDU) (Exhibit 14).

Exhibit 14. New HIV Cases in Texas by Mode of Exposure, 1987-2018



Just as the proportions of new HIV diagnoses involving IDUs or IDUs/MSM has decreased over time, the proportion of IDUs entering DSHS-funded Texas treatment programs has also decreased, from 32% in 1988 to 21% in 2018. Persons diagnosed with HIV are increasingly likely to be people of color (Exhibit 15). Of the HIV cases in 2018, 37% were Black, 42% were Hispanic, and 21% were White, as compared to the Texas population, which was 13% Black, 39% Hispanic, and 42% White. Daily adherence to medications such as PrEP and consistent use of condoms can protect users from HIV infection.

Exhibit 15. New Texas HIV Diagnoses by Sex and Race/Ethnicity, 1987-2018



VIEW FROM THE STREET

The DSHS Human Immunodeficiency Virus/Sexually Transmitted Disease (HIV/STD) Program administers the Texas HIV Medication Program and funds a number of community-based organizations and health departments to provide knowledge, skills, and support to persons at highest risk to reduce vulnerability to HIV and other sexually transmitted diseases. The quarterly reports from these centers provide a snapshot of the

latest drug trends and the problems the outreach counselors and their clients face. This section summarizes the main themes from these reports.

Street outreach workers reported more use of methamphetamine, especially by women, at different homeless shelters. Heroin is increasing as prescriptions for pain are becoming harder to access. There has been an increase with fentanyl and crystal meth, and an increased number of high-risk sexual behaviors related to methamphetamine and the rise in crack cocaine use.

China white heroin costs between \$50-\$75 a gram in the neighborhood. Local dealers are cutting fentanyl into other drugs. Pre-packaged edibles (THC/CBD-infused candies) can be bought in tourist areas. The drug "LEAN," which is promethazine and codeine, is becoming popular. The drug "XO's", which is a combination of ecstasy (X) and oxycodone (O), is being used by high school students, and they ` K-2 is still very high demand as is Kush, which continues to be the drug of choice among transients and low-level drug users. "G" (GHB) is being sold in one neighborhood for \$20/ounce. Ecstasy is being sold in another neighborhood for \$10 for 3 pills; PCP for \$10/gram. 8-balls (3.5 g) of methamphetamine are being sold in the one area for \$100; 8-balls (3.5 g) of heroin for \$200. Flavored THC oil cartridges for vape pens are sold for \$40-\$50 per cartridge; flavors include strawberry, mimosa, cherry, starfruit, and fruity pebbles.

The street outreach programs are still reporting that more men who define themselves as being straight are engaging in MSM sex for money. Most of the individuals understand that they are putting themselves at a high risk for HIV and get tested regularly, however most of them also state that if they get HIV, "it is okay" and they will just take a pill. Some outreach coordinators report that some potential clients continue to report the perception that if they are infected with HIV, then more benefits will come from being HIV positive. However, they acknowledge that they do not want to deal with the red tape that comes with the access to benefits they may qualify for.

Younger clients are reported by outreach staff to still be attending and participating in orgies in hopes that they become infected with HIV because they are under the assumption that they will receive benefits such as SSI or SSDI, which they see as easy money.

Another trend is clients with mental health needs who report having suffered some sort of trauma in the early stages of their lives and report they now need mental health services. Most of these clients do not have medical insurance and do not have access to mental health services. Many report turning to drugs to help with some of their mental health problems. Clients report using drugs to cope with their anxiety, depression, or even their post-traumatic stress disorder.

HIV-positive individuals from the LGBTQ population have difficulty with stable housing and food insecurity. Barriers to food include homelessness, lack of stable housing, unable to qualify for SNAP benefits, lapses in SNAP benefits, and financial crisis.

Problems remain with fatal overdoses with increases in the rates of endocarditis and life-threatening MRSA infections due to IDU. There are also increases in clients who have to have amputations due to IDU, increases in HIV among IDU communities, and an increase in HCV in IDU communities. .

Many HIV+ individuals recently released from incarceration continue to utilize HIV Early Intervention case management services. Their problems include finding housing, accessing medical care and medications, and complying with probation or parole requirements. People seem to prefer the nasal Naloxone over the injectable type.

Treatment Tables

Table 1: Trends in Admissions* to Programs Treating Substance Use Disorders, Texas Residents, 2014-2018

Number of Admissions and Percentage of Admissions with Selected Substances Cited as Primary Substance at Admission, by Year and Substance

	Calendar Year									
	2014		2015		2016		2017***		2018	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	77,057	100%	75,110	100%	73,490	100%	76,356	100%	70,543	100%
Primary Substance of Abuse (%)										
Alcohol	19,400	25.2%	19,176	25.5%	17,716	24.1%	17,532	23.0%	16,165	22.9%
Cocaine/Crack	7,206	9.4%	6,353	8.5%	6,004	8.2%	5,631	7.4%	5,496	7.8%
Heroin	10,950	14.2%	10,734	14.3%	10,349	14.1%	11,910	15.6%	10,307	14.6%
Prescription Opioids	3,445	4.5%	2,861	3.8%	2,554	3.5%	3,097	4.1%	2,372	3.4%
Methamphetamine**	10,837	14.1%	11,154	14.9%	12,450	16.9%	12,721	16.7%	12,385	17.6%
Marijuana	17,134	22.2%	16,857	22.4%	16,818	22.9%	17,363	22.7%	16,028	22.7%
Benzodiazepines	1,193	1.5%	1,273	1.7%	1,335	1.8%	1,320	1.7%	1,116	1.6%
Synthetic Stimulants	0	0.0%	0	0.0%	0	0.0%	6	0.0%	3	0.0%
Synthetic Cannabinoids	454	0.6%	642	0.9%	698	0.9%	643	0.8%	535	0.8%
Other Drugs/Unknown	6,438	8.4%	6,050	8.1%	5,566	7.6%	6,133	8.0%	6,136	8.7%

NOTES:

***Admissions:** Includes all clients admitted to treatment from January 1, 1987 through 2018. The treatment figures in this report differ from those included in the 2018 Texas SCS annual report because the 2017 report included only clients funded through the Block Grant. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.

****Methamphetamine:** Includes amphetamines and methamphetamine.

unavail: Data not available.

*****NorthSTAR** program ended January 2017.

SOURCE: Data provided to the Texas NDEWS SCE by the Texas Health and Human Services Commission.

Table 2: Demographic and Drug Use Characteristics of Treatment Admissions* for Select Primary Substances, Texas Residents, 2018
 Number of Admissions, by Primary Substance and Percentage of Admissions with Selected Demographic and Drug Use Characteristics

	Primary Substance																	
	Alcohol		Cocaine/Crack		Heroin		Prescription Opioids		Meth-amphetamine**		Marijuana		Benzo-diazepines		Synthetic Stimulants		Synthetic Cannabinoids***	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Number of Admissions (#)	16,165	100%	5,496	100%	10,307	100%	2,372	100%	12,385	100%	16,028	100%	1,116	100%	3	100%	535	100%
Sex (%)																		
Male	10,746	66.5%	3,092	56.3%	5,933	57.6%	961	40.5%	5,503	44.4%	10,887	67.9%	548	49.1%	2	66.7%	335	62.6%
Female†	5,419	33.5%	2,404	43.7%	4,374	42.4%	1,411	59.5%	6,882	55.6%	5,141	32.1%	568	50.9%	1	33.3%	200	37.4%
Race/Ethnicity (%)																		
White, Non-Hisp.	8,749	54.1%	1,434	26.1%	6,489	63.0%	1,572	66.3%	8,953	72.3%	4,994	31.2%	668	59.9%	0	0.0%	227	42.4%
African-Am/Black, Non-Hisp	2,375	14.7%	2,344	42.6%	725	7.0%	297	12.5%	651	5.3%	4,767	29.7%	96	8.6%	1	33.3%	117	21.9%
Hispanic/Latino	4,759	29.4%	1,644	29.9%	2,917	28.3%	475	20.0%	2,585	20.9%	6,022	37.6%	334	29.9%	2	66.7%	190	35.5%
Asian	67	0.4%	18	0.3%	38	0.4%	5	0.2%	38	0.3%	80	0.5%	6	0.5%	0	0.0%	0	0.0%
Other	215	1.3%	56	1.0%	138	1.3%	23	1.0%	158	1.3%	165	1.0%	12	1.1%	0	0.0%	1	0.2%
Age Group (%)																		
18-25	1,548	9.6%	unavail	unavail	609	5.9%	168	7.1%	1,894	15.3%	4,244	26.5%	229	20.5%	1	33.3%	126	23.6%
26-44	8,755	54.2%	unavail	unavail	2,750	26.7%	1,684	71.0%	8,629	69.7%	5,719	35.7%	620	55.6%	2	66.7%	259	48.4%
45+	5,575	34.5%	unavail	unavail	1,991	19.3%	469	19.8%	1,696	13.7%	760	4.7%	61	5.5%	0	0.0%	63	11.8%
Average Age	39.2		39.8		35.9		36.9		34.4		25.6		28.8		32.7		29.7	
Route of Administration (%)																		
Smoked	62	0.4%	2,552	46.4%	283	2.7%	16	0.7%	7,251	58.5%	15,637	97.6%	3	0.3%	2	66.7%	528	98.7%
Inhaled	39	0.2%	2,664	48.5%	1,449	14.1%	59	2.5%	1,166	9.4%	17	0.1%	16	1.4%	1	33.3%	1	0.2%
Injected	7	0.0%	130	2.4%	8,466	82.1%	106	4.5%	3,385	27.3%	4	0.0%	0	0.0%	0	0.0%	2	0.4%
Oral/Other/Unknown	16,057	99.3%	150	2.7%	109	1.1%	2,191	92.4%	583	4.7%	370	2.3%	1,097	98.3%	0	0.0%	4	0.7%
Secondary Substance (%)																		
None	8,723	54.0%	1,993	36.3%	3,856	37.4%	878	37.0%	5,376	43.4%	8,170	51.0%	205	18.4%	2	66.7%	202	37.8%
Alcohol	n/a	n/a	1,428	26.0%	722	7.0%	196	8.3%	1,547	12.5%	3,253	20.3%	147	13.2%	1	33.3%	40	7.5%
Cocaine/Crack	2,121	13.1%	n/a	n/a	1,380	13.4%	125	5.3%	685	5.5%	1,299	8.1%	100	9.0%	0	0.0%	72	13.5%
Heroin	262	1.6%	91	1.7%	n/a	n/a	126	5.3%	424	3.4%	85	0.5%	80	7.2%	0	0.0%	4	0.7%
Prescription Opioids	198	1.2%	38	0.7%	426	4.1%	n/a	n/a	257	2.1%	256	1.6%	75	6.7%	0	0.0%	5	0.9%
Methamphetamine**	1,279	7.9%	299	5.4%	1,942	18.8%	222	9.4%	n/a	n/a	1,238	7.7%	139	12.5%	0	0.0%	72	13.5%
Marijuana	2,940	18.2%	1,277	23.2%	1,036	10.1%	261	11.0%	3,405	27.5%	n/a	n/a	288	25.8%	0	0.0%	114	21.3%
Benzodiazepines	370	2.3%	92	1.7%	761	7.4%	230	9.7%	306	2.5%	1,109	6.9%	n/a	n/a	0	0.0%	15	2.8%
Synthetic Stimulants	4	0.02%	0	0.0%	1	0.01%	0	0.0%	1	0.0%	0	0.0%	0	0.0%	n/a	n/a	0	0.0%
Synthetic Cannabinoids***	54	0.3%	41	0.7%	26	0.3%	8	0.3%	73	0.6%	126	0.8%	17	1.5%	0	0.0%	n/a	n/a

NOTES:
***Admissions:** Includes all clients admitted to treatment from January 1, 1987 through 2018. The treatment figures in this report differ from those included in the 2018 Texas SCS annual report because the 2017 report included only clients funded through the Block Grant. Each admission does not necessarily represent a unique individual because some individuals are admitted to treatment more than once in a given period.
****Methamphetamine:** Includes amphetamines and methamphetamine.
*****Synthetic Cannabinoids:** HHSC collects data on "Other Cannabinoids", which may not include all the synthetic cannabinoids.
n/a: Not applicable; **unavail:** Data not available; **Percentages** may not sum to 100 due to missing data, rounding, and/or because not all possible categories are presented in the table. Category frequencies may not sum to drug total due to missing data and/or not all possible categories are presented in the table.

SOURCE: Data provided to the Texas NDEWS SCE by the Texas Health and Human Services Commission.

Sources

DATA FOR THIS REPORT WERE DRAWN FROM THE FOLLOWING SOURCES:

- **Sexually transmitted disease data and reports from outreach workers** were provided by the Texas Department of State Health Services (DSHS).
- **Data on controlled substances** shipped into Texas through legal distribution channels is from the Automation of Reports and Consolidated Orders System (ARCOS). Manufacturers and distributors report their controlled substances transactions to the DEA through ARCOS. Amounts of controlled substances that are delivered to pharmacies, physicians' offices, and hospital pharmacies are reported, and data can be accessed for 3-digit zip codes. Note that some of the substances listed, such as "cocaine," only refer to medicinal cocaine used by ophthalmologists. The categories do not report street drugs.
- **Poison center data** came from the Texas Poison Center Network, DSHS, for 1998 through December 2018.
- **Treatment data** were provided by the Texas Health and Human Services Commission on clients admitted to treatment from January 1, 1987 through 2018. The treatment figures in this report differ from those included in the 2018 Texas SCS annual report because the 2017 report included only clients funded through the Block Grant.
- **Information on drug mortality** through 2018 came from the DSHS Center for Health Statistics and CDC Wonder. The 2018 data are classified as "provisional," meaning the data are not final but subject to revision as more reports are received. Final data are available online in CDC Wonder with "literal" data available with an IRB from DSHS. "Literals" have all the comments written on the death certificate, not just the items mandated. Most drugs on the street now are not identified separately, but using the "literals" identified MDMA, fentanyl, and tramadol, which are not separately coded on the ICD codes.
- **Information on seized drugs** identified by laboratory tests came from forensic laboratories in Texas, which reported results from analyses of substances for 1998 through 2018 that involved a crime to the National Forensic Laboratory Information System (NFLIS) of the Drug Enforcement Administration (DEA). The drugs reported include not only the first drug reported in a case of multiple substances but also the second and third drugs in any combination. The NFLIS database is password protected.
- **Information on methamphetamine and cocaine purity, potency, and cultivation** through the second half of 2018 came from the DEA's Methamphetamine Profiling Program and Cocaine Signature Program reports, which are available on request from the DEA, and from the U.S. Department of State's International Narcotics Control Strategy Report.
- **Price, trafficking, distribution, and supply information** were gathered from 2018 reports on Trends in the Traffic Report System from the Dallas, El Paso, and Houston field divisions of the DEA. These are available on request from the DEA and from the 2018 Dallas and Houston HIDTA Threat Assessments.

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