



The University of Texas at Austin

Addiction Research Institute

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Drug Trends in Texas 2021: A Report to the National Drug Early Warning System

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Highlights

Texas has 254 counties and, as of 2020, a population of 28,995,881 with 42% White, 40% Hispanic, 12% Black, and 5% Asian. Fifty percent of the population is female, and 26% are younger than 18 years of age (United States Census Bureau, 2019). Because of the size of the U.S. – Mexico border, the drug patterns in Texas can vary, but these are the current trends.

- Methamphetamine still outnumbers other drugs in the four drug reporting systems, and it continues to increase, a pattern consistent with that seen in other states.
- Heroin indicators have been rising, except for decreases in poison center calls.
- Cocaine indicators have continued to decrease, except recent reports of increases in drug items and overdose deaths are a concern.
- Marijuana indicators are level.
- Fentanyl use is increasing because it is used to “cut” heroin, but it can cause additional treatment problems.
- Benzodiazepine indicators are decreasing except for rising alprazolam overdose deaths.
- Reports on Synthetic Cannabinoids have decreased and are being replaced by new chemicals such as 4-MDPPH.

Exhibit 1 provides an overview of the relative size and changes of the major drug problems in Texas, and it includes key indicators of cocaine, heroin and methamphetamine trends including:

- calls to the Texas Toxic Exposure Surveillance System as reported by poison center calls (Toxicall Toxic Exposure System – TESS),
- admissions to treatment programs reported to SAMHSA’s Treatment Episode Dataset (TEDS),
- deaths, and drug identification reports by DEA’s National Forensic Laboratory Information System (NFLIS).

The latest data in this report are provisional, which means that some may be incomplete, so they are subject to change and are not final.

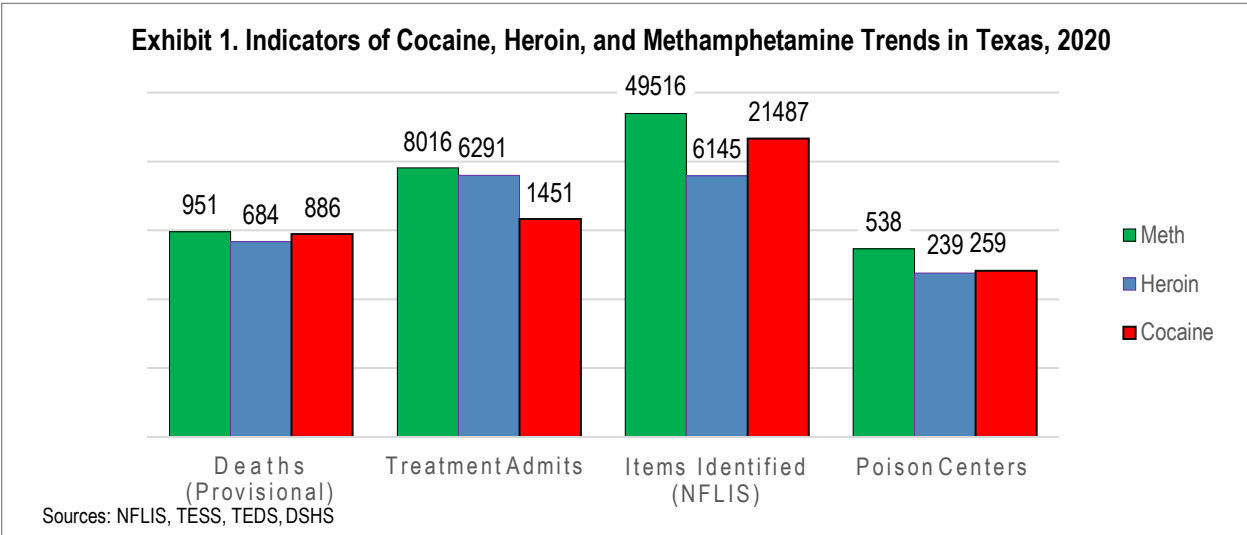


Exhibit 2 shows the changes in number of drug deaths. Other than methadone, all of the types of drug deaths have increased, with sharp increases in psychostimulants, cocaine, and synthetic narcotics (fentanyl). Note that if a death involved more than one drug, the individual death could be counted in each of the death categories.

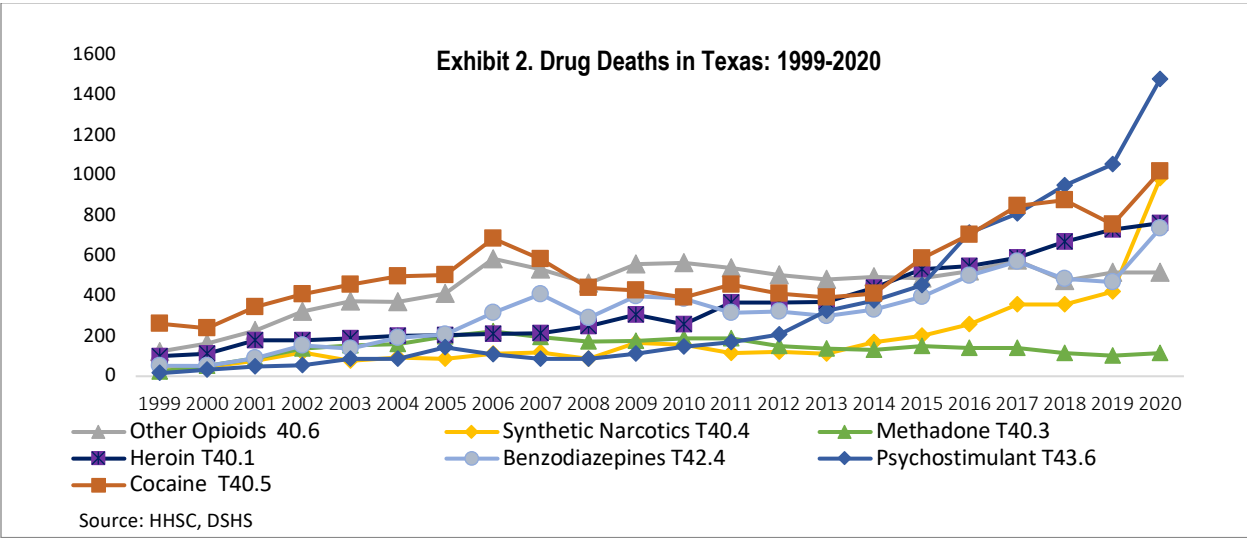
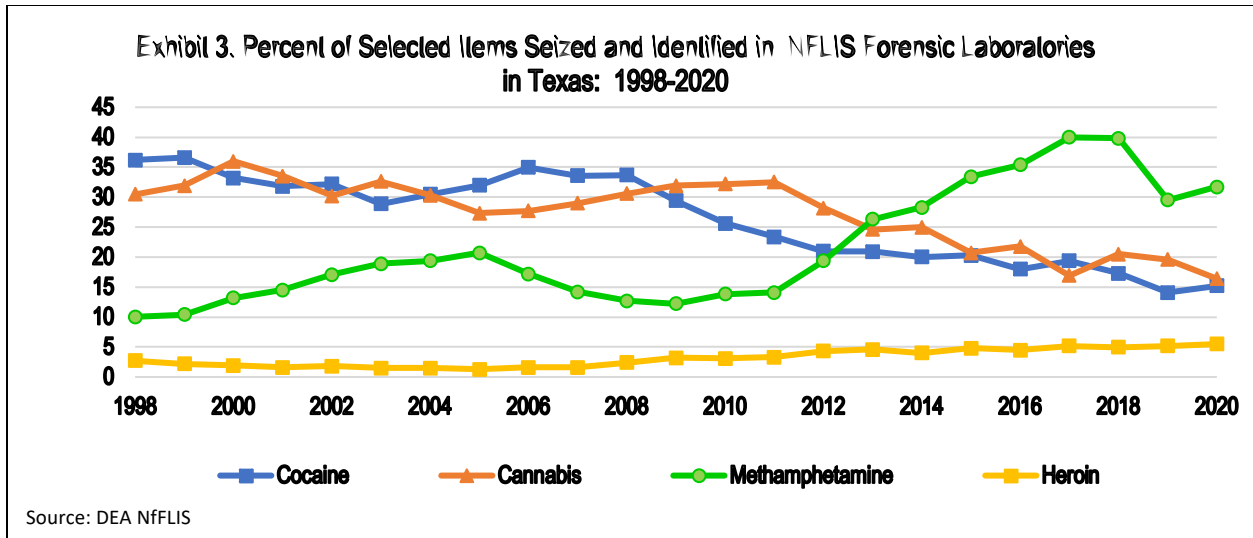


Exhibit 3 shows the increases over time in methamphetamine items seized and identified in NFLIS. Methamphetamine items dropped in 2019, but they are increasing again. Cannabis and cocaine items continue to decrease. The small number of heroin items also highlights the differences in the size of the different drug problems in Texas.



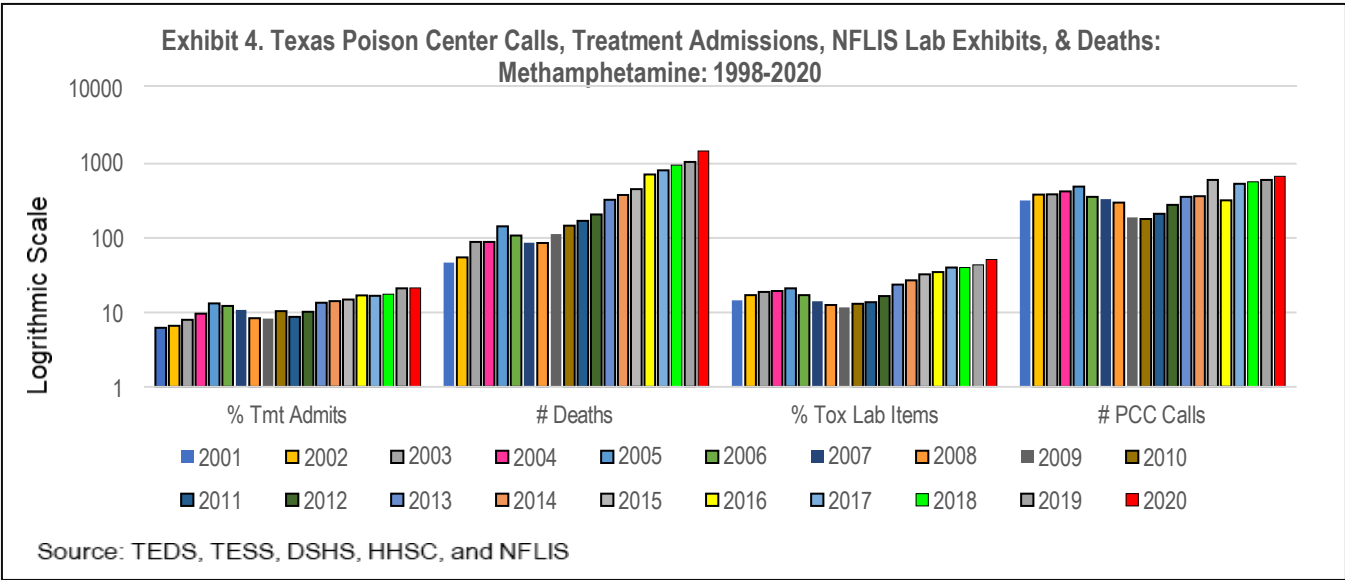
METHAMPHETAMINE

Methamphetamine is perceived to be the #1 drug threat 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. Methamphetamine is trafficked into the 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 2020, 98.6% of the meth samples were made from P2P.

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 average potency in 2020 is 95.9%, according to DEA’s Methamphetamine Profiling Program. Methamphetamine production now occurs in Mexico through the use of industrial-scale laboratories that use chemicals such as phenyl-2-propanone which are sourced in China and India to manufacture kilogram quantities. Since 2002 - 2003, the number of domestic methamphetamine laboratory incidents has fallen from 23,703 to 17,423.

Over the years, the proportion of methamphetamine items seized has changed. In 2005, methamphetamine represented 21% of all items identified by DEA laboratories; in 2019, methamphetamine comprised 50% of all the items examined.

Methamphetamine seizures on the Texas-Mexico border are increasing. The El Paso Intelligence Center predicts a possible correlation between heroin and methamphetamine seizures as Mexican transnational criminal organizations and drug trafficking organizations are actively pursuing new user markets and expanding 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.

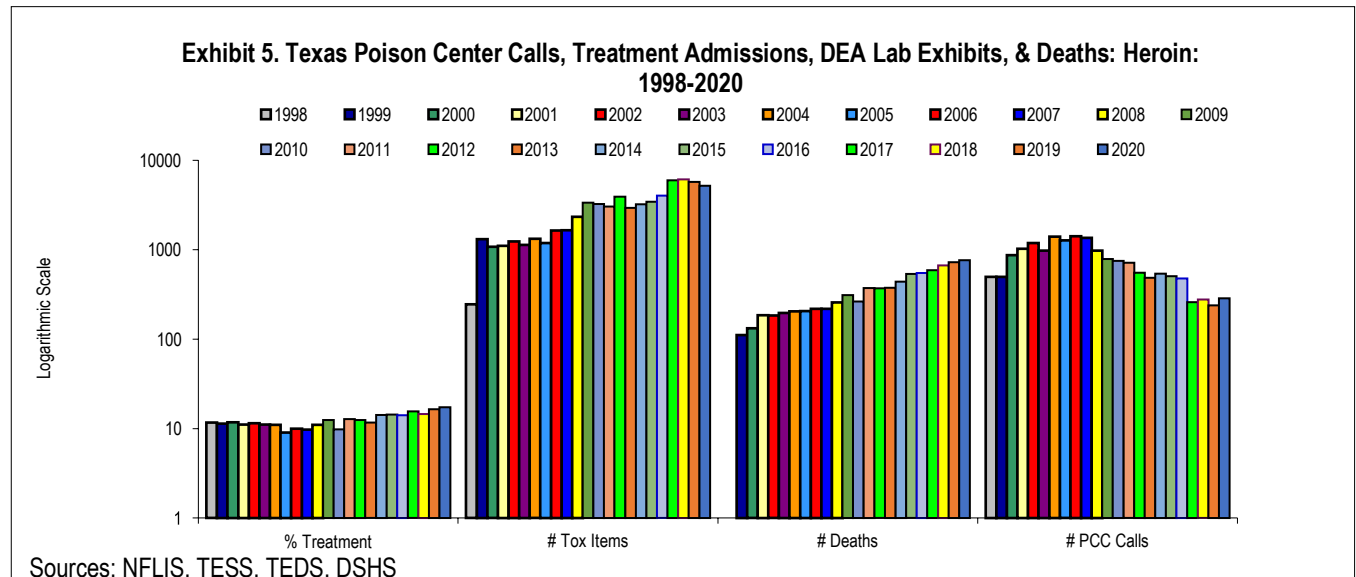
The liquid form of methamphetamine is brought in from Mexico (“liquid meth”) and turned into solid crystalline form in “dry houses” in Texas to reconstitute the drug from liquid to crystalline form. In May 2020, 17 kilograms of methamphetamine and nearly 38 liters of methamphetamine in solution were seized in Austin. A methamphetamine conversion laboratory was discovered after complaints of chemical odors. Among the seized items were tire rims as well as modified fuel tanks used to conceal and transport methamphetamine.

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 22% of admissions in 2020. The race-ethnic composition has changed in terms of Hispanic representation. In 1995, 91% were White, 2% were Black, and 5% were Hispanic. Of the 2020 admissions, 90% were White, 7% were Black, and 18% were Hispanic. Forty-one percent of the admissions were ages 26-35. In 1994, 59% of the clients were male, as compared to 45% male in 2020. Based on the results of the author’s previous research, females use methamphetamine for energy, to lose weight, and to counter depression. There is a significant need to consider gender issues in methamphetamine treatment (Maxwell, 2014).

HEROIN

Heroin in Texas is either black tar heroin or powdered brown heroin (diluted with diphenhydramine or Tylenol or other filler, which makes it weaker), or the Mexican white heroin. “Tar” is sold in small party 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.

The average purity of MEX-SA at the Southwest Border was 84% in 2020. Inside Texas, the black tar shipments remained in the 40%-45% purity range. Black tar varied with an average purity of 28% for 465 Texas samples collected from 2014 to 2020. Once heroin reaches the retail markets, the purity and cutting patterns can vary significantly between neighborhoods.



Fentanyl is the primary substance used to “cut” heroin. It interacts in a competitive manner with opioid antagonists such as naltrexone (Comer et al., 1992). It is harder to block the effects of opioids with a higher efficacy (fentanyl) than to block the effects of opioids with a lower efficacy (heroin). In addition to being cut with fentanyl, heroin can be cut with caffeine, quinine, lidocaine, procaine, diphenhydramine, tramadol, or xylazine. The primary diluents are mannitol, lactose, inositol, and sucrose.

Texas has not suffered the epidemic of heroin overdoses seen in the Northeast because the Mexican black tar 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 envelope or a party balloon.

Of the substances most often found with heroin in NFLIS analysis in Texas, 54% of the combinations involved heroin and diphenhydramine, which is used to turn tar heroin into a powder. Diphenhydramine is used because “snorting” heroin can cause a runny nose. 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%).

COCAINE/CRACK

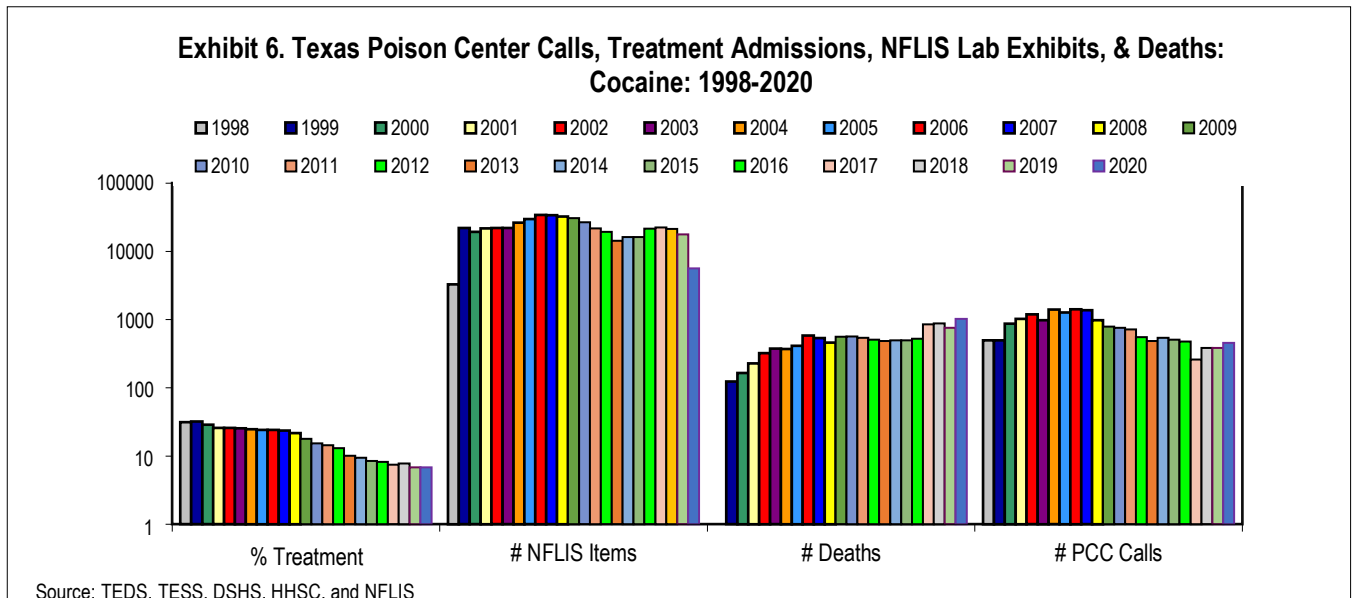
Cocaine (both crack and powder) represented 25% of all drug admissions in Texas in 2004; in 2020, only 6.8% were for cocaine.

Cocaine is primarily grown in Colombia, and after 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. The increase in supply can be seen in the news reports of seizure of ships carrying large quantities of cocaine off the east and west coasts.

According to the DEA, the average retail price per pure gram has decreased with an average gram purity of 83.4% in 2021. Cutting agents include levamisole or levamisole mixture containing dexamisole, phenacetin, lactose, procaine, and alcohol.

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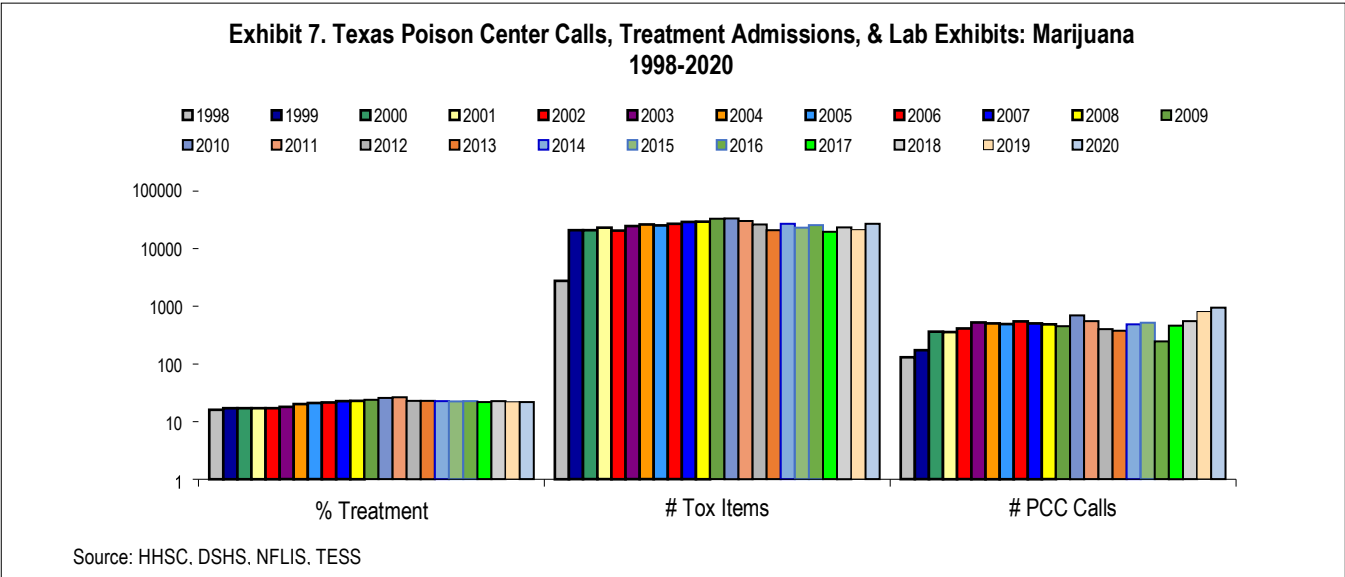
Preliminary analysis of Texas admission data shows that smoking cocaine has decreased: in 1995, 76% of the cocaine admissions smoked crack, while in 2020, the proportion of crack smokers was 46%. The proportion of crack smokers who are Hispanic was 15% in 2020 and the proportion of Black admissions comprised 56%. The crack smokers are an aging population: there were more smokers in the 51-60 age group, while among the cocaine non-smokers, more admissions were ages 26-30.



MARIJUANA/CANNABIS

Exhibit 7 shows the traditional measures of marijuana use, such as treatment admissions and toxicology reports. The poison center dataset includes 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. In 2019, there were 69 cases of cannabidiol, 87 cases of edible preparations, 131 of concentrated extract (including oils and tinctures), and 2 of oral capsules or pill preparations. The “oil” category included those who reported use of “dabs”, “shatter”, and “wax”.

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



FENTANYL AND OTHER SYNTHETIC OPIOIDS

Exhibit 8 shows that hydrocodone is the most common controlled substance dispensed in Texas in 2020. Of the opiates which are identified in law enforcement laboratories, the increase in fentanyl is also of concern. Fentanyl is a major problem because it is used to “cut” heroin and can result in more deadly effects than other “cuts”. Mentions of other synthetic opiates in TESS and NFLIS data for Texas have been small.

Of special concern is the increasing use of fentanyl mixed with heroin. China white heroin costs between \$50-\$75 a gram in the neighborhood. Local dealers are cutting fentanyl into other drugs to increase their profit: illicit fentanyl comes from China and Mexico. The number of seizures of fentanyl items identified by law enforcement has risen from 23 in 2006 to 841 in 2020.

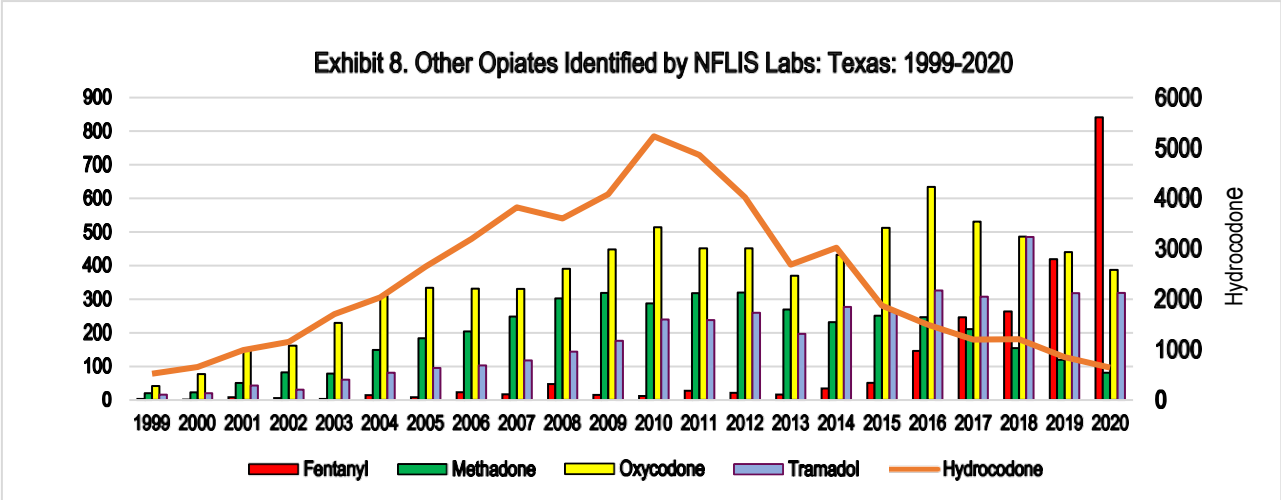
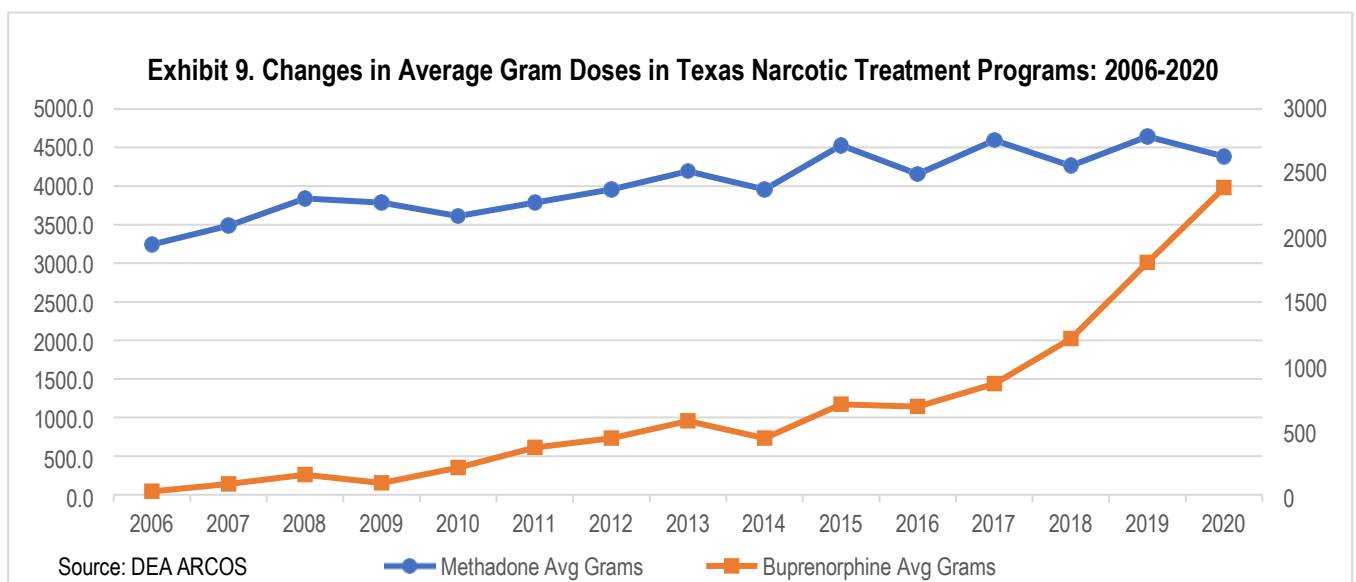


Exhibit 9, drawn from DEA’s Automation of Reports and Consolidated Orders System, shows an unusual dosing pattern, with doses of methadone decreasing and then increasing year by year. The increases in average dose of buprenorphine have consistently risen since 2010. Recent literature has reported it is harder to block the effects of opioids with a higher efficacy (fentanyl) than it is to block the effects of opioids with lower efficacy (heroin). Buprenorphine is not as effective in antagonizing higher efficacy agonists. Fentanyl clearance in persons with an opioid use disorder is considerably longer than the typical clearance of other short-acting opioids, which may explain reports of difficulty in buprenorphine induction for persons who used fentanyl.

Comer (2019) suggested that the pharmacology of fentanyl may affect the effectiveness of currently approved narcotic treatment medications such as methadone or buprenorphine in treating opioid users, which could be a factor in dosage level and treatment outcomes for persons receiving methadone or buprenorphine.



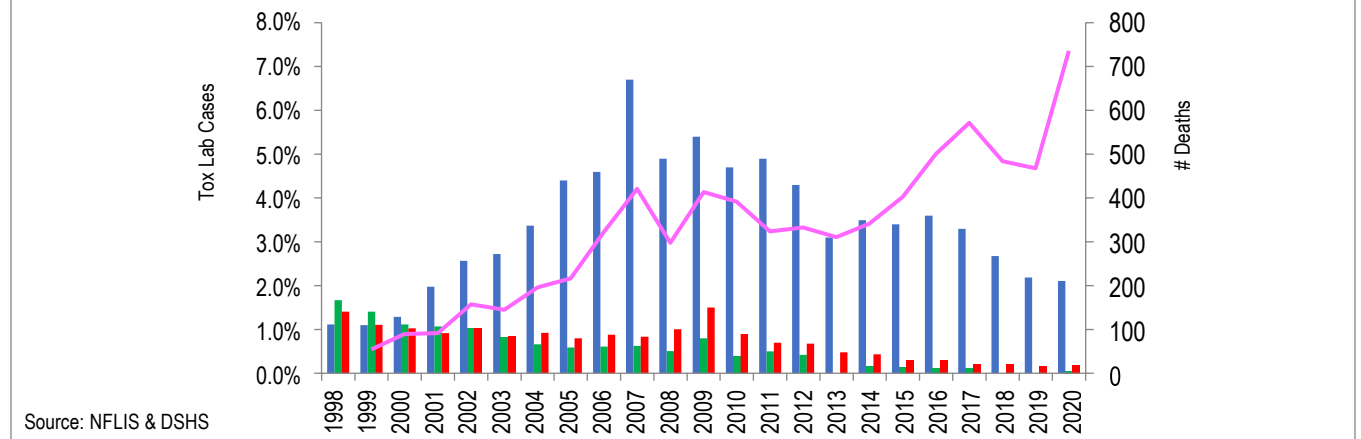
BENZODIAZEPINES

Benzodiazepines are a lesser problem in terms of identifications by toxicology laboratories (Exhibit 10), but alprazolam is the most common benzodiazepine dispensed in 2020 and it is still the most common benzodiazepine seen in Texas treatment admissions. The Texas Prescription Monitoring Program has reported that the dispensing of benzodiazepines per 1,000 has remained level since 2015 and that the 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. Of those entering Texas treatment programs in 2020 for problems with tranquilizers, 43% were female and for sedatives, 52% were female. Over 90% of the admissions for these drugs were white.

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 medications and families who need to be educated about the signs of opioid overdose and have naloxone

available. This pattern of using multiple drugs should not only be a target of harm reduction campaigns targeting users of prescribed pain medications, but also for families who need to be educated about the signs of opioid overdose and have naloxone present in the home if needed in an emergency.

Exhibit 10. Benzodiazepines as Percent of All Items Identified by NFLIS Labs & Number of Benzodiazepine Deaths, Texas 1998-2020

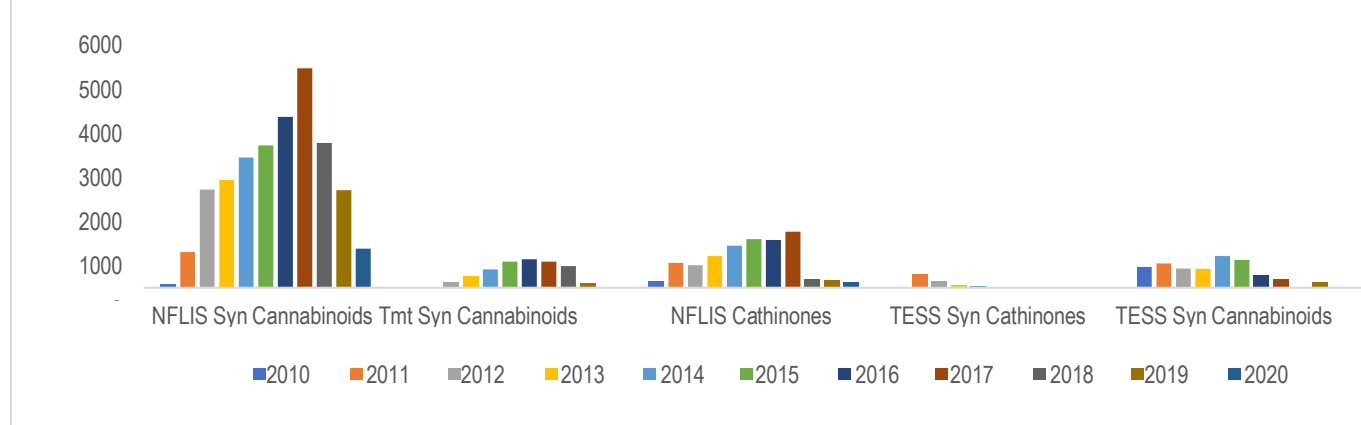


SYNTHETIC CANNABINOIDS AND CATHINONES

The number of poison center calls, treatment admissions, and toxicology laboratory identifications have varied over the years. 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).

The characteristics of synthetic cannabinoid users and the varieties of these drugs in Texas have changed from just young users trying for a different “high” to an aging population experiencing homelessness along with co-morbid substance use and the psychiatric problems, as well as the needs of females using these drugs (Maxwell, 2018).

Exhibit 11. Identifications of Synthetic Cannabinoids and Cathinones: 2010-2020



References:

Comer, S.D. Fentanyl: How We Got Here, What We Know and What We Don't Know. Comer AAAP Fentanyl Talk, December 8, 2018.

Comer, S.D. and Cahill, C.M. 2019. Fentanyl: Receptor pharmacology, abuse potential, and implications for treatment. *Neuroscience and Behavioral Reviews*, 10649-57.

Information on drug mortality through 2020 came from CDC Wonder and from the Texas Center for Health Care Statistics. The 2020 data are classified as “provisional,” meaning the data are not final but subject to revision as more reports are received.

Information on specific drugs came from laboratories in Texas which reported results from analyses of substances for 1998 through 2020 to the National Forensics Laboratory Information System (NFLIS) of the Drug Enforcement Administration (DEA). The NFLIS database includes data generated June 1, 2020.

Information on methamphetamine and cocaine purity, potency, and cultivation came from the DEA's Methamphetamine Profiling Program, Cocaine Signature Program, and Annual Heroin Reports.

Maxwell, J.C. 2014. A New Survey of Methamphetamine Users in Treatment: Who They Are, Why They Like “Meth,” and Why They Need Additional Services. *Substance Use and Misuse*, 49(6): 639- 644.

Maxwell, J. C. 2018. The Changing Face of Synthetic Cannabinoids in Texas. *Journal of Psychoactive Drugs*, 50, 4, 281-286.

Poison center data came from the Texas Poison Center Network, Toxicall®-Toxic Exposure Surveillance System (TESS) for 1998 through 2020.

Treatment Episode Data (TEDS) on clients admitted to treatment from January 1, 1987, through 2020 came from SAMHSA. The treatment numbers in this report differ from those included by Texas Department of State Health Services, which only reports clients whose treatment was funded through DSHS; treatment from all sources of funds are included in TEDS.

United States Census Bureau (2019) Texas State data. Downloaded from:

<https://data.census.gov/cedsci/all?q=texas&tid=GOVSTIMESERIES.CG00ORG01>

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