

# **Drug Cases Submitted to the Virginia Department of Forensic Science Calendar Year 2022**

**Produced by the Virginia Department of Criminal Justice Services  
in partnership with the Virginia Department of Forensic Science**



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# Drug Cases Submitted to the Virginia Department of Forensic Science

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## Data Sources

Drug submission data for this report were provided by DFS, using information collected for the National Forensic Laboratory Information System. Annual totals presented here may be slightly lower than previous reports. Some submissions (fewer than 0.1% overall) were double-counted in cases in which testing for two different samples within a submission were completed in different months.

Arrest data were taken from the annual Crime in Virginia reports prepared by the Virginia State Police (VSP), <https://vsp.virginia.gov/sections-units-bureaus/bass/criminal-justice-information-services/uniform-crime-reporting/#UCR-IBR>

Population data used to calculate rates were retrieved from the Weldon Cooper Center for Public Service, <https://demographics.coopercenter.org/virginia-population-estimates>

Data analysis was provided by the DCJS Criminal Justice Research Center, <https://www.dcjs.virginia.gov/criminal-justice-research-center>

# Drug Cases Submitted to the Virginia Department of Forensic Science

## Introduction

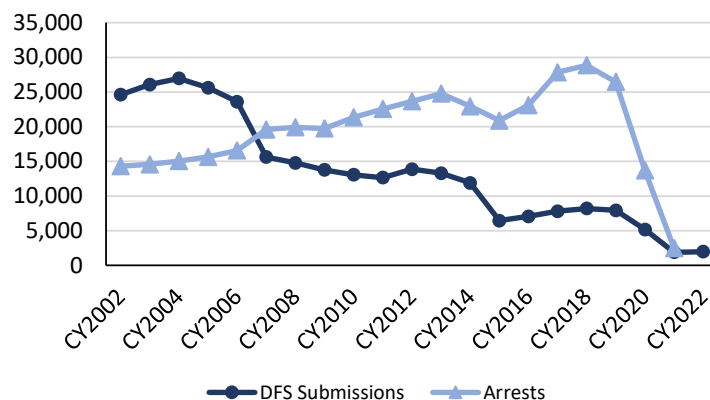
Every year, tens of thousands of drug samples are submitted to the Virginia Department of Forensic Science (DFS). These submissions arrive in many forms, including powders, solid material, liquids, pills, plants, residue, and more. At DFS, they are tested by the Controlled Substances Section, to identify the presence of controlled substances. Hundreds of unique substances are identified each year, and they include illegal drugs, prescription drugs, and over the counter medications.

The frequency with which individual drugs are identified in DFS drug testing can help in understanding the level of availability of those drugs within Virginia, and how that level of availability has changed over time. This report looks at selected drug categories of interest, showing how frequently those drugs are submitted to DFS, both statewide and regionally. The drug categories examined here are among the most common submissions and include both illicit substances and prescription drugs with a potential for abuse. In some cases – particularly with regard to designer drugs and cannabimimetic agents – a substance is identified before it is explicitly listed as a controlled substance in the *Code of Virginia*. Those cases are still counted in this report.

- Illicit substances
  - ◊ Cocaine
  - ◊ Methamphetamine
  - ◊ Heroin
  - ◊ Illicit synthetic opioids (primarily illicitly produced fentanyl and fentanyl analogs)
  - ◊ Illicit benzodiazepines
  - ◊ Hallucinogenic substances (such as LSD, PCP, and psychoactive mushrooms)
  - ◊ Cannabimimetic agents (also known as synthetic cannabinoids)
  - ◊ Other designer drugs (excluding those included in any of the categories above)
- Prescription drugs
  - ◊ Opioids (such as oxycodone and morphine)
  - ◊ Stimulants (primarily medications to treat ADD/ADHD)
  - ◊ Benzodiazepines (such as alprazolam and diazepam)

Marijuana is not included in this report. The *Code of Virginia* was revised in July 2006 to permit law enforcement officers to testify to the results of marijuana field tests at trial in simple possession cases involving plant material. Following this change, the number of marijuana submissions to DFS dropped significantly, while the number of arrests increased significantly through 2018. Data on marijuana submissions to DFS before and after this change cannot be compared. Possession of less

Marijuana DFS Submissions  
vs Marijuana Arrests



than one ounce of marijuana was decriminalized in 2020, and legalized in 2021.

Each of the drug categories listed is presented separately in the pages that follow. These pages report changing trends in both time and geography, as the availability of individual drugs (as measured by the number of submissions to DFS) changed differently for different regions in Virginia. This report examines regional trends using the Virginia State Police (VSP) Divisions, as well as the smaller Virginia Court Districts. A listing of the counties and cities within the seven VSP divisions, and within the 32 Court Districts, is included in Appendix C.

The pages that follow report the following for each drug category: trends in submissions between 2013 and 2022; the 2022 frequency of submissions of various subcategories of drugs within these larger categories, where applicable; the regional distribution of 2022 submissions; the 2022 rate of submissions, by VSP Division; and maps presenting the trend in submission rates for the 32 Virginia Court Districts, for 2012, 2017, and 2022.

Note that drug submissions in this report may be counted differently than in some other reports of DFS data. For this report, if a submission included at least one substance within a drug category it is counted as a single submission, even if multiple substances within that category were identified. When data are presented for subcategories (e.g., specific prescription opioids), a subcategory is counted once regardless of how many samples of that substance were included in the submission. The sum of the subcategories (where relevant) will usually not equal the total for the drug category, as there are submissions that meet the criteria for multiple subcategories but are still only counted once for the broader category.

# 2022 Drug Submissions to DFS – Highlights

## Summary

Overall, drug submissions to DFS dropped in CY 2022, but that varied across the different drug categories.

- Several drug categories did show a drop between 2021 and 2022:
  - ◇ Illicit Benzodiazepine submissions dropped 61%
  - ◇ Cannabimimetic Agent submissions dropped 50%
  - ◇ Heroin submissions dropped 36%
  - ◇ Other Designer Drug submissions dropped 35%
  - ◇ Prescription Opioids submissions dropped 16%
  - ◇ Prescription Benzodiazepine submissions dropped 11%
  - ◇ Hallucinogenic Substance submissions dropped 3%
  - ◇ Methamphetamine submissions dropped 1%
- Other drug categories showed an increase:
  - ◇ Prescription Stimulant submissions increased 7%
  - ◇ Illicit Synthetic Opioid submissions increased 8%
  - ◇ Cocaine submissions increased 11%

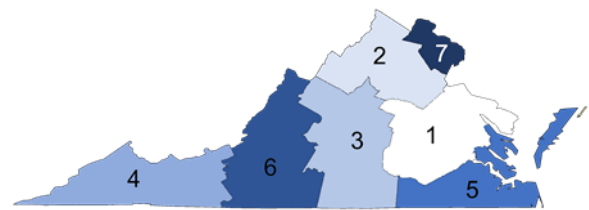
The 2022 rate of drug submissions per 100,000 population varied by drug type and region.

**Cocaine:** The rate of submissions was highest from VSP 1, and lowest from VSP 4.

**Methamphetamine:** Rate of submissions was highest from VSP 4, and lowest from VSP 7.

**Prescription Stimulants:** Rate of submissions was highest from VSP 4, and lowest from VSP 7.

**Heroin:** Rate of submissions was highest from VSP 1, and lowest from VSP 7.



Virginia State Police Divisions (VSP)

**Illicit Synthetic Opioids:** Rate of submissions was highest from VSP 6, and lowest from VSP 3.

**Prescription Opioids:** Rate of submissions was highest from VSP 4, and lowest from VSP 7.

**Illicit Benzodiazepines:** Rate of submissions was highest from VSP 4, and lowest from VSP 3.

**Prescription Benzodiazepines:** Rate of submissions was highest from VSP 4, and lowest from VSP 7.

**Hallucinogenic Substances:** Rate of submissions was highest from VSP 2, and lowest from VSP 1.

**Cannabimimetic Agents:** Rate of submissions was highest from VSP 4, and lowest from VSP 1.

**Other Designer Drugs:** Rate of submissions was highest from VSP 2, and lowest from VSP 3.

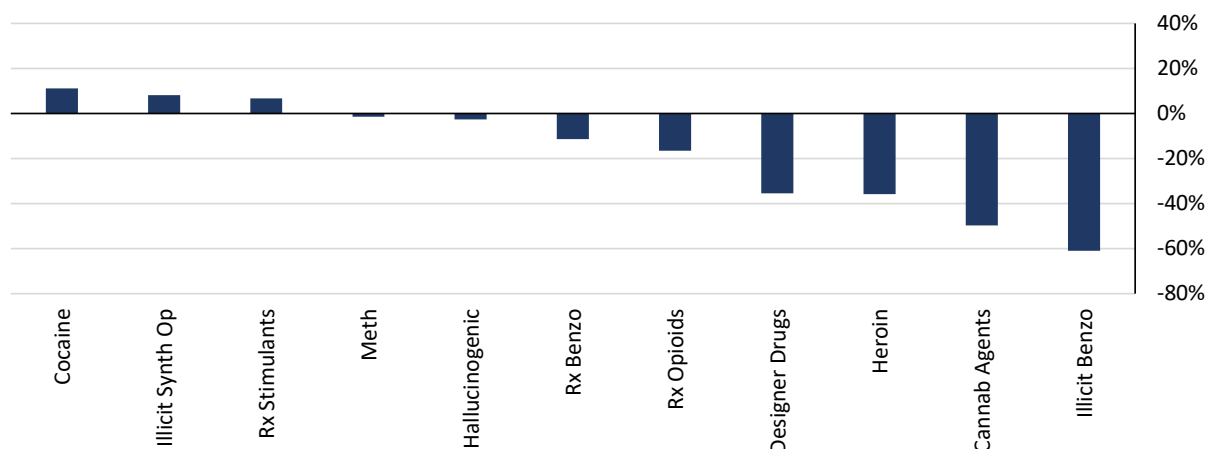
## Top Ten

The ten most common substances identified in 2022 were:

- |                    |                        |
|--------------------|------------------------|
| 1. Methamphetamine | 6. Buprenorphine       |
| 2. Cocaine         | 7. Xylazine            |
| 3. Fentanyl        | 8. Naloxone*           |
| 4. Marijuana*      | 9. para-fluorofentanyl |
| 5. Heroin          | 10. Oxycodone          |

\*Marijuana and naloxone are not included in this report

## Change in Submissions—CY 2021 to 2022

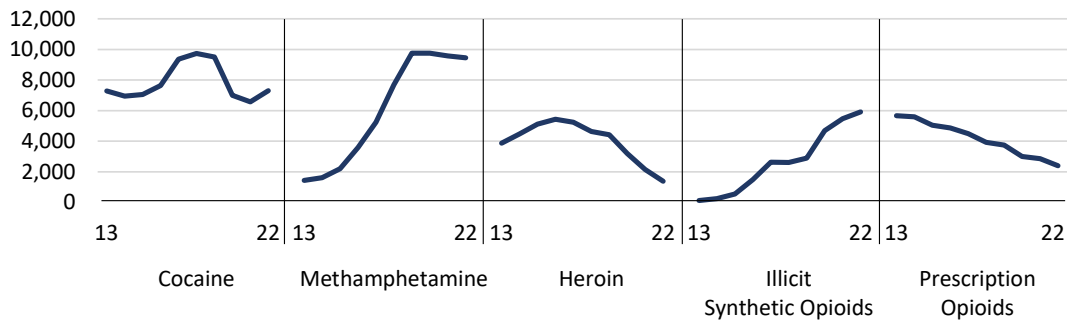


# 2022 Drug Submissions to DFS – Highlights

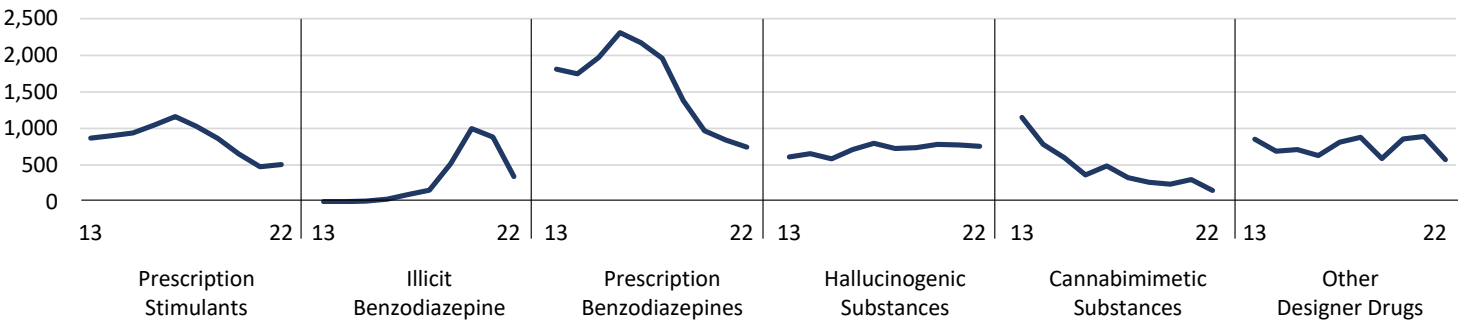
## Ten-Year Trends

The graphs below present ten-year trendlines for the substances/substance categories included in this report. Note that the two graphs have different scales, so that the trends can be clearly displayed. Please see the sections for the individual substances/substance categories for more details on these trends.

Submissions for Select Drugs, CY 2013-2022



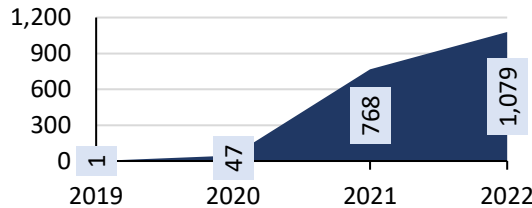
Submissions for Select Drugs, CY 2013-2022



## Emerging Trend—Xylazine

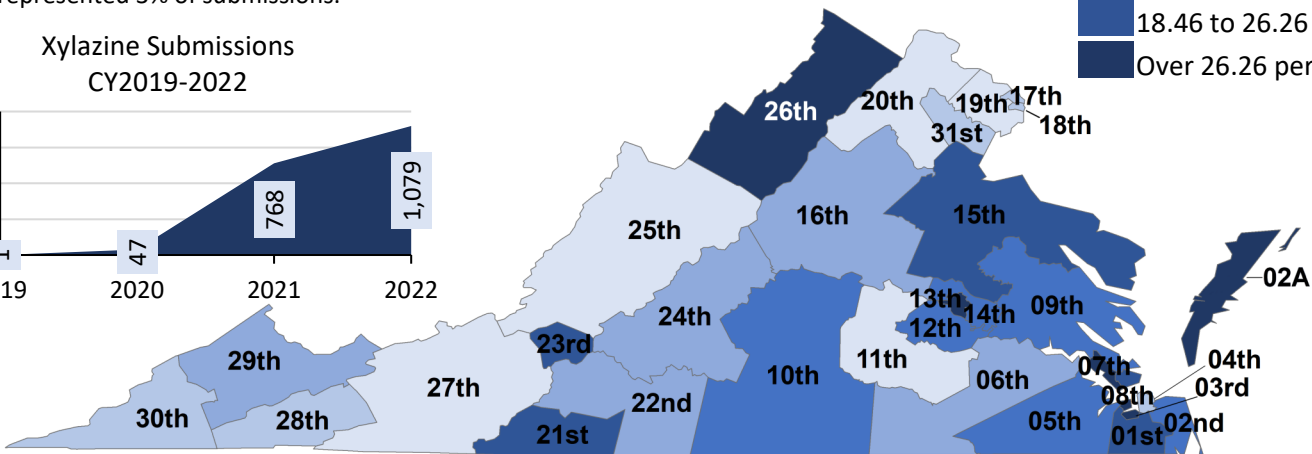
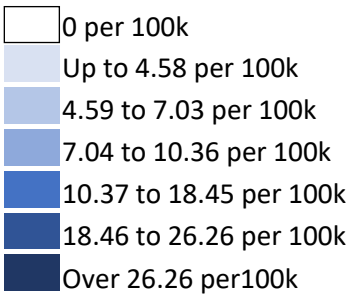
Xylazine is a veterinary tranquilizer that, mixed with fentanyl, has been involved in a rising number of overdose fatalities across the country. DFS has seen an increase in submissions containing xylazine, but only began requiring the reporting of xylazine in August 2021. Therefore, data prior to that time would not provide a complete picture. In CY2022, xylazine represented 3% of submissions.

Xylazine Submissions  
CY2019-2022

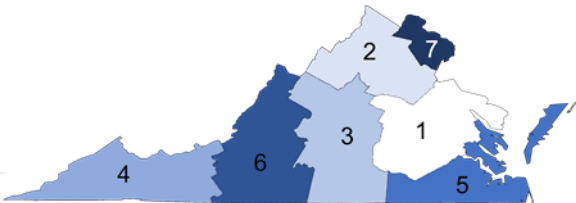


Xylazine Submissions by Court District  
Rate per 100,000  
CY 2022

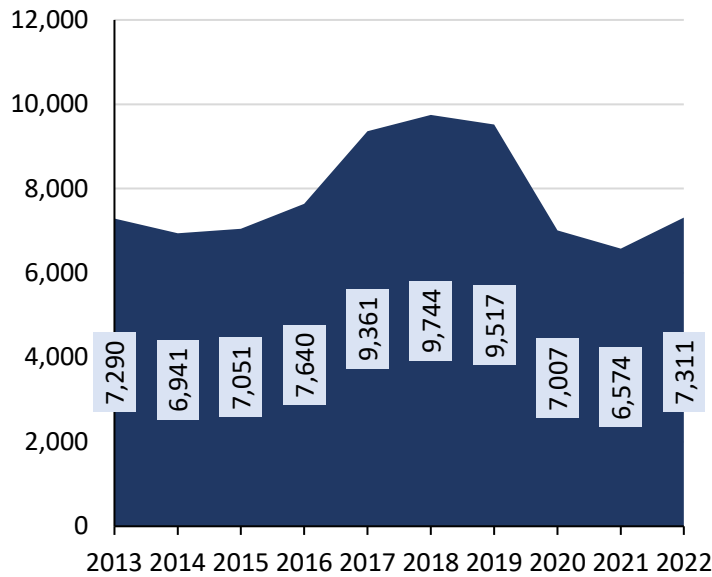
Statewide Rate: 12.4



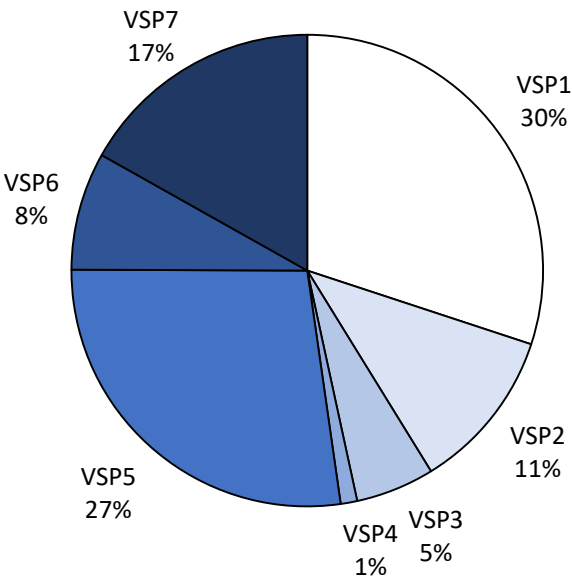
# Cocaine



Cocaine Submissions  
CY2013-2022



2022 Cocaine Submissions Percentage  
Distribution Across Regions



Cocaine submissions to DFS are higher than almost any other individual drug, representing 19% of the total number of submissions to DFS in 2022.

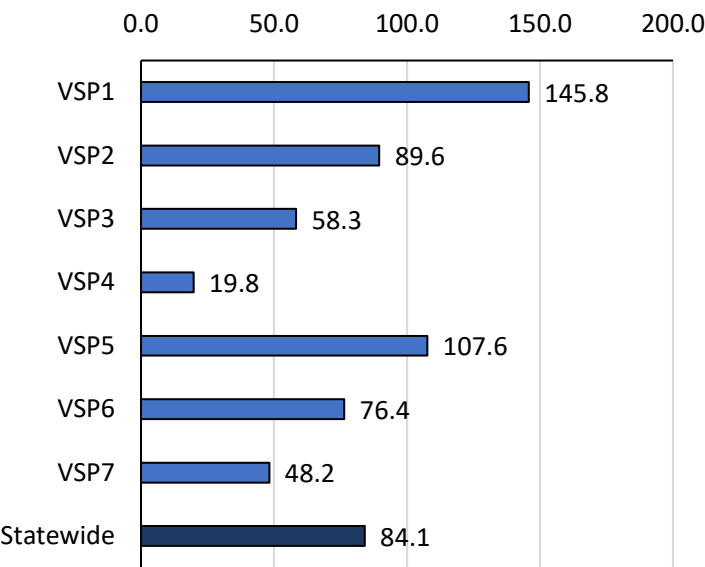
After increasing 40% between 2014 and 2018, cocaine submissions dropped 2% in 2019, 26% in 2020, and another 6% in 2021. This trend reversed in 2022, when cocaine submissions increased 11%.

Both the highest number and the highest rate of cocaine submissions in 2022 were from VSP 1.

Statewide, the rate of cocaine submissions in 2022 was 84.1 per 100,000 population. Despite the increase in cases in 2022, this statewide rate was down 24% from 2017.

The maps on the following page present the changing pattern of cocaine submission rates, by Virginia Court District.

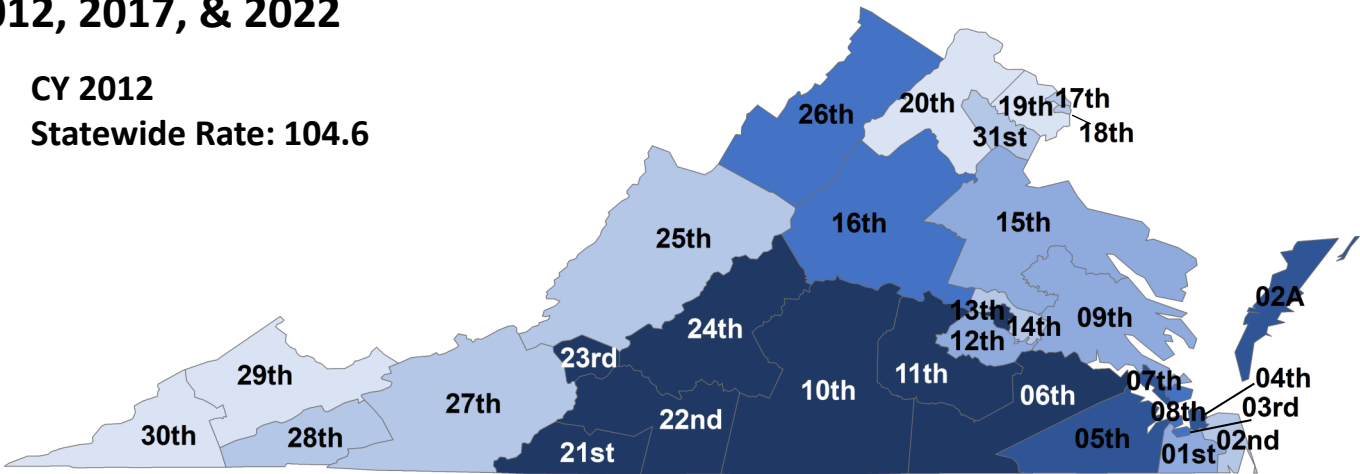
2022 Cocaine Submissions  
Rate per 100,000



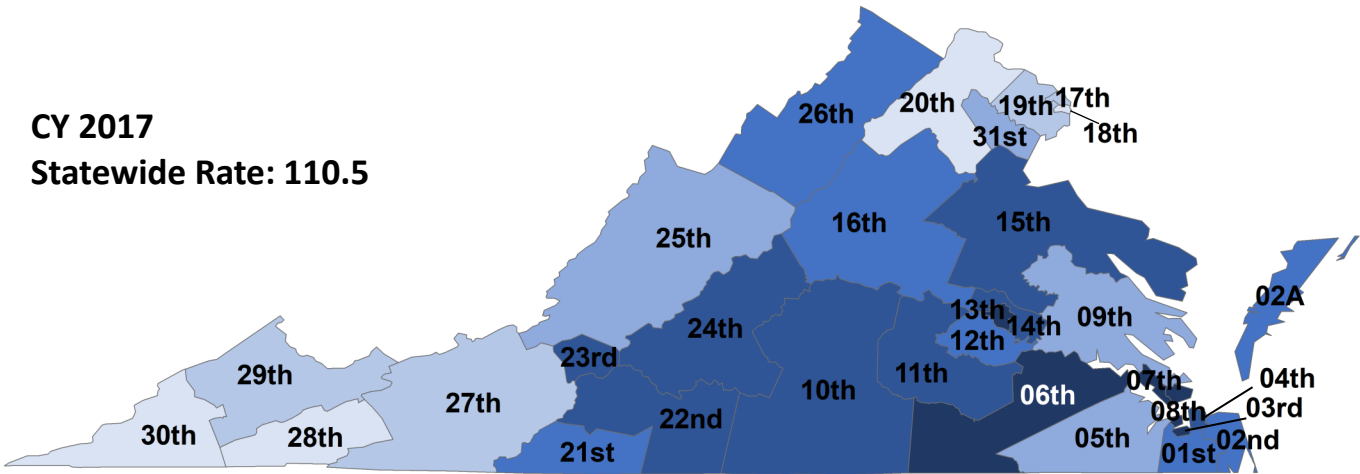
# Cocaine

## Cocaine Submissions by Court District, Rate per 100,000 CY 2012, 2017, & 2022

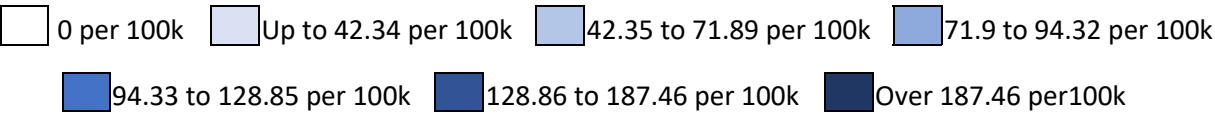
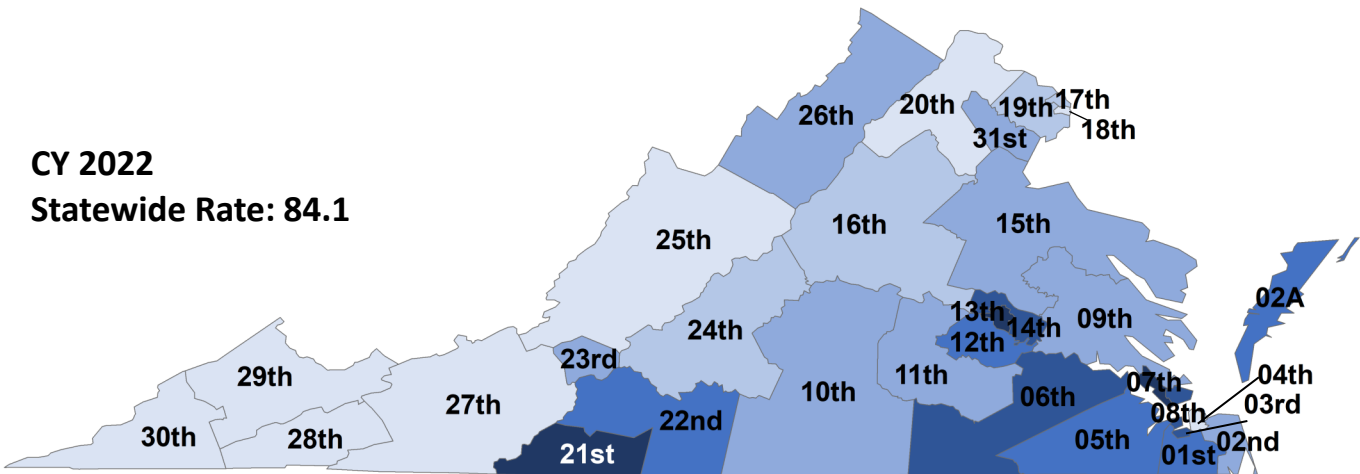
CY 2012  
Statewide Rate: 104.6



CY 2017  
Statewide Rate: 110.5

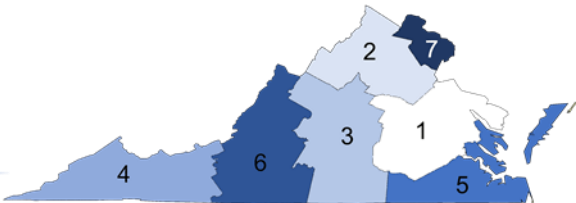


CY 2022  
Statewide Rate: 84.1

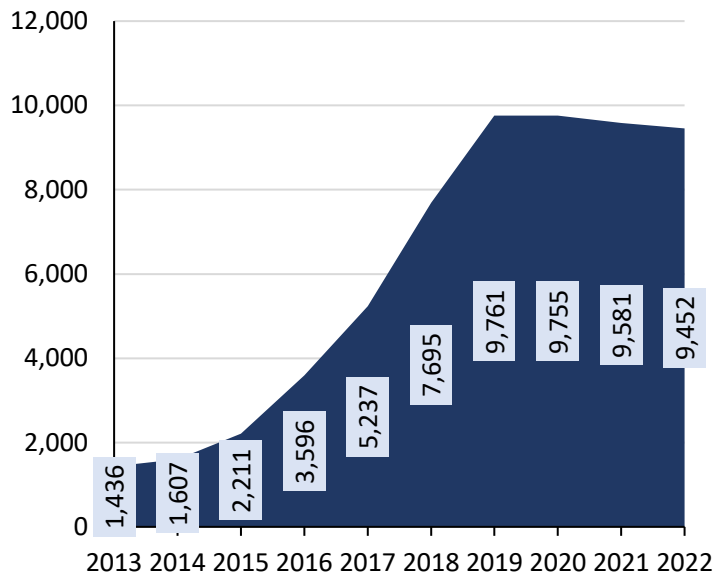




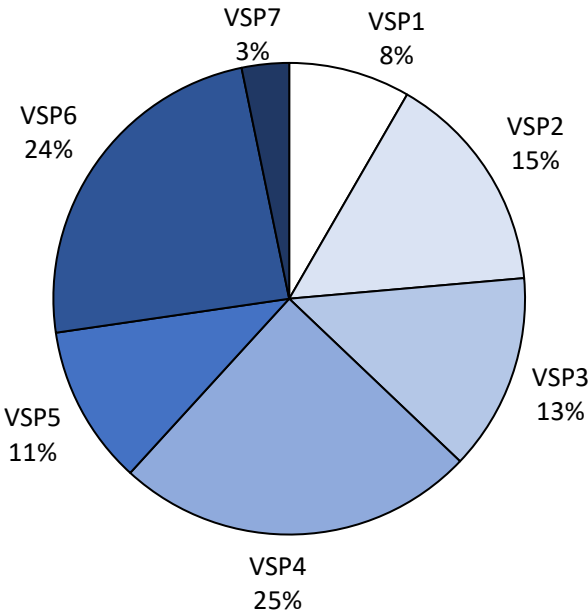
# Methamphetamine



Methamphetamine Submissions  
CY2013-2022



2022 Methamphetamine Submissions  
Percentage Distribution Across Regions



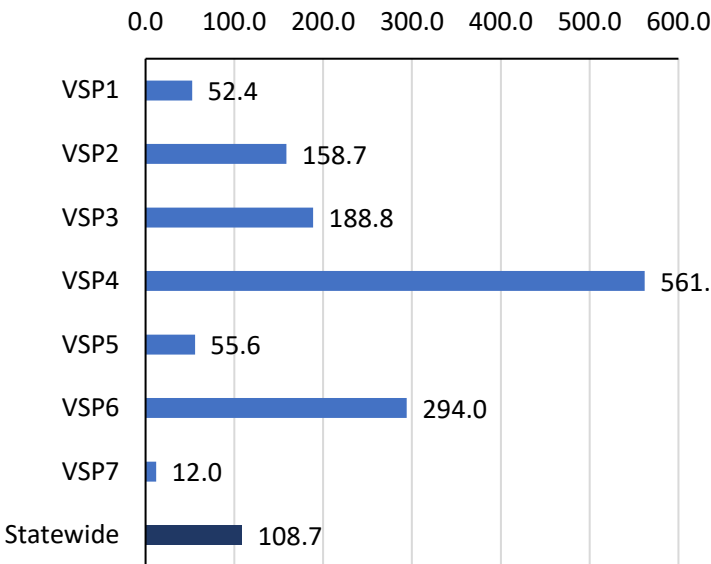
Methamphetamine submissions to DFS are the highest for an individual drug, representing 25% of the total number of submissions to DFS in 2022.

After increasing every year between 2013 and 2019 – more than a fivefold overall increase during that time – methamphetamine submissions remained flat between 2019 and 2020, dropped 2% in 2021, and dropped 1% in 2022. The large percentage increase between 2013 and 2019 is due in part to the relatively low number of submissions in 2013. In 2013, methamphetamine represented only 3% of total submissions statewide, vs. 25% in 2022. Both the highest number and the highest rate of methamphetamine submissions in 2022 were from VSP 4.

Statewide, the rate of methamphetamine submissions in 2022 was 108.7 per 100,000 population. This was up 76% from 2017.

The maps on the following page present the changing pattern of methamphetamine submission rates, by Virginia Court District.

2022 Methamphetamine Submissions  
Rate per 100,000

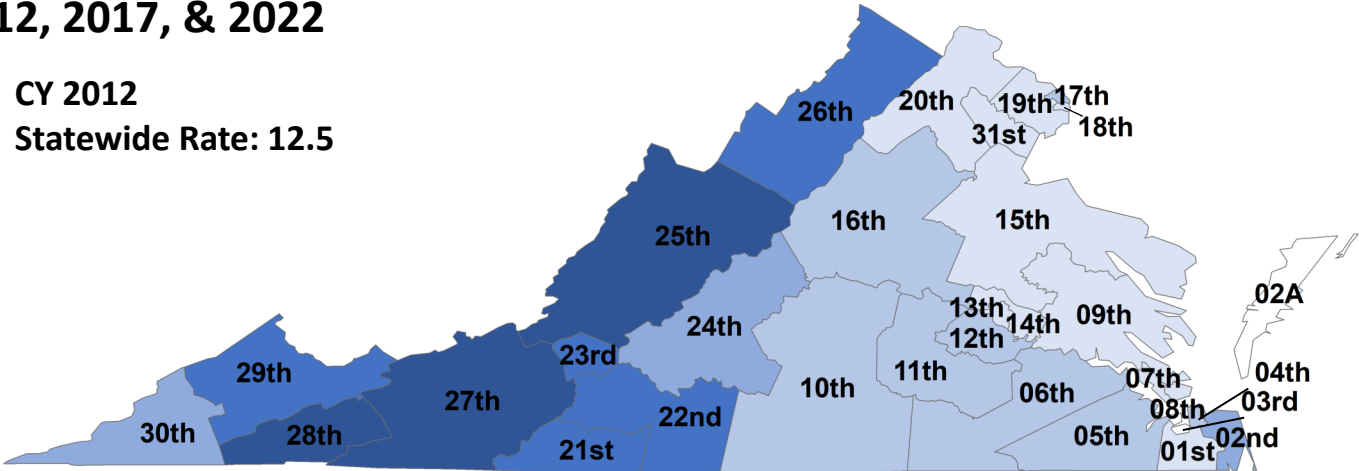




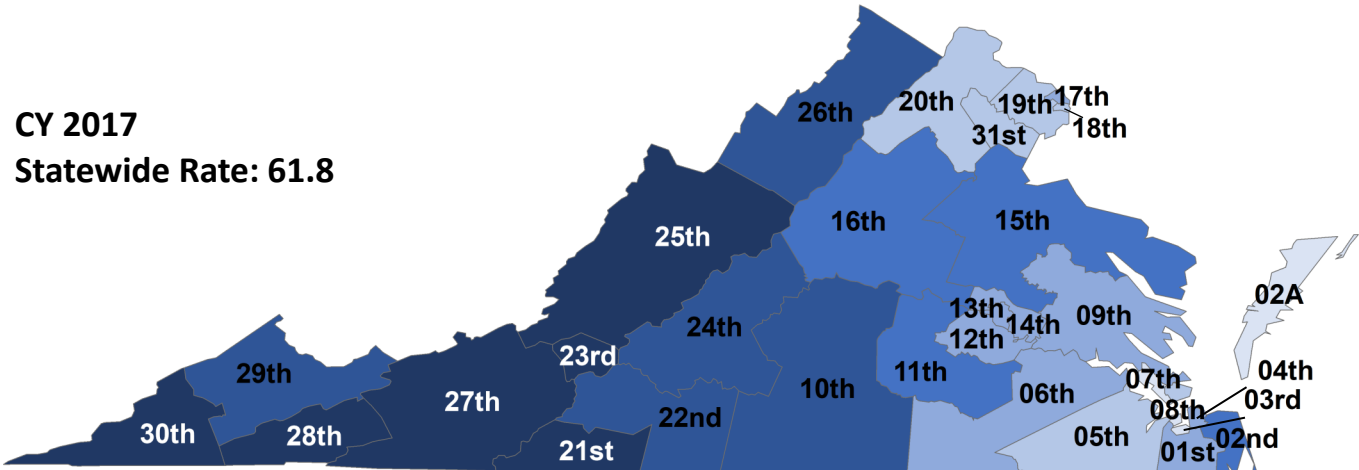
# Methamphetamine

## Methamphetamine Submissions by Court District, Rate per 100,000 CY 2012, 2017, & 2022

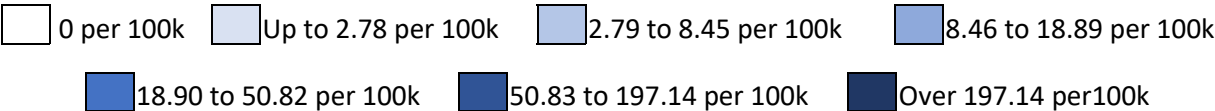
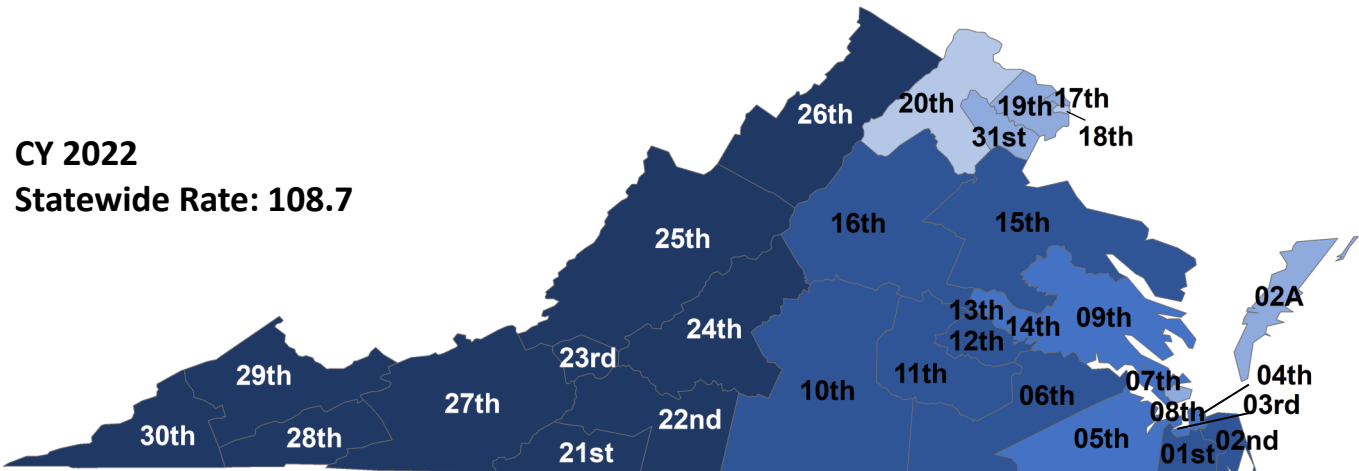
CY 2012  
Statewide Rate: 12.5



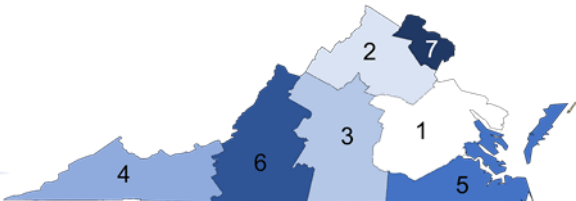
CY 2017  
Statewide Rate: 61.8



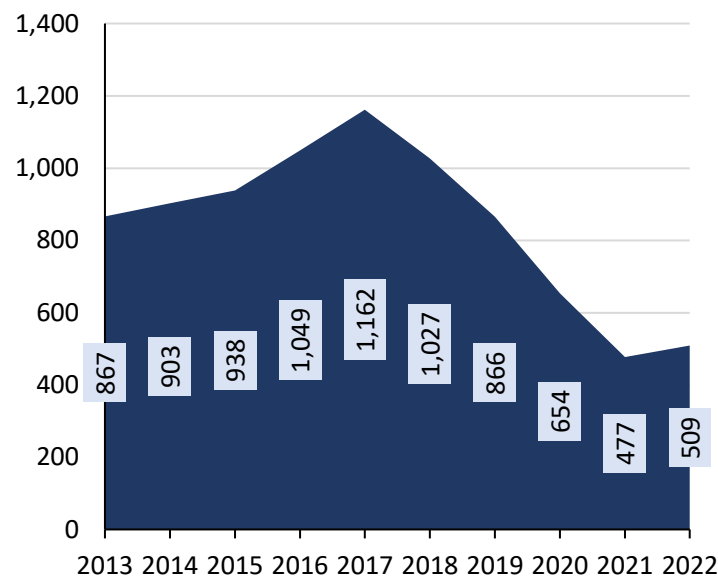
CY 2022  
Statewide Rate: 108.7



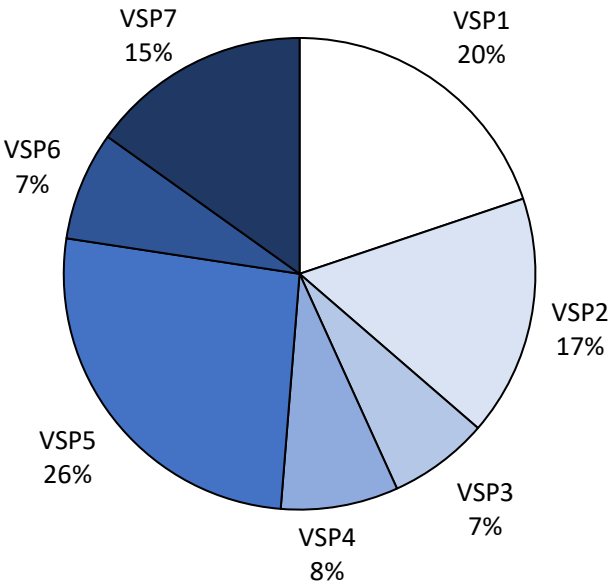
# Prescription Stimulants



Prescription Stimulant Submissions  
CY2013-2022



2022 Prescription Stimulant Submissions  
Percentage Distribution Across Regions



Prescription Stimulants Identified\*

Substance Identified	CY2014-16	CY2017-19	CY2020-22
Amphetamine	2,174	2,450	1,373
Methylphenidate	467	373	161
Lisdexamfetamine	337	276	121
Other	68	71	46

\*Sum of individual substances will not match the total, as some cases involved more than one prescription stimulant.

Prescription stimulants are submitted to DFS less frequently than the illicit stimulants cocaine and methamphetamine, representing only 1% of total drug submissions in 2022.

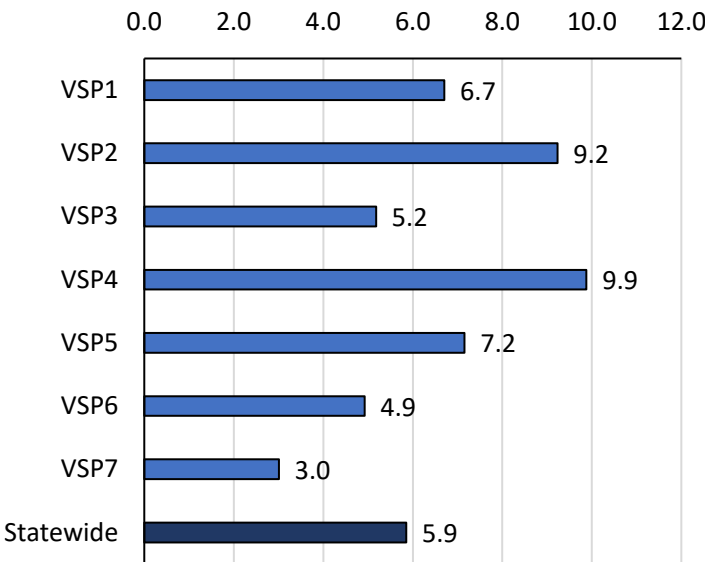
After increasing 34% between CY 2013 and 2017, prescription stimulant submissions dropped every year until 2021, 59% overall. Prescription stimulant submissions increased 7% in 2022.

The most common prescription stimulant identified in substances submitted to DFS is amphetamine, frequently prescribed for attention deficit/hyperactivity disorder. Detailed ten-year trends on individual prescription stimulants are provided in Appendix B.

The largest number of prescription stimulant submissions in 2022 were from VSP 5 and VSP 1, but the Division with the highest rate of submissions per 100,000 population was VSP 4.

Statewide, the rate of prescription stimulant submissions in

2022 Prescription Stimulant Submissions  
Rate per 100,000

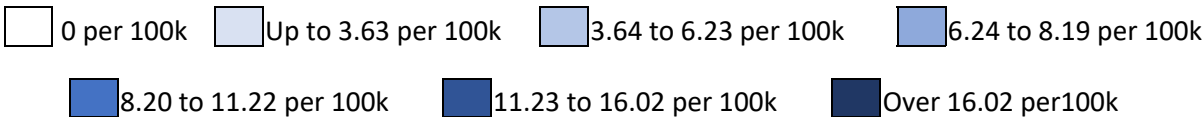
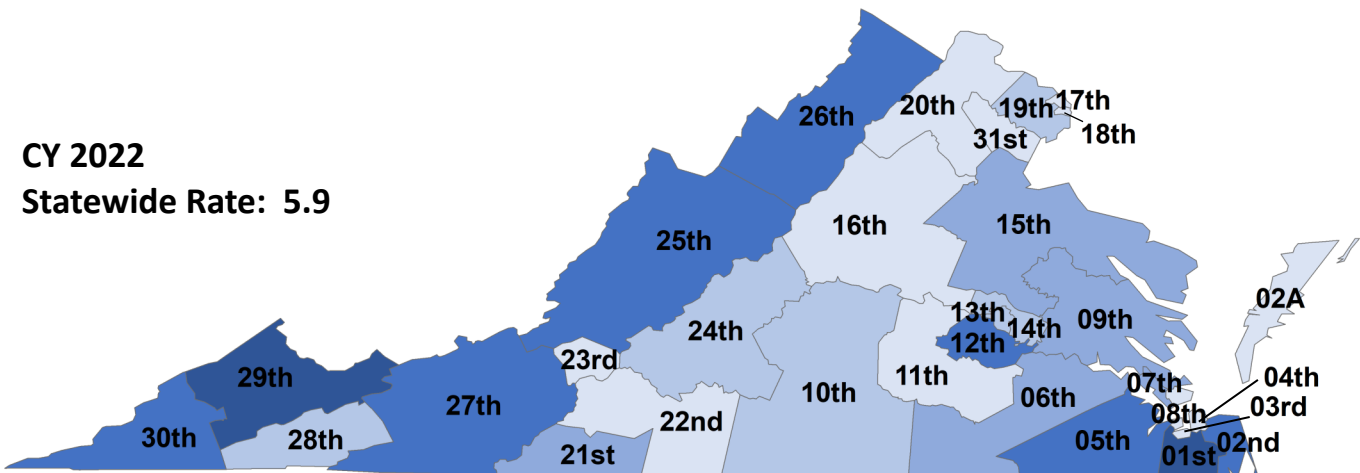
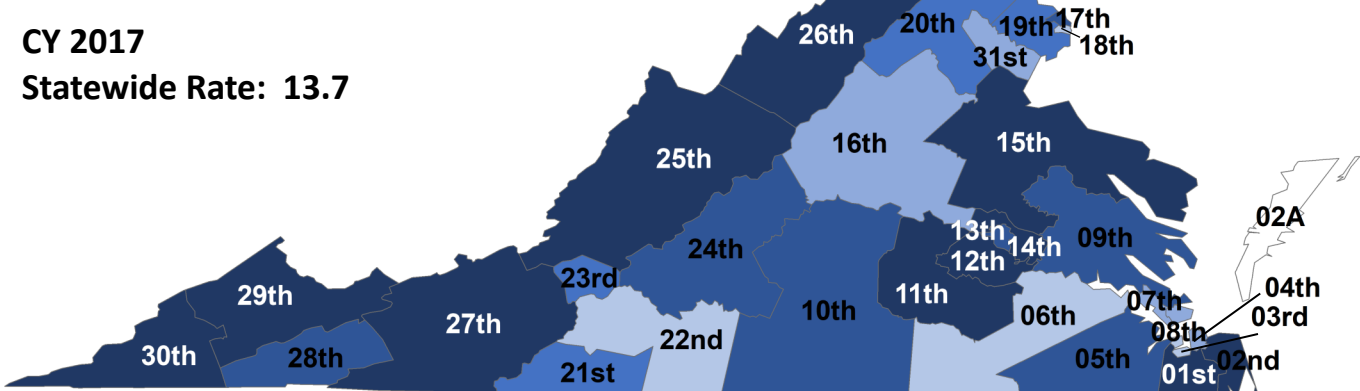
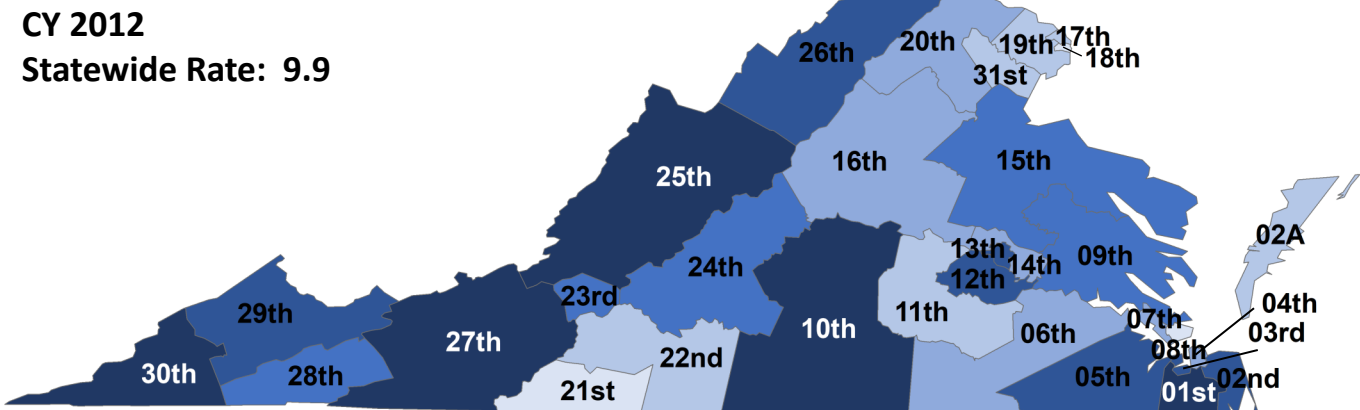


2022 was 5.9 per 100,000. This was down 57% from 2017.

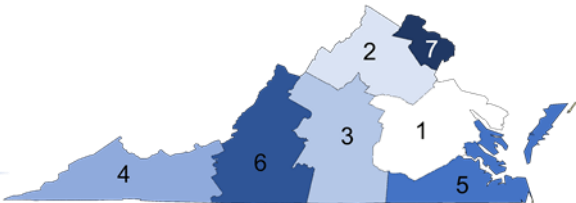
The maps on the following page present the changing pattern of prescription stimulant submission rates, by Virginia Court District.

# Prescription Stimulants

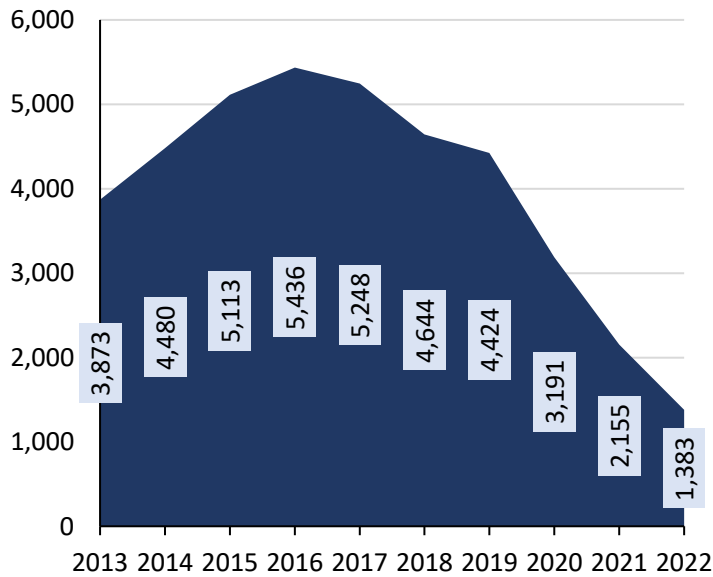
Prescription Stimulant Submissions by Court District, Rate per 100,000  
CY 2012, 2017, & 2022



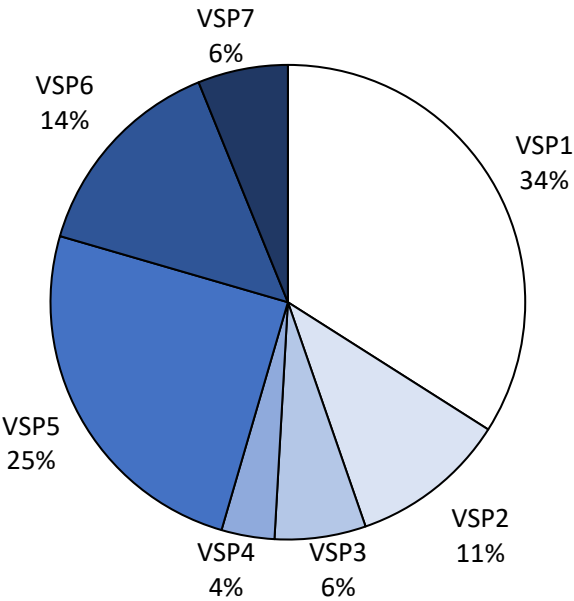
# Heroin



Heroin Submissions  
CY2013-2022



2022 Heroin Submissions Percentage  
Distribution Across Regions



Heroin submissions to DFS represented 4% of total drug submissions in 2022.

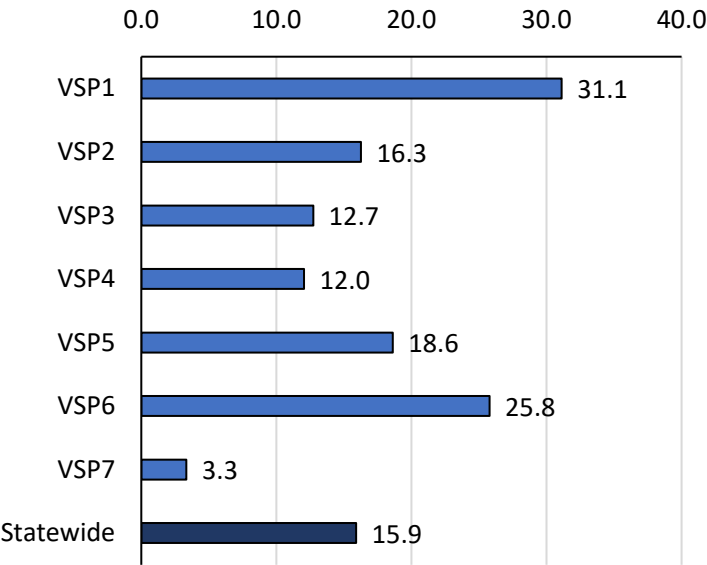
After increasing 40% between 2013 and 2016, heroin submissions dropped steadily each year from 2016 to 2022. Heroin submissions dropped 36% between 2021 and 2022, to the lowest level in a decade.

Both the highest number and the highest rate of heroin submissions in 2022 were from VSP 1.

Statewide, the rate of heroin submissions in 2022 was 15.9 per 100,000 population. This was down 74% from 2017.

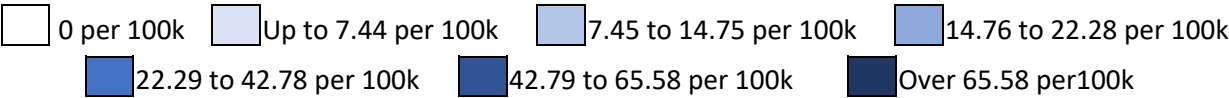
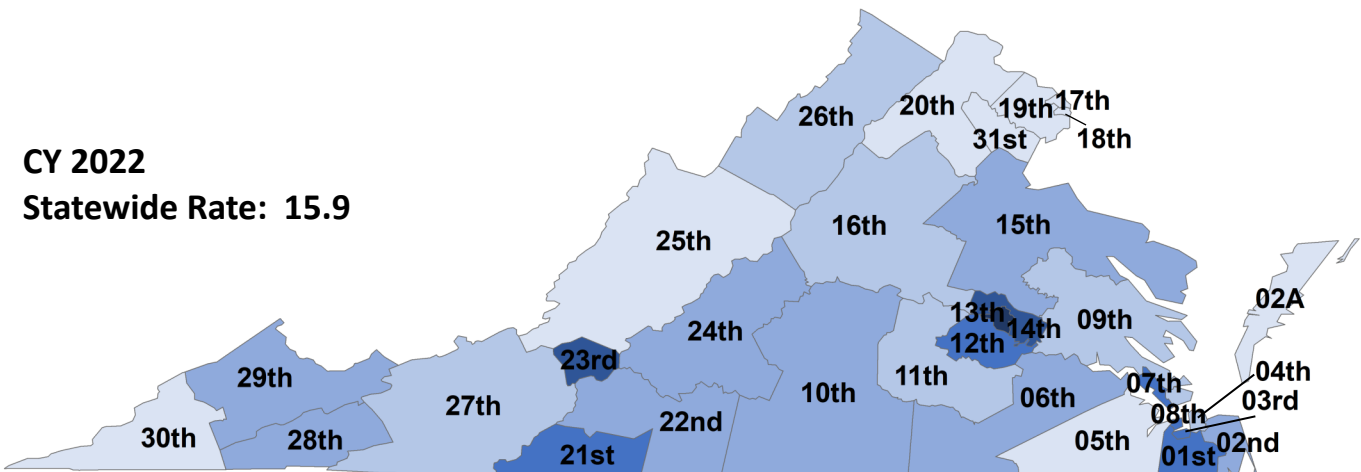
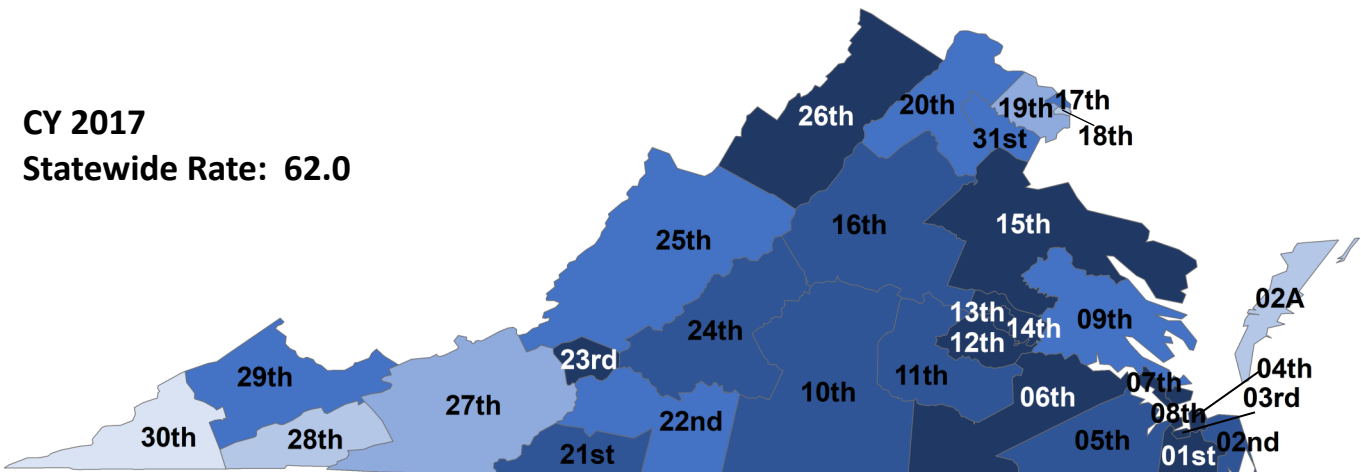
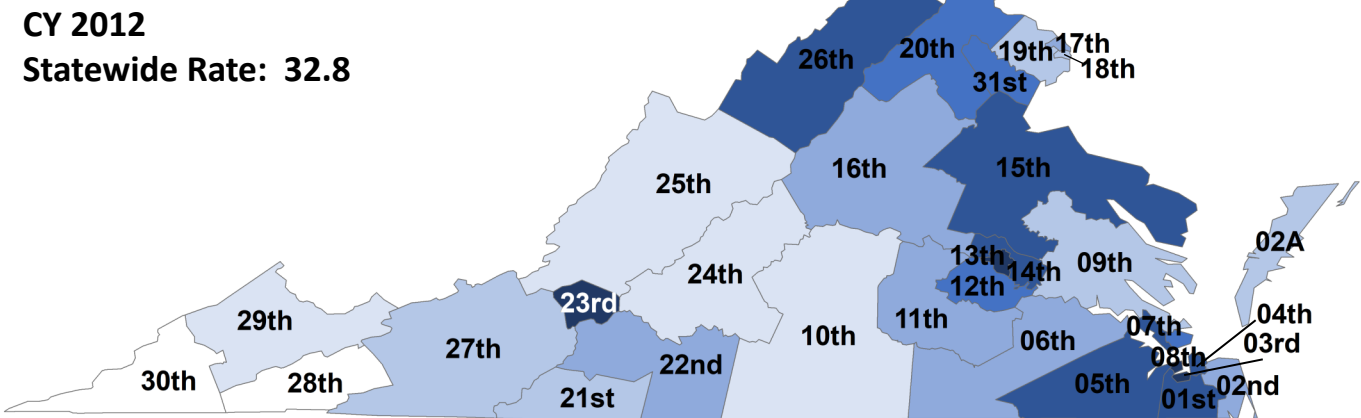
The maps on the following page present the changing pattern of heroin submission rates, by Virginia Court District.

2022 Heroin Submissions  
Rate per 100,000

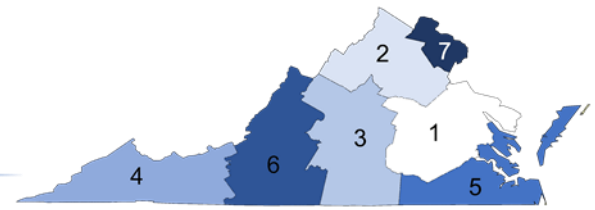


# Heroin

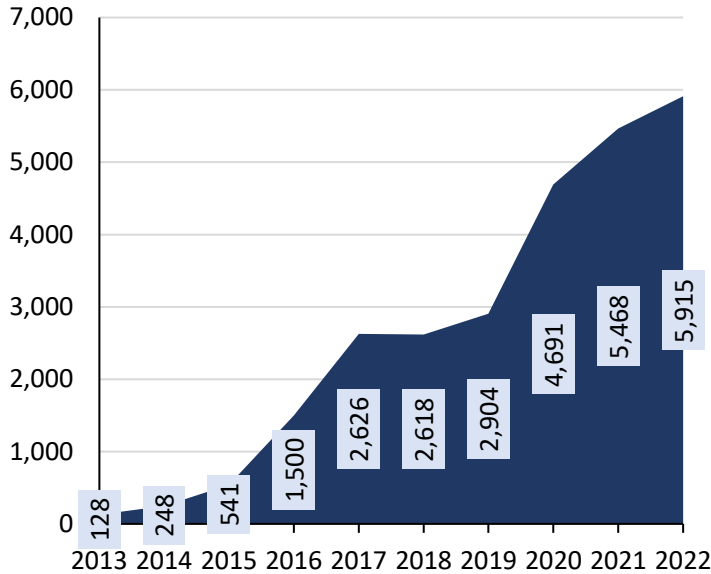
## Heroin Submissions by Court District, Rate per 100,000 CY 2012, 2017, & 2022



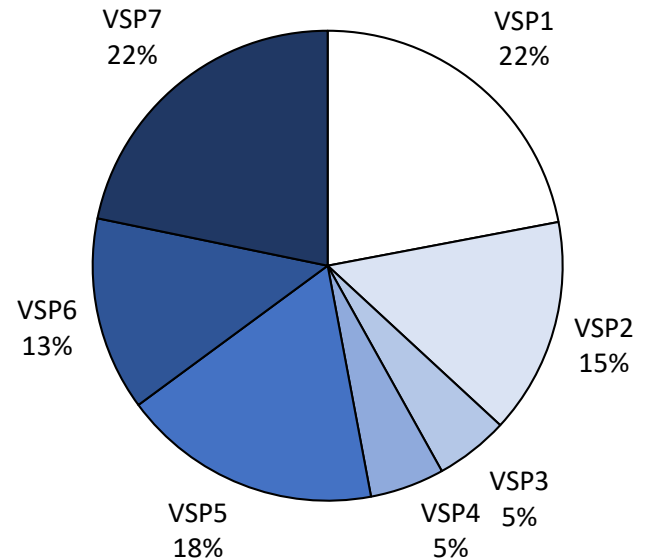
# Illicit Synthetic Opioids



Illicit Synthetic Opioid Submissions  
CY2013-2022



2022 Illicit Synthetic Opioid Submissions  
Percentage Distribution Across Regions



Illicit Synthetic Opioids Identified\*

Substance Identified	CY2014-16	CY2017-19	CY2020-22
Fentanyl	1,798	6,880	15,727
<b>Fentanyl Analogs</b>			
Para-Fluorofentanyl	1	0	1,218
Acetyl Fentanyl	73	429	205
FIBF	22	597	10
Furanyl Fentanyl	229	566	1
Fentanyl Analog - Other	13	254	42
<b>Other</b>			
Other	244	338	178

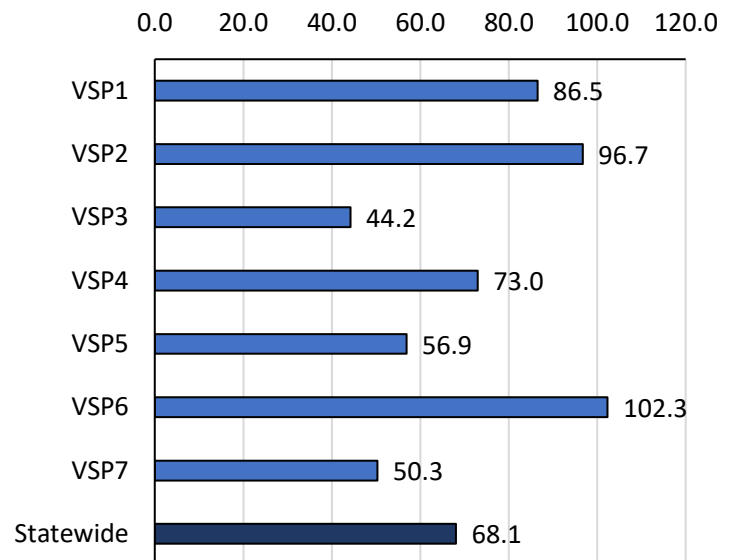
\*Sum of individual substances will not match the total, as some cases involved more than one illicit synthetic opioid.

Illicit synthetic opioids have become the most frequently submitted category of opioid drugs submitted to DFS, surpassing both heroin and prescription opioids. In 2022, illicit synthetic opioids represented 16% of total drug submissions.

Illicit synthetic opioid submissions have increased steadily every year since 2011 (not shown), excepting 2018, which was essentially unchanged from 2017. Submissions increased 8% between 2021 and 2022, to the highest level on record.

The most common illicit synthetic opioid identified in substances submitted to DFS is illicitly produced fentanyl. (Fentanyl is also available as a prescription medication; prescription fentanyl submissions are counted with other prescription opioids in this report.) Detailed ten-year trends on individual illicit synthetic opi-

2022 Illicit Synthetic Opioid Submissions  
Rate per 100,000



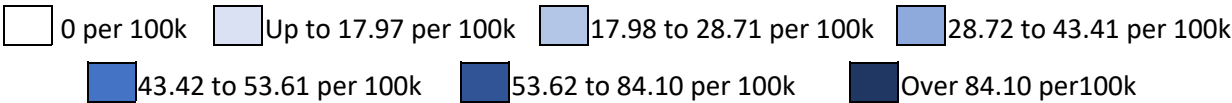
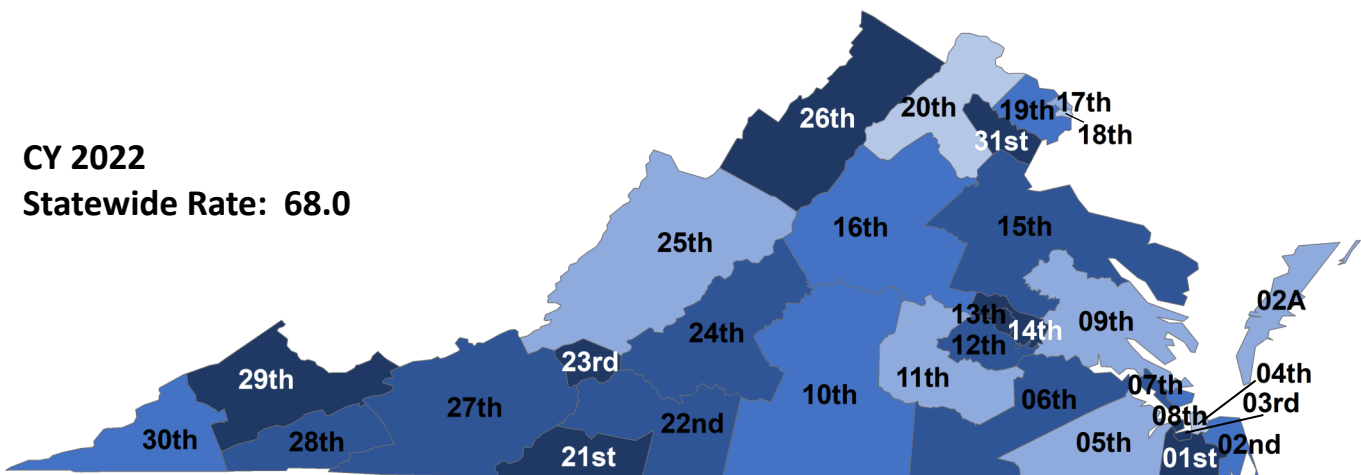
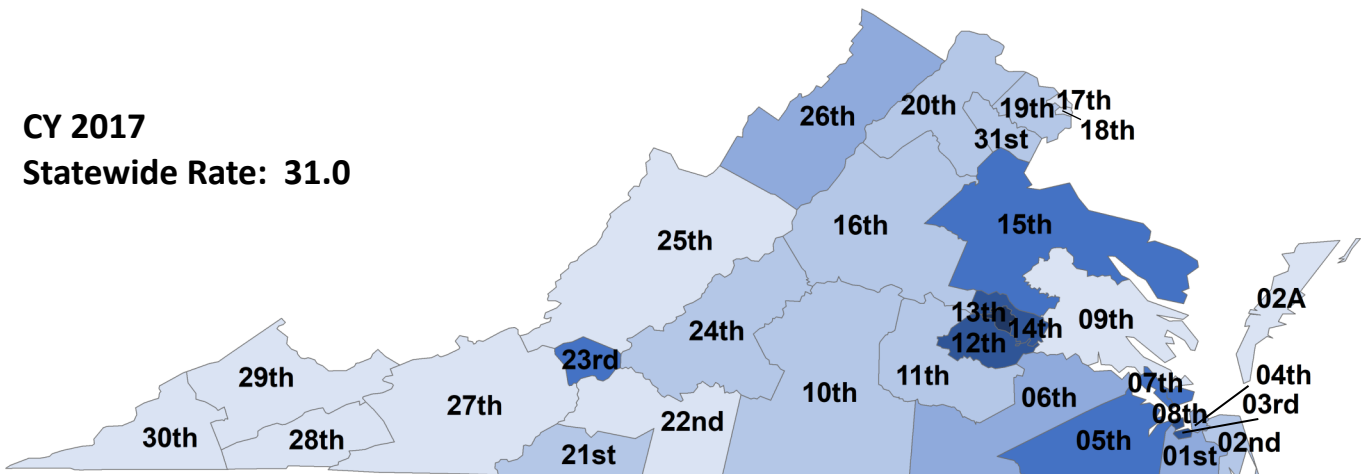
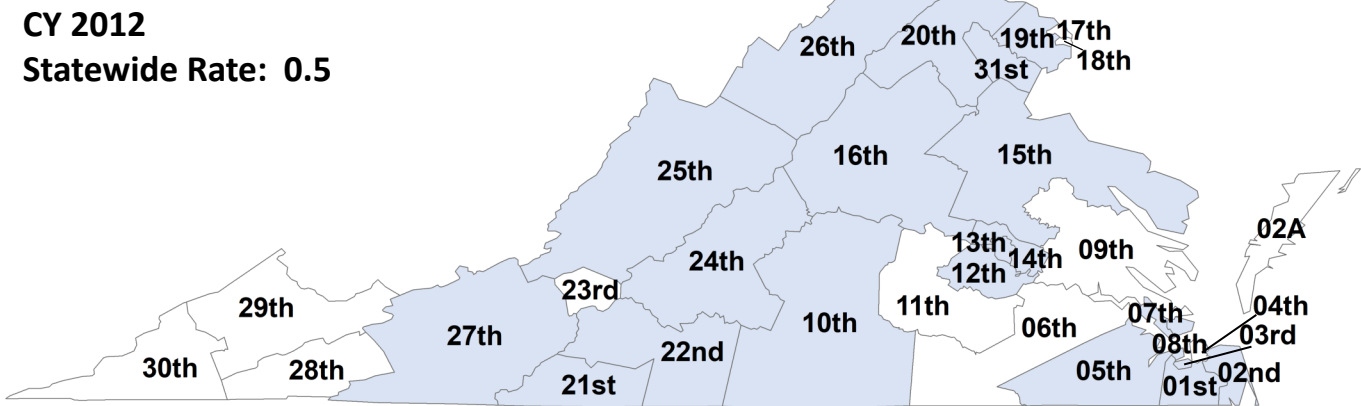
oids are provided in Appendix B.

The largest number of illicit synthetic opioid submissions in 2022 were from VSP 1 and VSP 7, but the Division with the highest rate of submissions per 100,000 population was VSP 6.

Statewide, the rate of illicit synthetic opioid submissions in 2022 was 68.0 per 100,000. This was up 119% from 2017. The maps on the following page present the changing pattern of illicit synthetic opioid submission rates, by Virginia Court District.

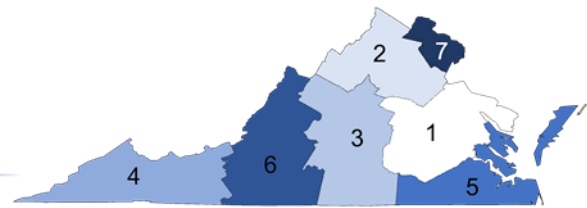
# Illicit Synthetic Opioids

Illicit Synthetic Opioid Submissions by Court District, Rate per 100,000  
CY 2012, 2017, & 2022

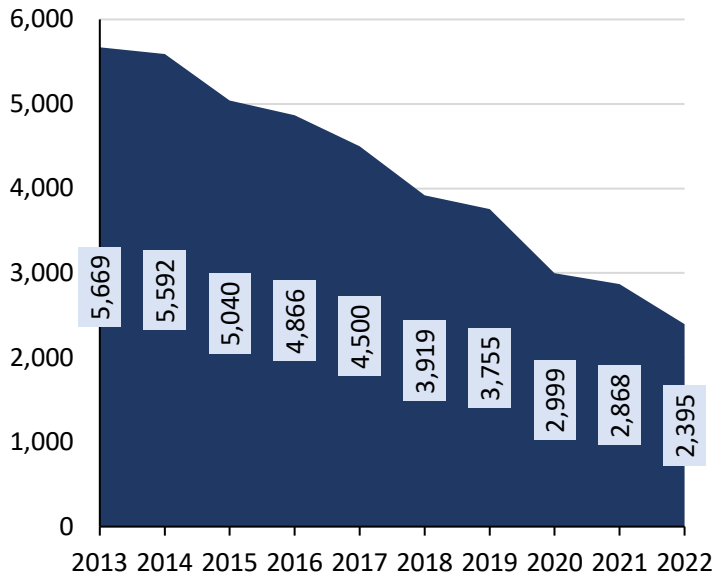




# Prescription Opioids



Prescription Opioid Submissions  
CY2013-2022



Prescription Opioids Identified\*

Substance Identified	CY2014-16	CY2017-19	CY2020-22
Buprenorphine	3,580	4,430	3,885
Oxycodone	5,879	3,999	2,021
Tramadol	688	830	1,329
Hydrocodone	3,504	1,940	795
Methadone	722	481	288
Morphine	1,038	591	206
Hydromorphone	970	454	167
Codeine	252	221	114
Other	593	387	87

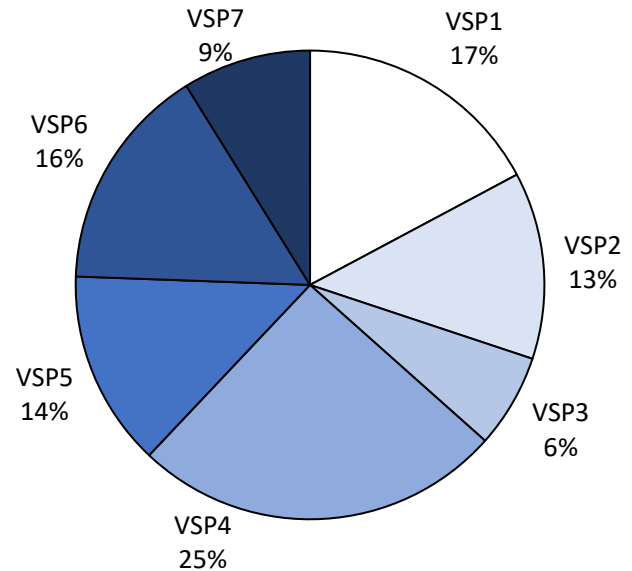
\*Sum of individual substances will not match the total, as some cases involved more than one prescription opioid.

Prescription opioid submissions to DFS represented 6% of total drug submissions in 2022. Prescription opioid submissions have decreased steadily since 2013. Submissions decreased 16% between 2021 and 2022, to the lowest level in over a decade.

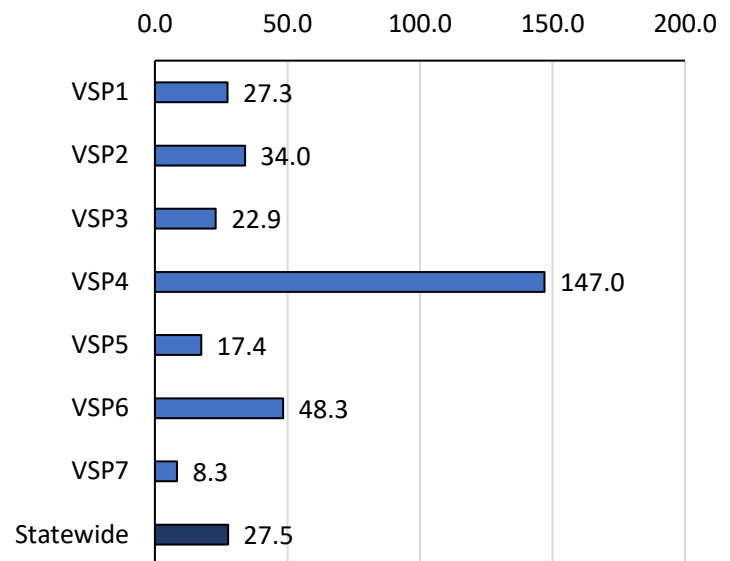
The most common prescription opioid identified in substances submitted to DFS in recent years is buprenorphine, which is frequently used in medically-assisted treatment for individuals addicted to opioids. This represents a change in trends among prescription opioid submissions, which were previously dominated by oxycodone and hydrocodone. Detailed ten-year trends on individual prescription opioids are provided in Appendix B.

Tramadol has recently become the third most frequently identified prescription opioid in DFS submissions, but this is misleading. In recent years, there has been a substantial increase in illicitly

2022 Prescription Opioid Submissions  
Percentage Distribution Across Regions



2022 Prescription Opioid Submissions  
Rate per 100,000



produced tramadol. At the time of this report, there is no simple way to distinguish illicitly-produced tramadol from the prescription version in the data, and so they are all counted as prescription opioids. This may change in future reports.

Both the highest number and the highest rate of prescription opioid submissions in 2022 were from VSP 4.

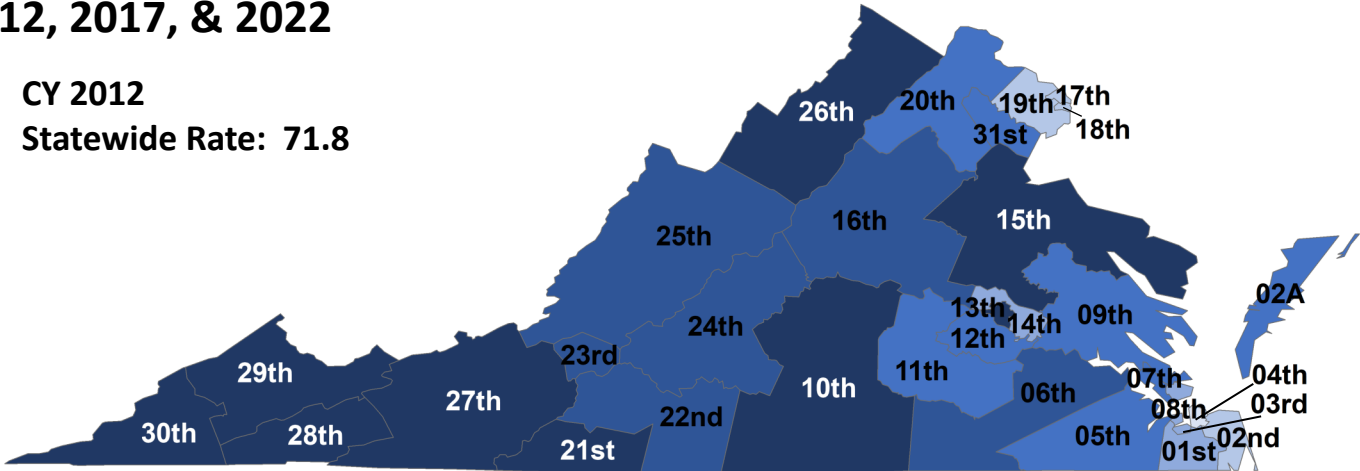
Statewide, the rate of prescription opioid submissions in 2022 was 27.5 per 100,000. This was down 48% from 2017.

The maps on the following page present the changing pattern of prescription opioid submission rates, by Virginia Court District.

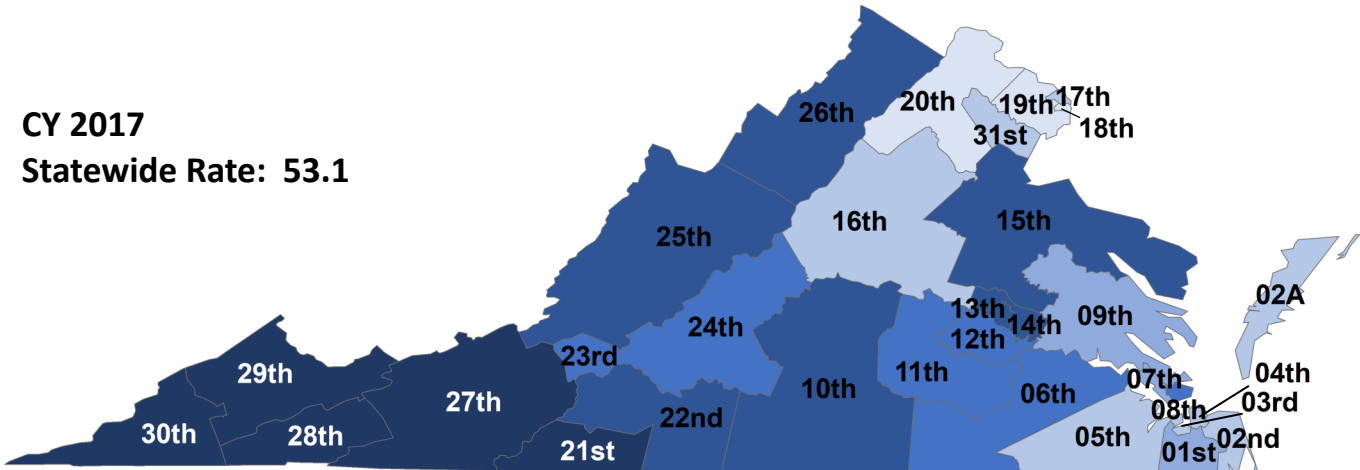
# Prescription Opioids

## Prescription Opioid Submissions by Court District, Rate per 100,000 CY 2012, 2017, & 2022

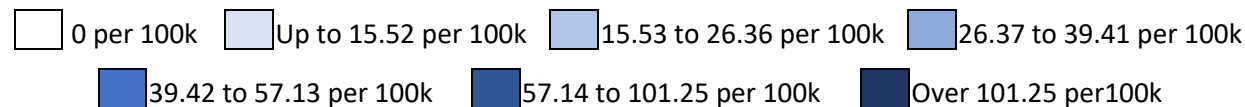
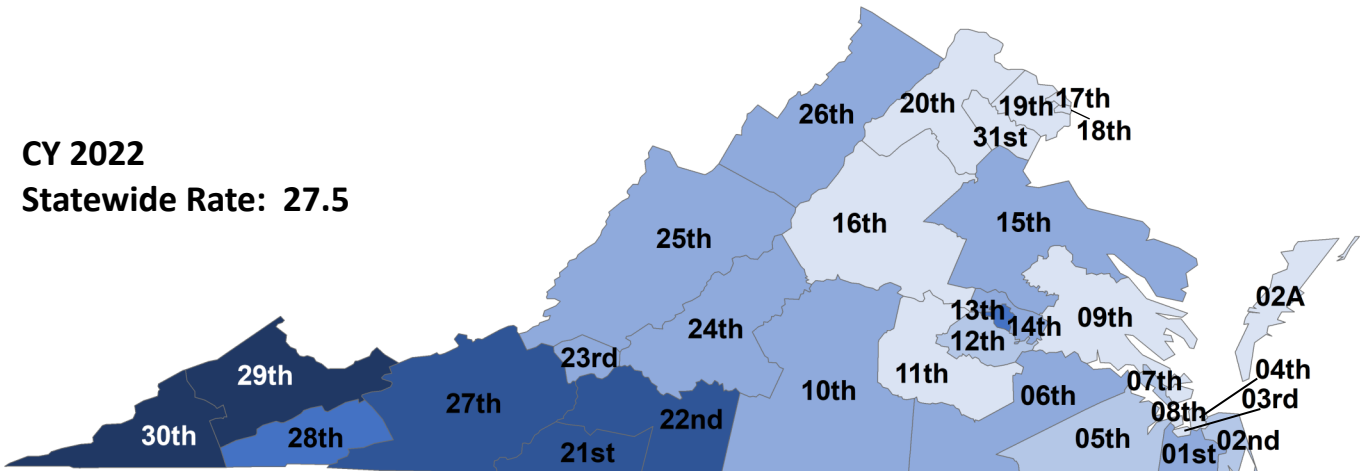
CY 2012  
Statewide Rate: 71.8



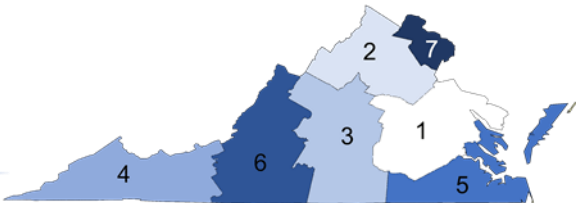
CY 2017  
Statewide Rate: 53.1



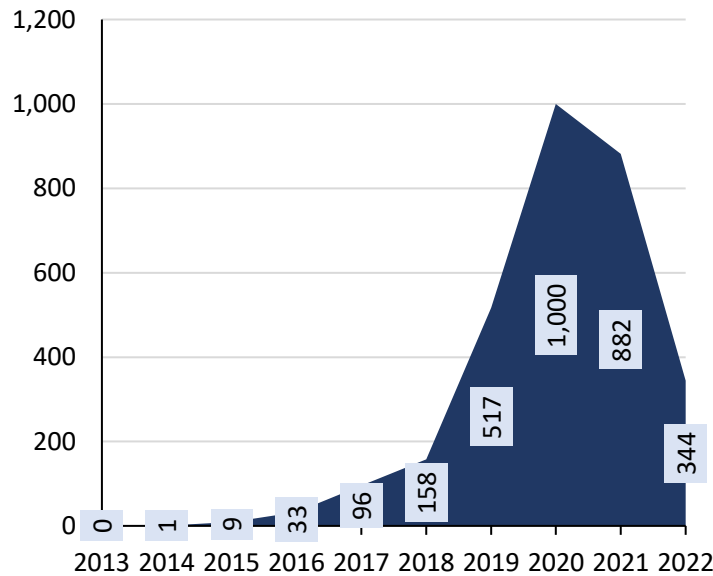
CY 2022  
Statewide Rate: 27.5



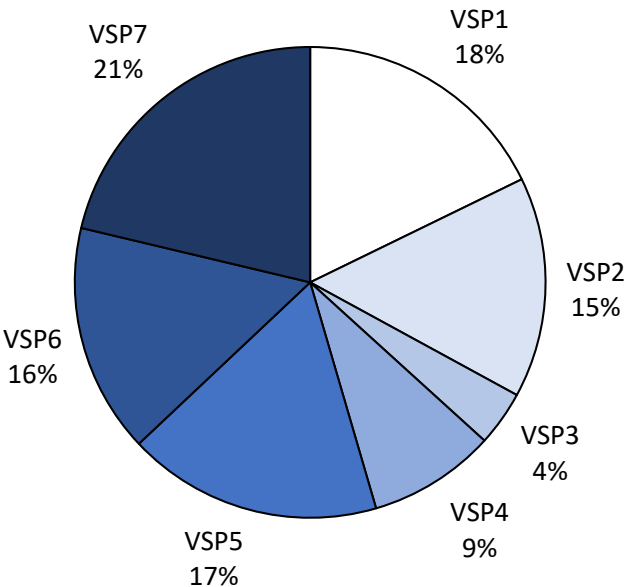
# Illicit Benzodiazepines



Illicit Benzodiazepine Submissions  
CY2013-2022



2022 Illicit Benzodiazepine Submissions  
Percentage Distribution Across Regions



Illicit Benzodiazepines Identified\*

Substance Identified	CY2014-16	CY2017-19	CY2020-22
Etizolam	35	493	970
Clonazolam	5	113	745
Flualprazolam	0	118	384
Other	3	73	268

\*Sum of individual substances will not match the total, as some cases involved more than one illicit benzodiazepine.

In 2020, for the first time, illicit benzodiazepines were submitted to DFS more frequently than prescription benzodiazepines. This continued in 2021, but reversed in 2022. Illicit benzodiazepines represented 1% of total drug submissions in 2022.

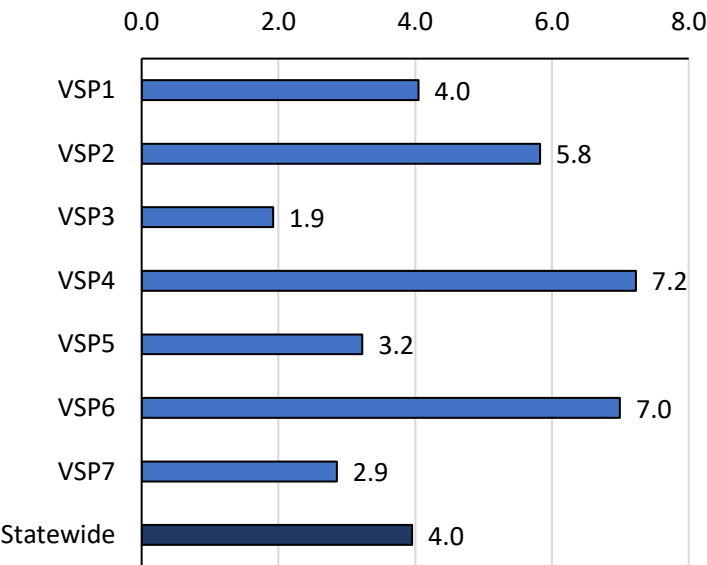
Illicit benzodiazepine submissions had increased sharply in recent years. Between 2017 and 2020, submissions increased tenfold. In 2021, that trend reversed, dropping 12%; submissions dropped another 61% in 2022.

The most common illicit benzodiazepine identified in substances submitted to DFS is etizolam. Detailed ten-year trends on individual illicit benzodiazepines are provided in Appendix B.

The highest number of illicit benzodiazepine submissions in 2022 was from VSP 2, while the highest rate was from VSP 4.

Statewide, the rate of illicit benzodiazepine submissions in 2022 was 4.0 per 100,000. Despite the large drop in cases in 2022, this statewide rate was 249% higher than the rate in 2017.

2022 Illicit Benzodiazepine Submissions  
Rate per 100,000

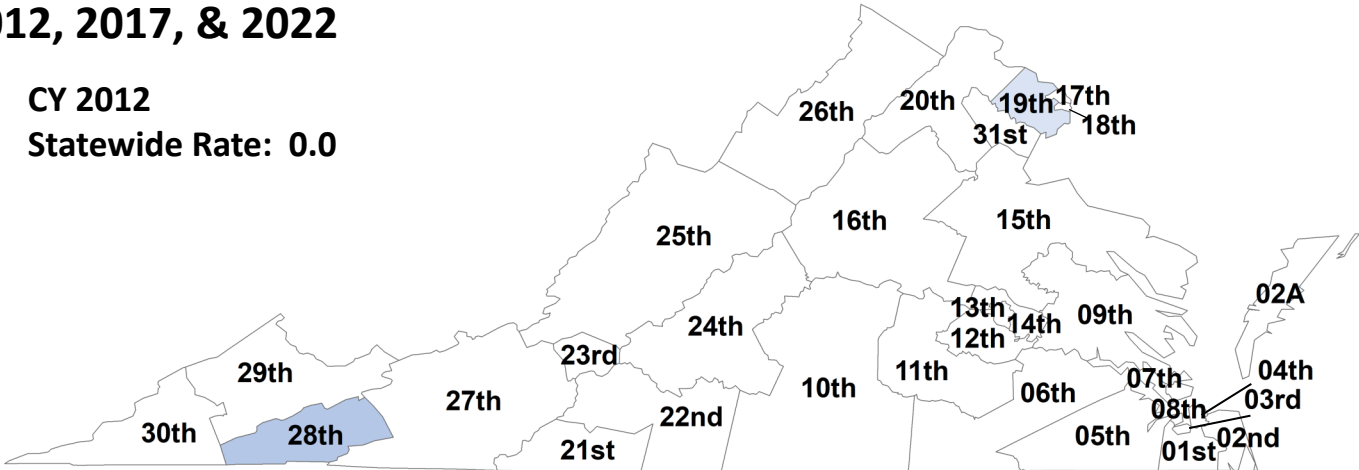


The maps on the following page present the changing pattern of illicit benzodiazepine submission rates, by Virginia Court District.

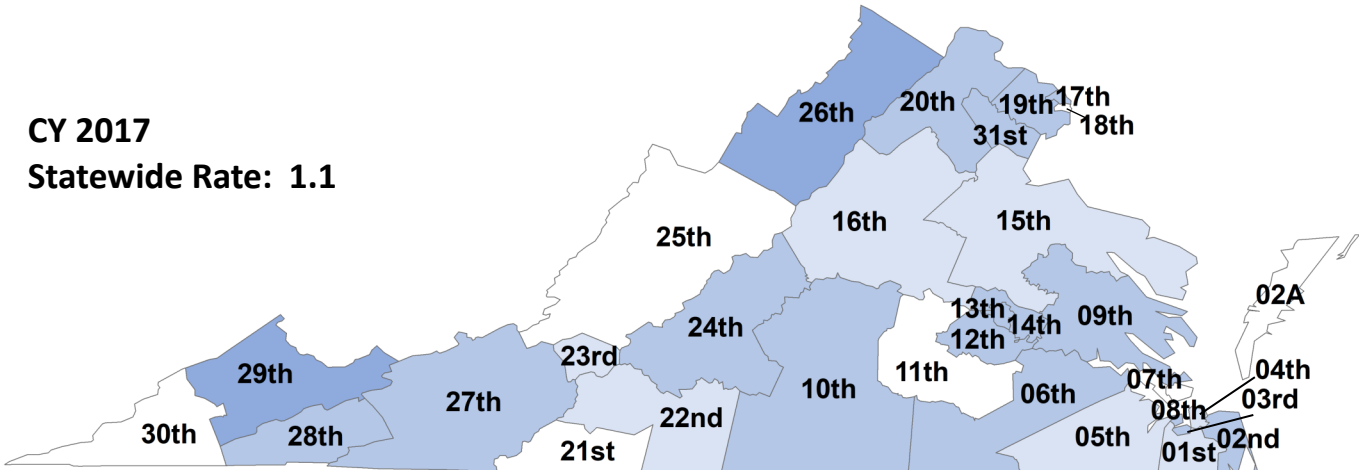
# Illicit Benzodiazepines

## Illicit Benzodiazepine Submissions by Court District, Rate per 100,000 CY 2012, 2017, & 2022

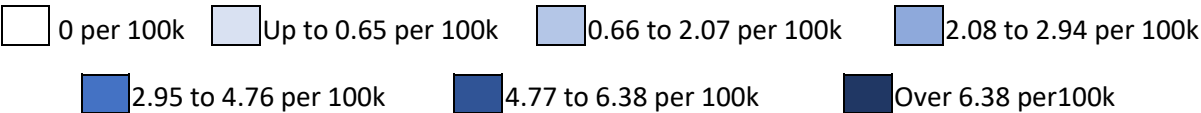
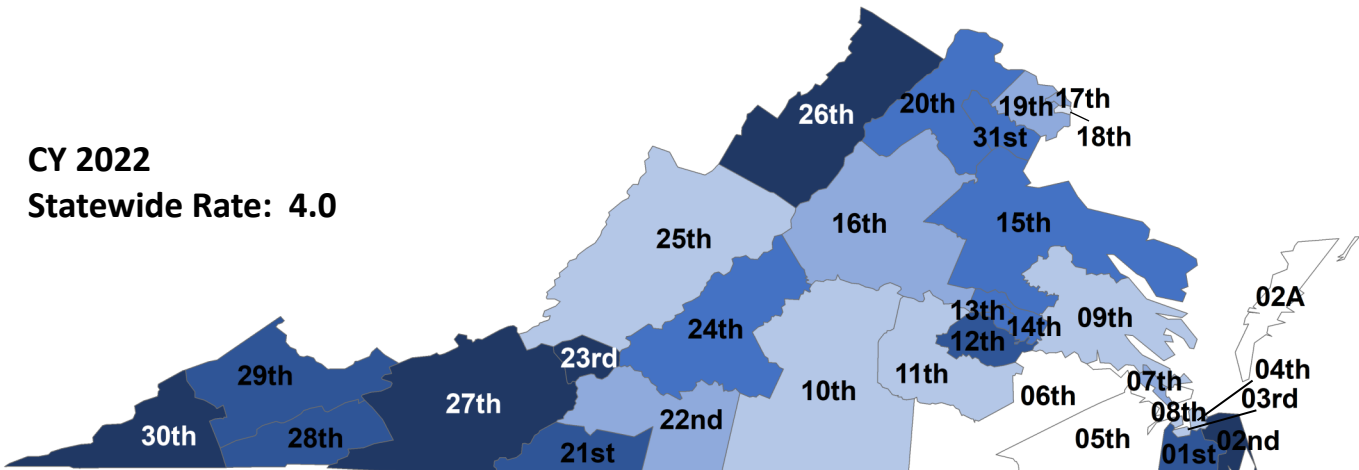
CY 2012  
Statewide Rate: 0.0



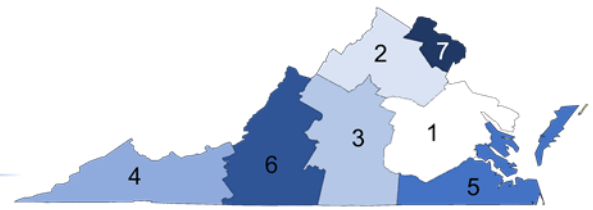
CY 2017  
Statewide Rate: 1.1



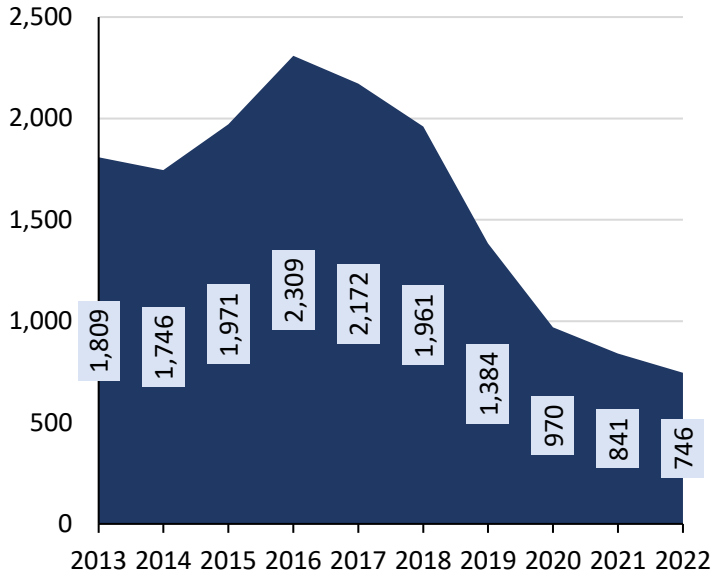
CY 2022  
Statewide Rate: 4.0



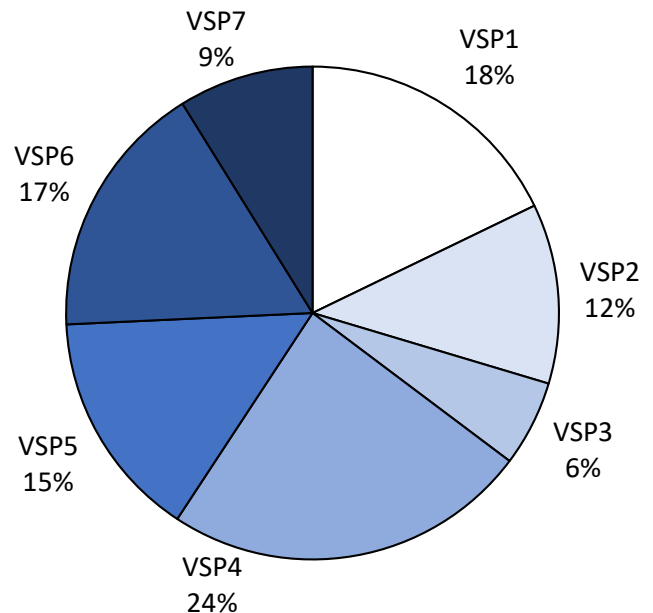
# Prescription Benzodiazepines



Prescription Benzodiazepine Submissions  
CY2013-2022



2022 Prescription Benzodiazepine Submissions  
Percentage Distribution Across Regions



Prescription Benzodiazepines Identified\*

Substance Identified	CY2014-16	CY2017-19	CY2020-22
Alprazolam (Xanax)	4,207	3,902	1,626
Clonazepam (Klonopin)	1,434	1,262	787
Diazepam (Valium)	625	504	241
Lorazepam (Ativan)	317	298	123
Other	61	45	24

\*Sum of individual substances will not match the total, as some cases involved more than one prescription benzodiazepine.

In 2022, prescription benzodiazepine submissions represented 2% of total submissions.

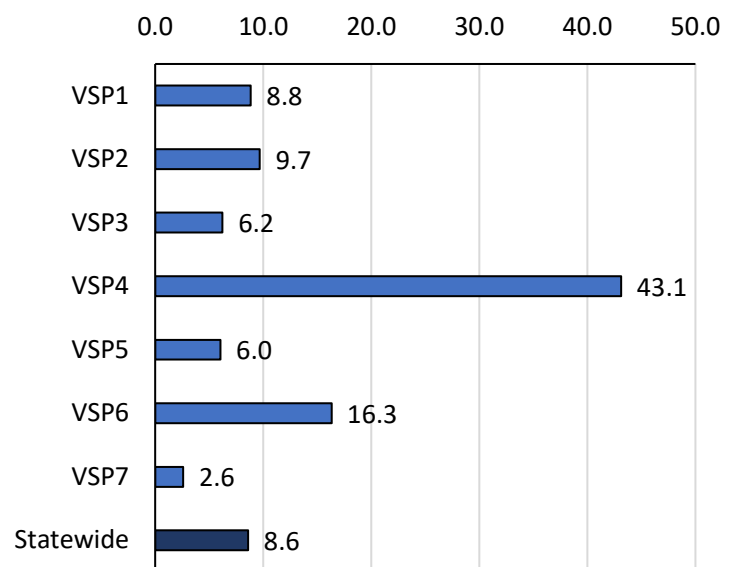
Prescription benzodiazepine submissions have decreased sharply in recent years. Submissions decreased 64% between 2016 and 2021, and decreased another 11% in 2022.

The most common prescription benzodiazepine identified in substances submitted to DFS is alprazolam. Detailed ten-year trends on individual prescription benzodiazepines are provided in Appendix B.

Both the highest number and the highest rate of prescription benzodiazepine submissions in 2022 were from VSP 4.

Statewide, the rate of prescription benzodiazepine submissions in 2022 was 8.5 per 100,000. This was down 67% from 2017.

2022 Prescription Benzodiazepine  
Submissions Rate per 100,000

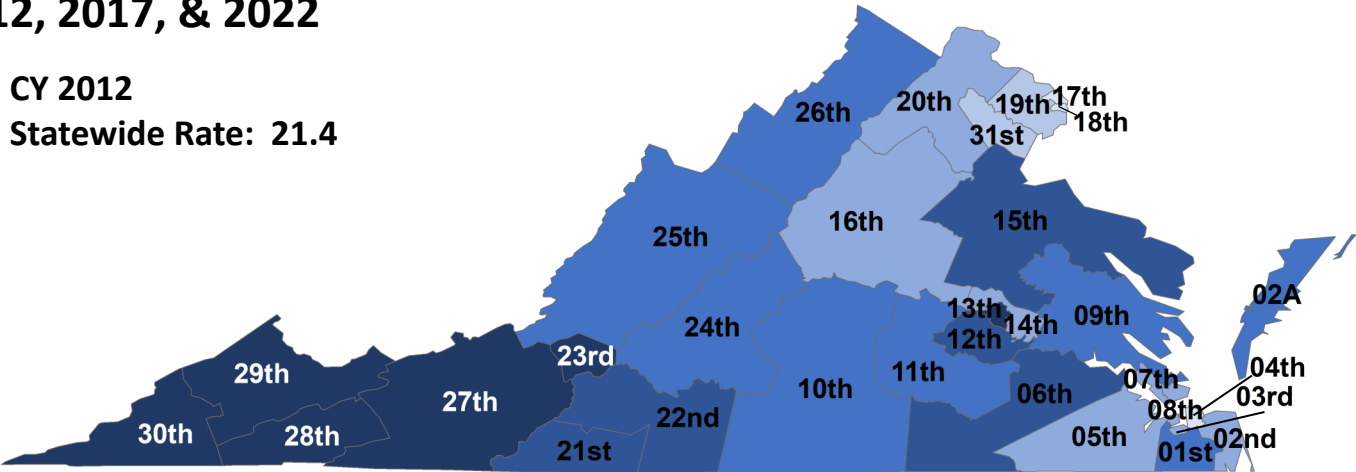


The maps on the following page present the changing pattern of prescription benzodiazepine submission rates, by Virginia Court District.

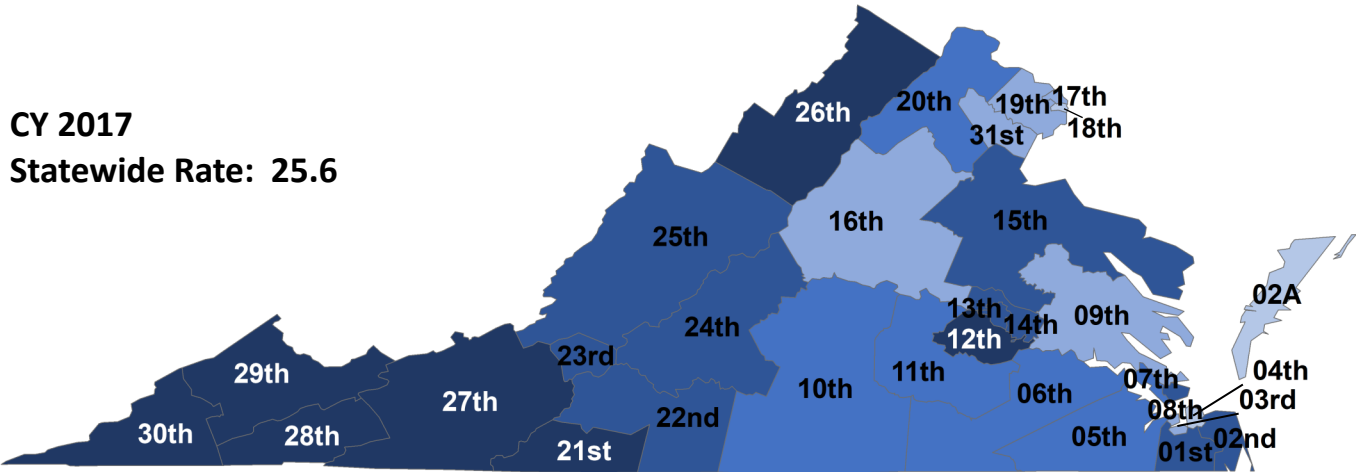
# Prescription Benzodiazepines

## Prescription Benzodiazepine Submissions by Court District, Rate per 100,000 CY 2012, 2017, & 2022

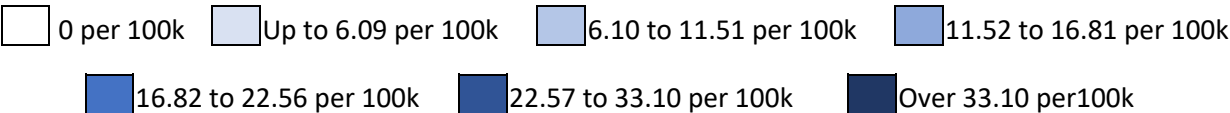
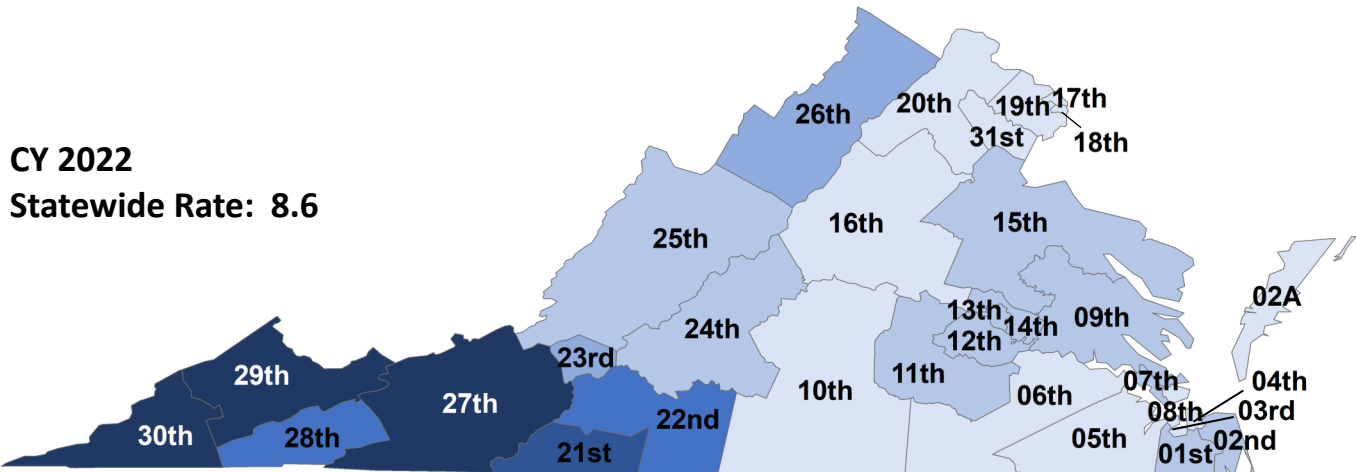
CY 2012  
Statewide Rate: 21.4



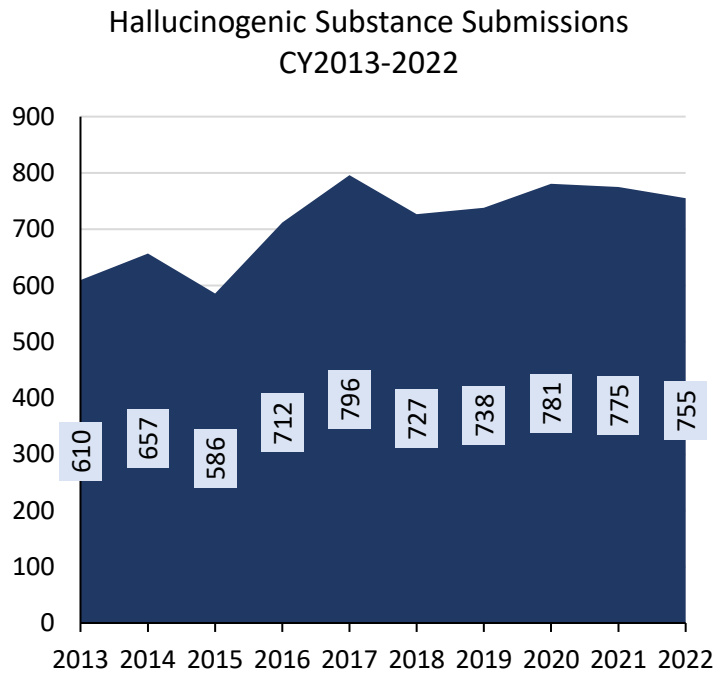
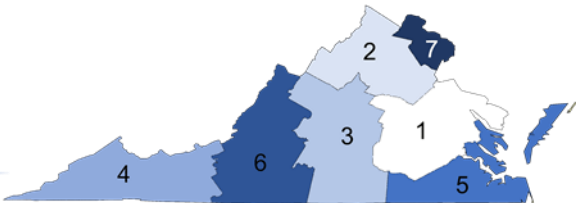
CY 2017  
Statewide Rate: 25.6



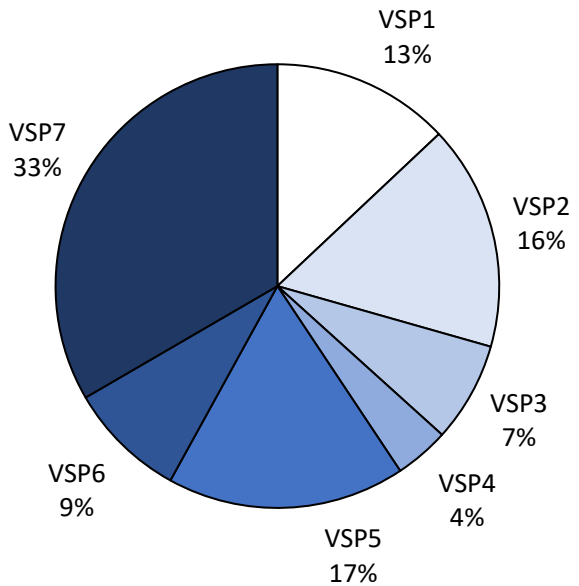
CY 2022  
Statewide Rate: 8.6



# Hallucinogenic Substances



2022 Hallucinogenic Substance Submissions  
Percentage Distribution Across Regions



Hallucinogenic Substances Identified\*

Substance Identified	CY2014-16	CY2017-19	CY2020-22
Psilocyn-Psilocybin (mushrooms)	389	551	904
LSD & analogs	509	857	624
PCP & analogs	521	560	568
Ketamine & analogs	158	187	194
Tryptamines	146	144	89
Benzylpiperazine (BZP)	55	3	0
Other	381	251	165

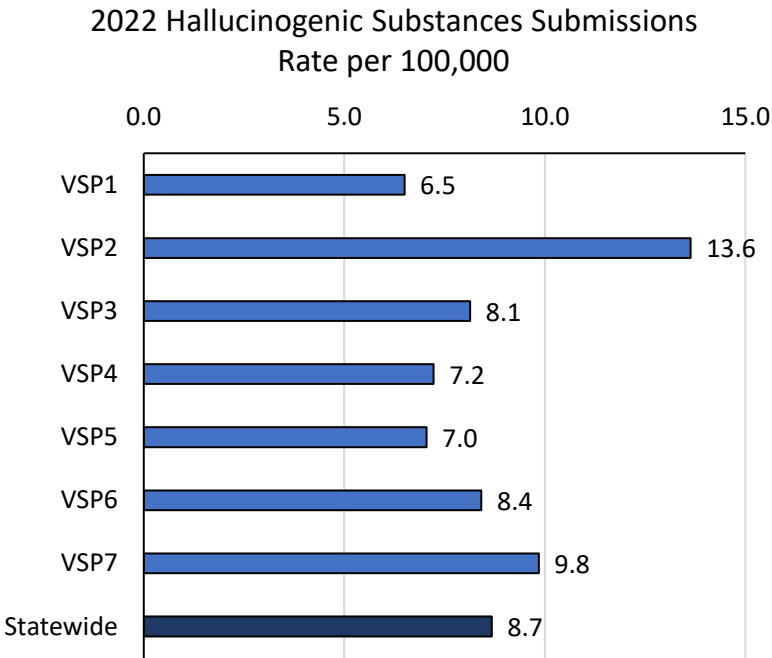
\*Sum of individual substances will not match the total, as some cases involved more than one hallucinogenic substance.

Hallucinogenic substance submissions to DFS represented 2% of total drug submissions in 2022.

Hallucinogenic substance submissions have not demonstrated a consistent trend over time. Submissions decreased 3% between 2021 and 2022.

The most common hallucinogenic substance category identified in submissions to DFS in the past several years is Psilocyn-Psilocybin (mushrooms), and the second most common is LSD & LSD analogs. This represents a change. Detailed ten-year trends on individual hallucinogenic substances are provided in Appendix B.

The largest number of hallucinogenic substance submissions in 2022 were from VSP 7, but the Division with the highest rate of submissions per 100,000 population was VSP 2.



Statewide, the rate of hallucinogenic substance submissions in 2022 was 8.7 per 100,000, down 8% from 2017.

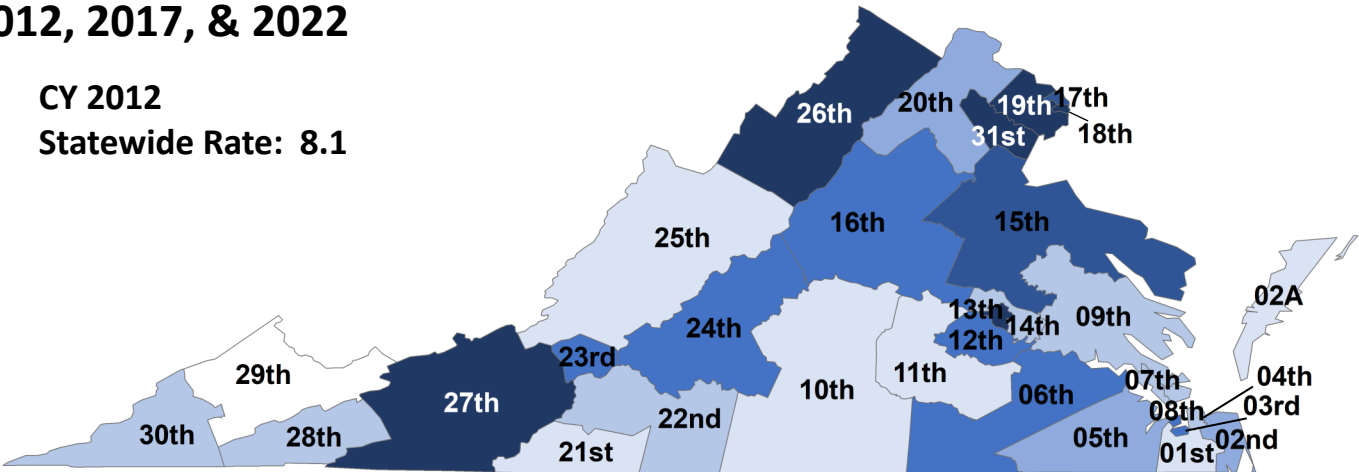
The maps on the following page present the changing pattern of hallucinogenic substance submission rates, by Virginia Court District.



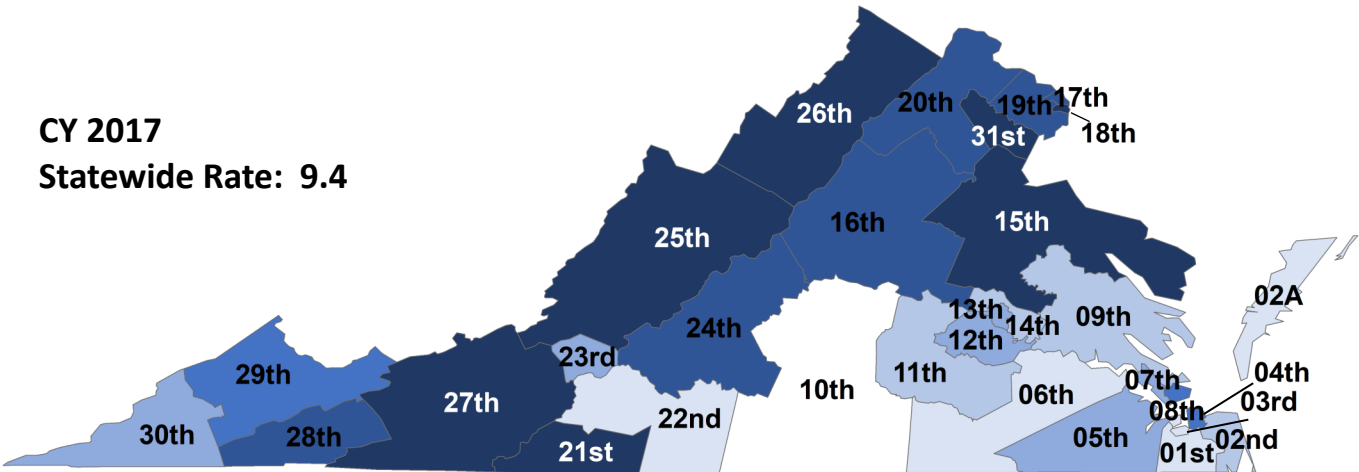
# Hallucinogenic Substances

## Hallucinogenic Substance Submissions by Court District, Rate per 100,000 CY 2012, 2017, & 2022

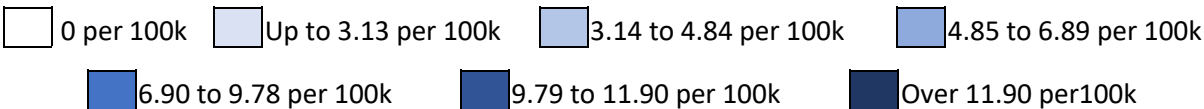
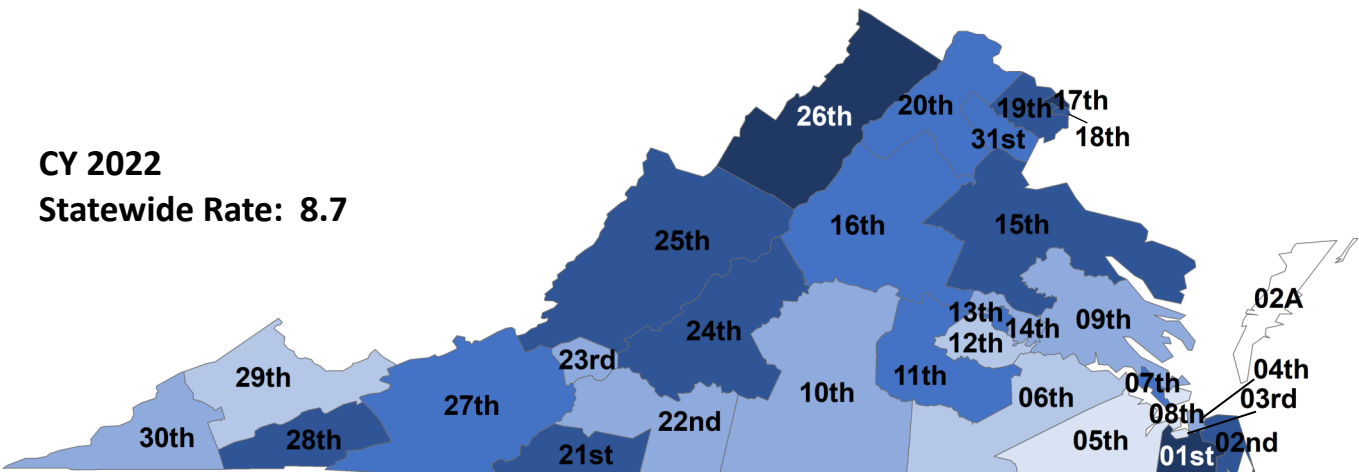
CY 2012  
Statewide Rate: 8.1



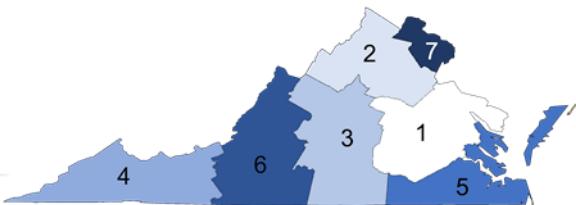
CY 2017  
Statewide Rate: 9.4



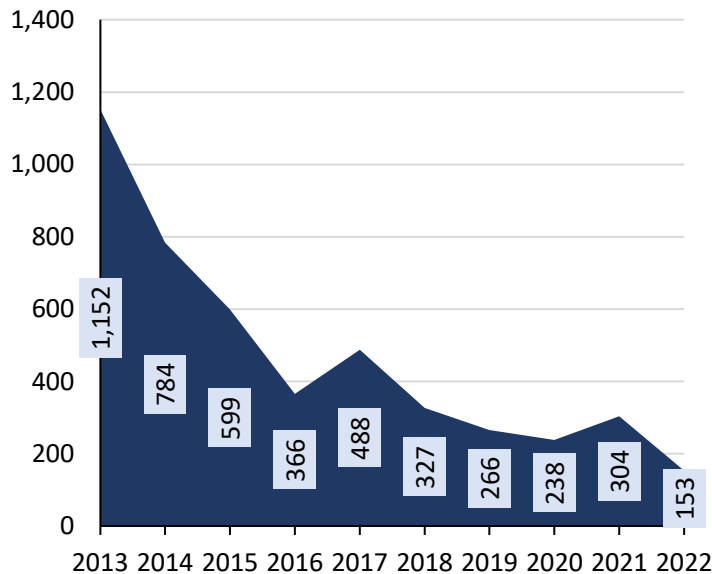
CY 2022  
Statewide Rate: 8.7



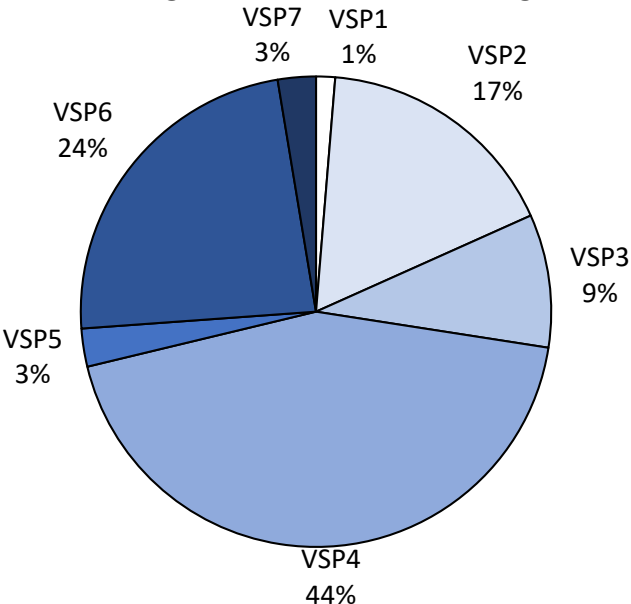
# Cannabimimetic Agents



Cannabimimetic Agent Submissions  
CY2013-2022



2022 Cannabimimetic Agent Submissions  
Percentage Distribution Across Regions



Cannabimimetic Agents Identified\*

Substance Identified	CY2014-16	CY2017-19	CY2020-22
Indazole carboxamides	907	921	587
Indole carboxamides	1	168	111
Alkoylindoles	618	24	9
Benzoylindoles	4	0	2
Indole carboxylates	196	2	0
Naphthoylindoles	28	6	0
Phenylacetylindoles	6	0	0
Other or unclear	281	28	14

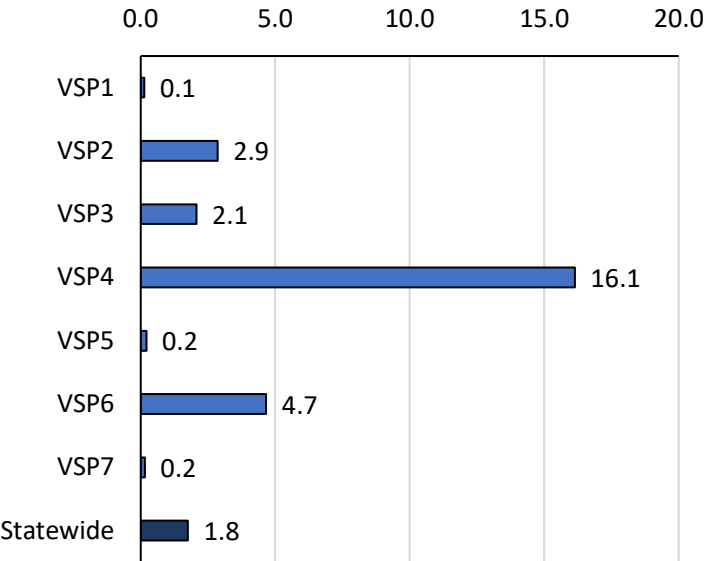
\*Sum of individual substances will not match the total, as some cases involved more than one cannabimimetic agent.

Cannabimimetic agent submissions to DFS represented less than 1% of total drug submissions in 2022.

Cannabimimetic agent submissions peaked in 2013, and dropped consistently in later years (with the exception of 2017), dropping 79% overall between 2013 and 2020. Submissions increased 28% between 2020 and 2021, but then dropped 50% in 2022, to the lowest level in a decade.

The types of cannabimimetic agents that are most prevalent among submissions has varied substantially over time. Alkoylindoles (e.g., UR-144) were the most common during the peak years of cannabimimetic agent submissions, but indazole carboxamides (e.g., AMB-FUBINACA) have been the most common in recent years. In some cases, cannabimimetic agents were identified prior to being expressly proscribed in the Code of Virginia. In those cases, the specific type of cannabimimetic agent may be unclear in the record. Detailed ten-

2022 Cannabimimetic Agent Submissions  
Rate per 100,000



year trends on individual cannabimimetic agents are provided in Appendix B.

Both the highest number and the highest rate of cannabimimetic agent submissions in 2022 were from VSP 4.

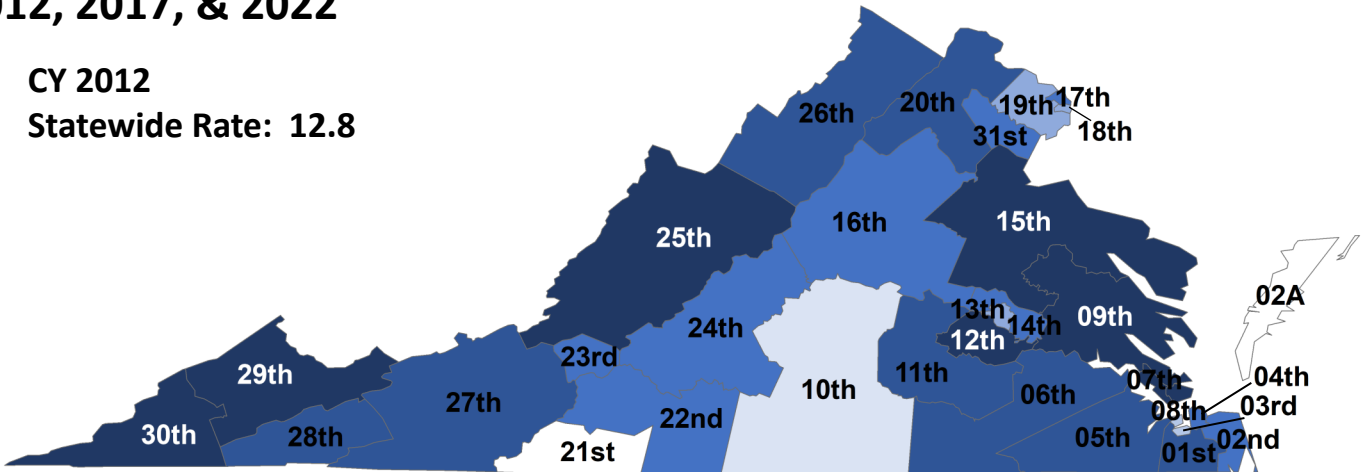
Statewide, the rate of cannabimimetic agent submissions in 2022 was 1.8 per 100,000, down 69% from 2017.

The maps on the following page present the changing pattern of cannabimimetic agent submission rates, by Virginia Court District.

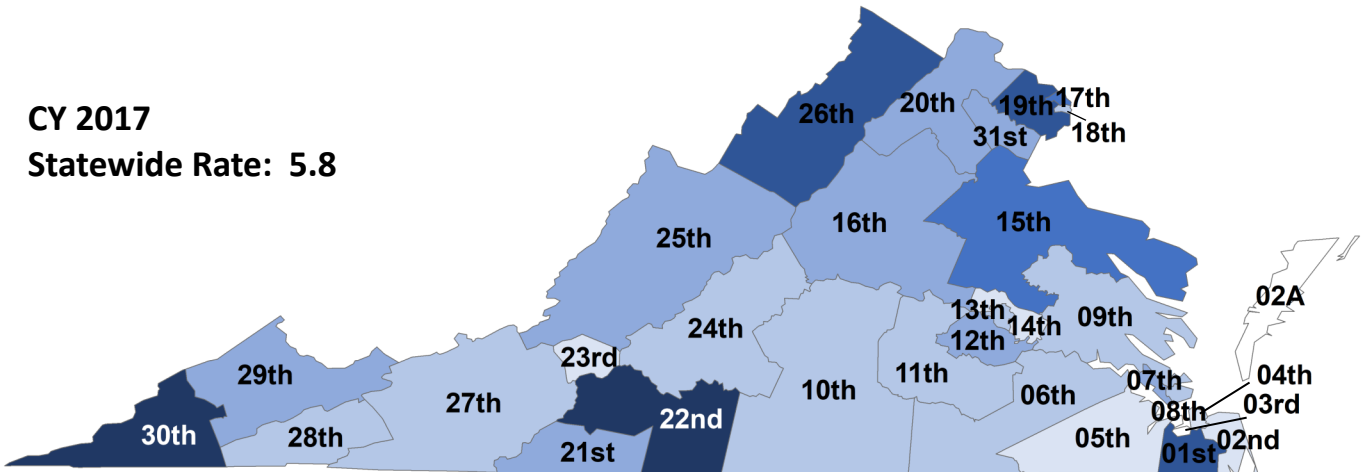
# Cannabimimetic Agents

Cannabimimetic Agent Submissions by Court District, Rate per 100,000  
CY 2012, 2017, & 2022

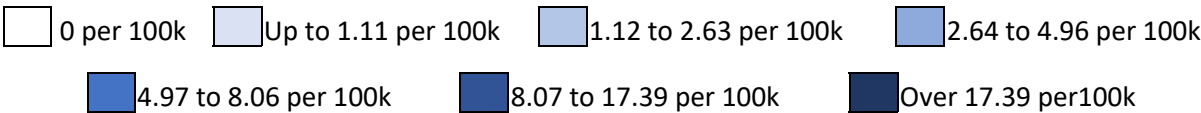
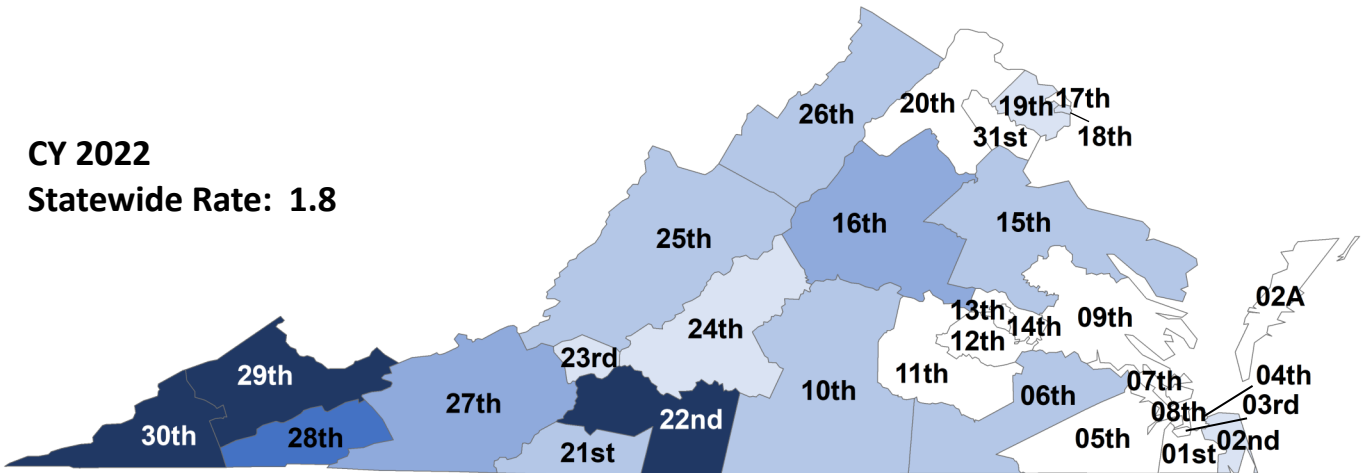
CY 2012  
Statewide Rate: 12.8



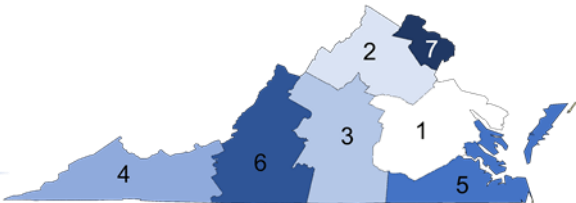
CY 2017  
Statewide Rate: 5.8



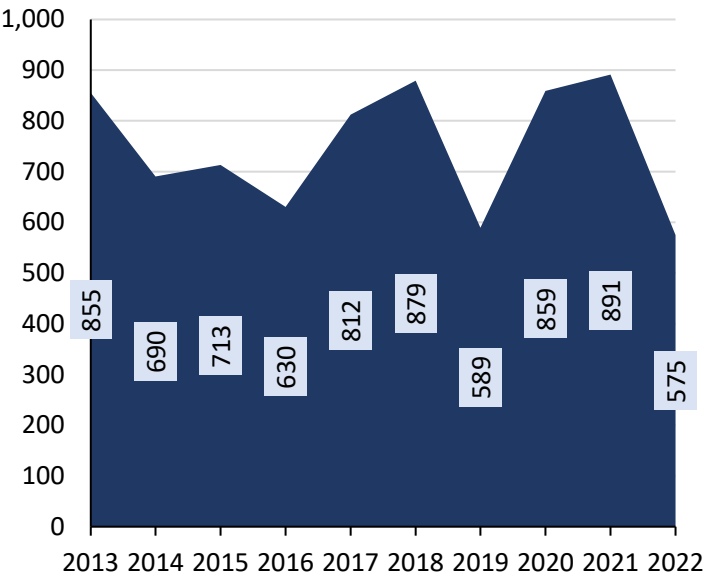
CY 2022  
Statewide Rate: 1.8



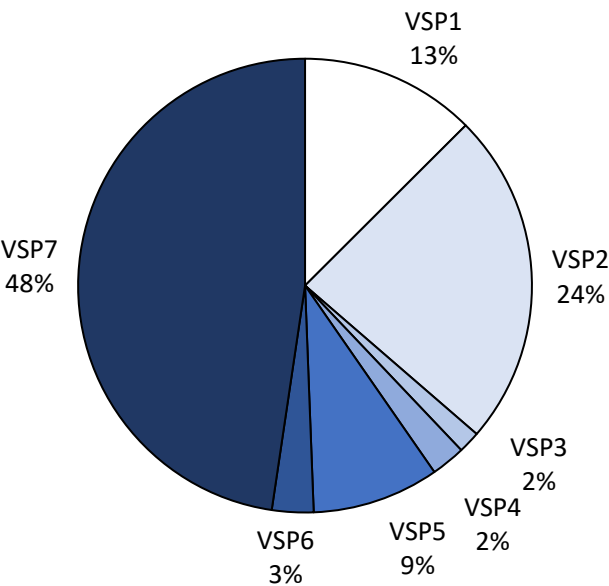
# Other Designer Drugs



Other Designer Drug Submissions  
CY2013-2022



2022 Designer Drug Submissions  
Percentage Distribution Across Regions



Designer Drugs Identified*			
Substance Identified	CY2014-16	CY2017-19	CY2020-22
Synthetic Cathinone			
Eutylone	0	242	1,537
N,N-dimethylpentylone	0	0	394
N-ethylpentylone	83	1,045	11
Alpha-PVP	226	4	3
Dibutylone	229	213	0
Ethylone	743	23	0
MDPV	22	3	0
Methylone	204	6	0
Other	115	111	137
Substituted Amphetamine			
MDMA (Ecstasy)	446	575	263
Other	97	174	69

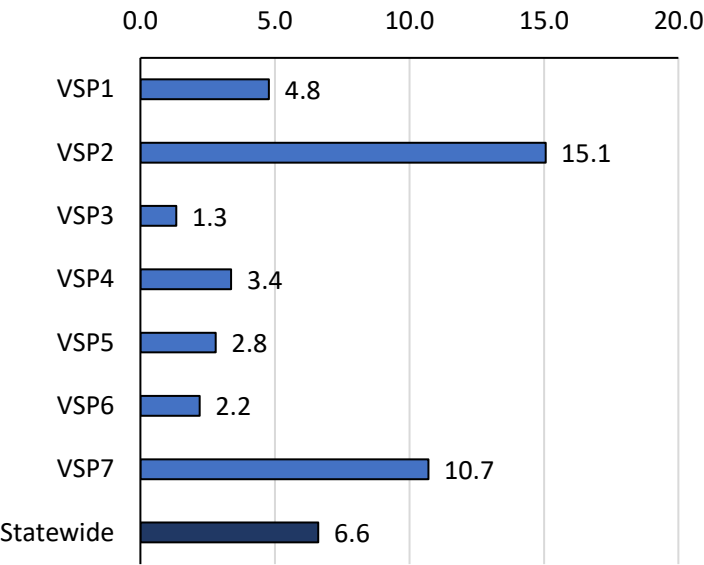
\*Sum of individual substances will not match the total, as some cases involved more than one designer drug.

The frequency of designer drug submissions, and the type submitted, has not displayed a consistent trend. In 2022, designer drugs represented 2% of total submissions.

Designer drug submissions decreased 35% between 2021 and 2022.

The types of designer drugs that are most prevalent among submissions has varied substantially over time. Eutylone was the most frequently submitted designer drug in recent years, but prior to 2018, there were no submissions of eutylone. Detailed ten-year trends on individual designer drugs are provided in Appendix B.

2022 Designer Drug Submissions  
Rate per 100,000



The largest number of designer drug submissions in 2022 were from VSP 7, but the Division with the highest rate of submissions per 100,000 population was VSP 2.

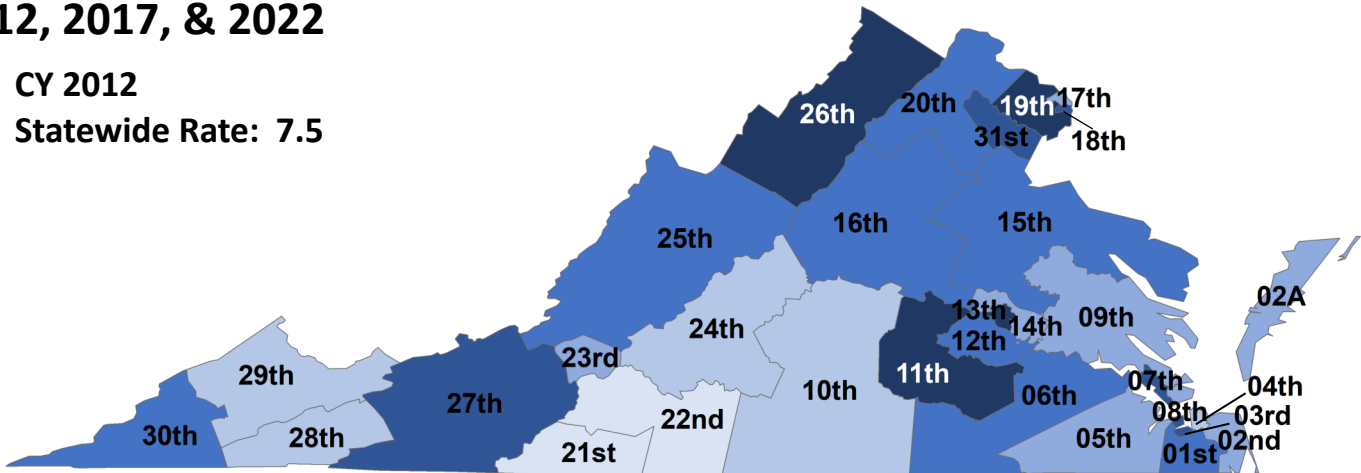
Statewide, the rate of designer drug submissions in 2022 was 6.6 per 100,000, down 31% from 2017.

The maps on the following page present the changing pattern of designer drug submission rates, by Virginia Court District.

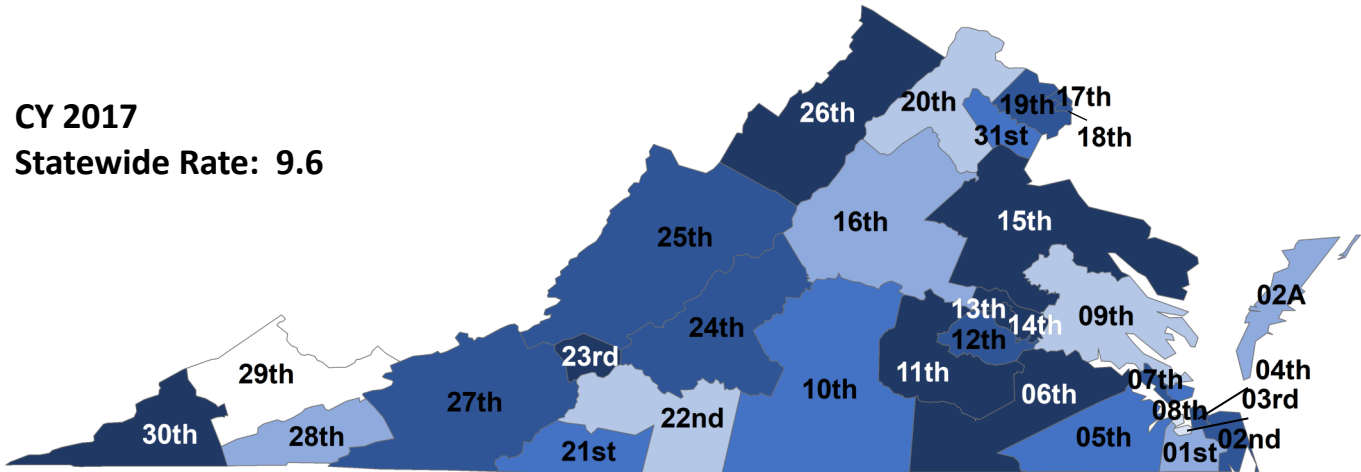
# Other Designer Drugs

Other Designer Drug Submissions by Court District, Rate per 100,000  
CY 2012, 2017, & 2022

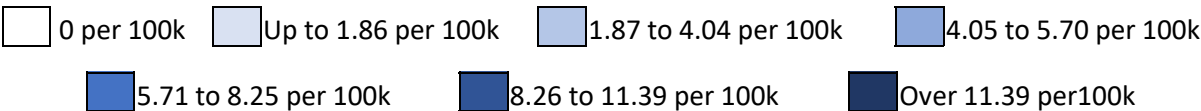
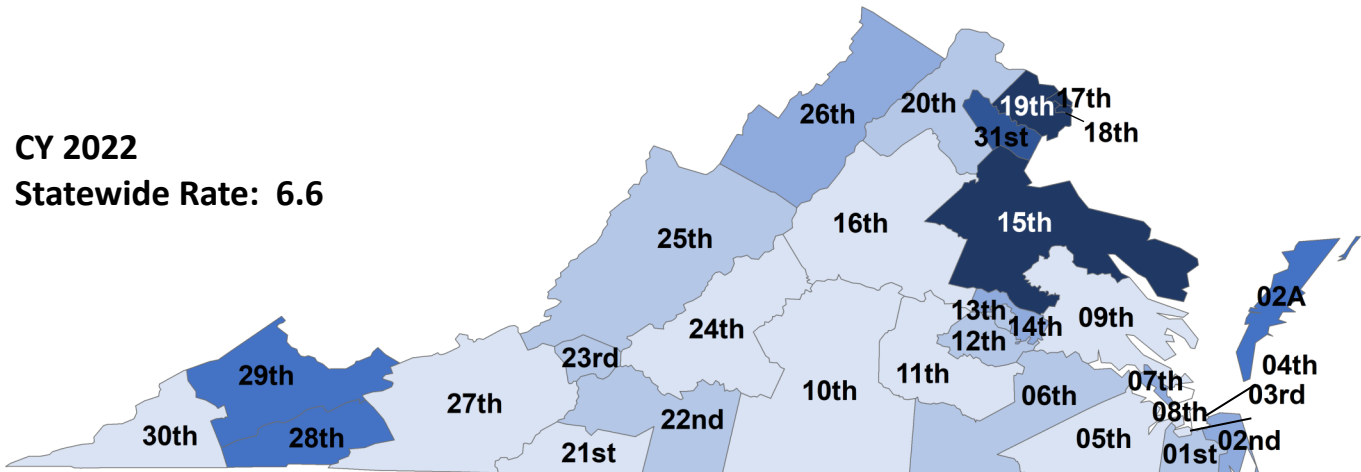
CY 2012  
Statewide Rate: 7.5



CY 2017  
Statewide Rate: 9.6



CY 2022  
Statewide Rate: 6.6



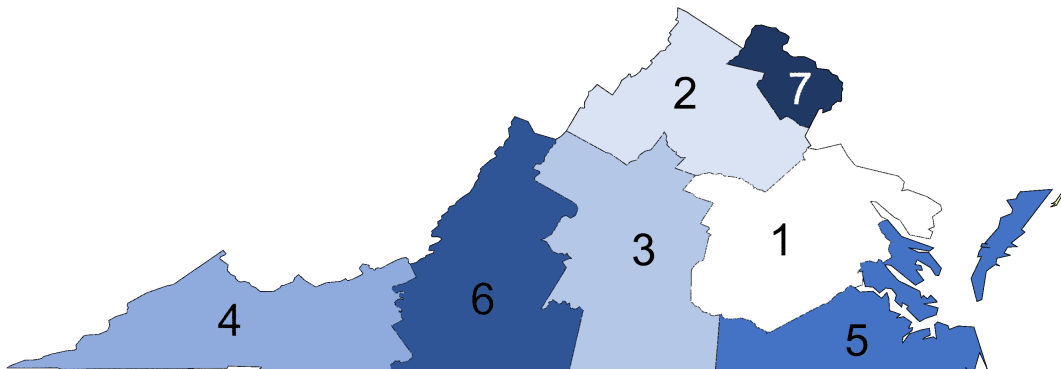
# Appendix A

## Regional Trends—Number of Submissions

Cocaine										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	1,881	2,048	1,981	2,095	2,599	2,925	3,067	2,331	2,198	2,196
VSP2	634	537	612	752	1,009	1,086	945	803	774	815
VSP3	964	933	816	769	872	763	702	469	387	394
VSP4	163	159	123	195	155	144	134	85	79	82
VSP5	1,612	1,497	1,647	1,906	2,429	2,431	2,387	1,841	1,659	2,000
VSP6	1,103	898	922	813	947	942	849	529	488	590
VSP7	933	869	950	1,110	1,350	1,453	1,433	949	989	1,234

Methamphetamine										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	30	61	82	110	172	301	528	748	779	789
VSP2	215	234	314	425	663	848	1,173	1,394	1,497	1,444
VSP3	181	230	294	684	1,056	1,298	1,467	1,421	1,248	1,276
VSP4	527	530	678	1,174	1,582	2,462	3,109	2,807	2,685	2,332
VSP5	79	72	103	193	253	400	705	846	957	1,034
VSP6	351	398	645	911	1,353	2,166	2,527	2,322	2,125	2,270
VSP7	53	82	95	99	158	220	248	217	290	307

Prescription Stimulants										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	155	176	177	200	233	184	155	161	113	101
VSP2	135	135	139	164	165	153	133	110	82	84
VSP3	61	66	69	76	79	69	53	33	16	35
VSP4	63	77	71	74	93	81	75	51	39	41
VSP5	171	179	173	194	235	211	202	160	97	133
VSP6	109	113	116	123	140	112	100	57	53	38
VSP7	173	157	193	218	217	217	148	82	77	77



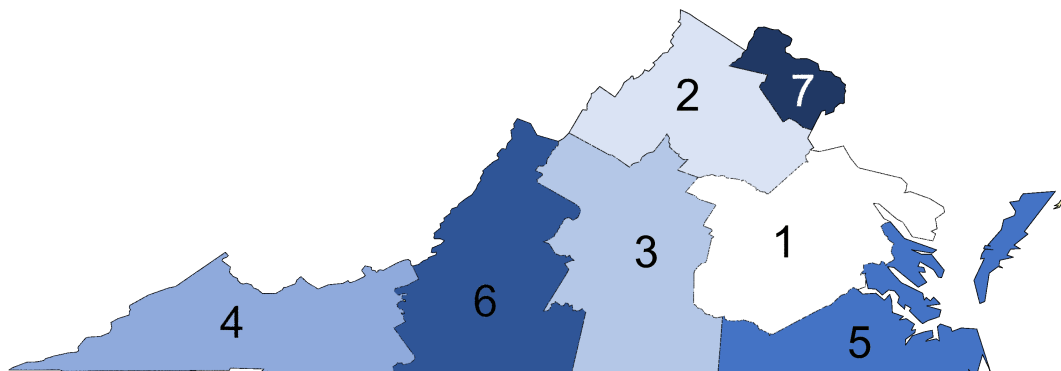
# Appendix A

## Regional Trends—Number of Submissions

Heroin										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	1,155	1,521	1,618	1,669	1,668	1,380	1,422	945	670	469
VSP2	773	846	958	1,037	841	623	521	355	223	148
VSP3	97	132	214	238	282	253	246	192	141	86
VSP4	28	38	46	58	63	46	82	132	82	50
VSP5	896	1,015	1,170	1,249	1,260	1,065	1,042	777	585	346
VSP6	424	388	366	413	532	787	772	560	319	199
VSP7	500	539	741	772	602	490	339	230	135	85

Illicit Synthetic Opioids										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	16	71	117	366	752	669	769	1,274	1,372	1,300
VSP2	27	49	112	248	444	572	556	890	973	879
VSP3	3	11	15	29	112	101	118	226	261	299
VSP4	2	7	4	11	23	24	33	126	209	302
VSP5	47	43	218	533	661	569	724	936	1,039	1,057
VSP6	7	16	25	48	193	226	240	595	661	790
VSP7	26	51	50	265	441	457	464	644	953	1,288

Prescription Opioids										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	861	854	780	792	735	695	754	576	606	412
VSP2	859	807	768	761	593	518	465	455	405	309
VSP3	446	404	317	369	277	248	271	196	166	155
VSP4	1,627	1,876	1,579	1,375	1,264	1,052	1,007	813	767	610
VSP5	501	449	507	534	513	390	421	344	323	324
VSP6	788	717	646	647	731	665	498	419	404	373
VSP7	587	485	443	388	386	351	338	196	197	212



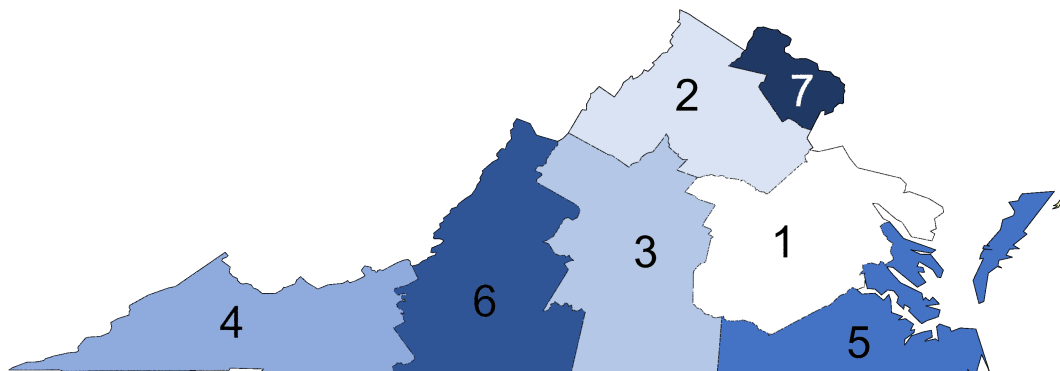


# Appendix A

## Regional Trends—Number of Submissions

Illicit Benzodiazepines										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	0	0	1	2	16	25	64	150	147	61
VSP2	0	0	1	5	10	33	124	244	203	53
VSP3	0	0	0	4	7	10	37	67	47	13
VSP4	0	0	1	0	4	18	36	60	82	30
VSP5	0	0	3	4	16	16	63	119	140	60
VSP6	0	0	0	0	5	6	26	54	89	54
VSP7	0	1	3	18	38	50	167	306	174	73

Prescription Benzodiazepines										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	385	339	362	405	378	345	240	202	178	133
VSP2	206	206	238	267	272	253	163	117	111	88
VSP3	109	87	79	106	117	102	88	37	49	42
VSP4	443	444	442	440	392	342	301	235	194	179
VSP5	205	229	273	364	331	245	179	141	112	112
VSP6	281	252	237	240	289	287	222	129	122	126
VSP7	180	189	340	487	392	387	190	109	75	66



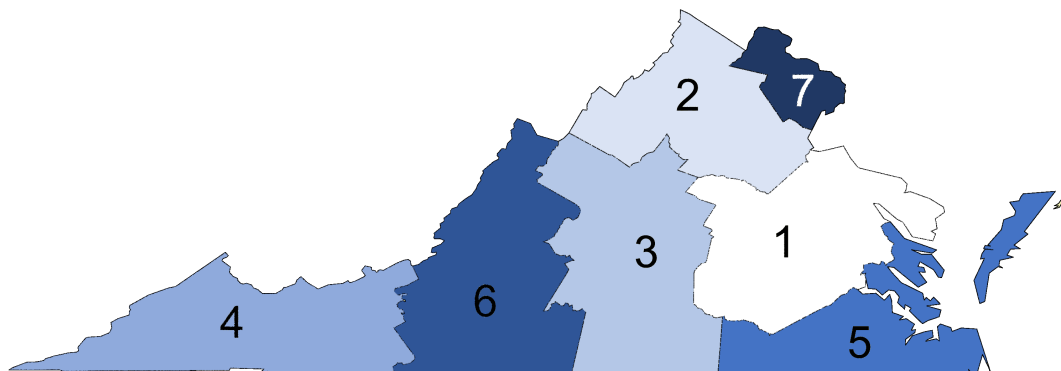
# Appendix A

## Regional Trends—Number of Submissions

Hallucinogenic Substances										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	78	66	93	80	90	80	73	110	78	98
VSP2	99	118	88	89	128	107	118	158	166	124
VSP3	27	40	39	55	44	63	55	65	47	55
VSP4	15	19	17	26	37	24	32	47	41	30
VSP5	68	95	70	75	86	84	95	89	90	131
VSP6	74	59	56	76	122	80	68	45	50	65
VSP7	249	260	223	310	289	289	297	267	303	252

Cannabimimetic Agents										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	238	71	80	65	36	8	11	4	11	2
VSP2	118	134	131	63	104	46	37	56	82	26
VSP3	40	31	42	10	14	14	14	13	28	14
VSP4	147	142	124	92	45	9	15	20	62	67
VSP5	347	179	56	45	36	16	19	15	5	4
VSP6	53	40	86	33	95	106	76	70	87	36
VSP7	209	187	80	58	158	128	94	60	29	4

Other Designer Drugs										
VSP	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
VSP1	176	134	138	129	205	227	116	220	182	72
VSP2	95	87	86	78	108	159	99	223	270	137
VSP3	32	27	28	27	49	39	36	37	35	9
VSP4	59	103	62	20	26	14	28	22	18	14
VSP5	127	114	135	116	133	131	105	129	92	52
VSP6	65	35	37	45	67	46	39	45	31	17
VSP7	301	190	227	215	224	263	166	183	263	274



# Appendix B – Ten-Year Trends, Statewide

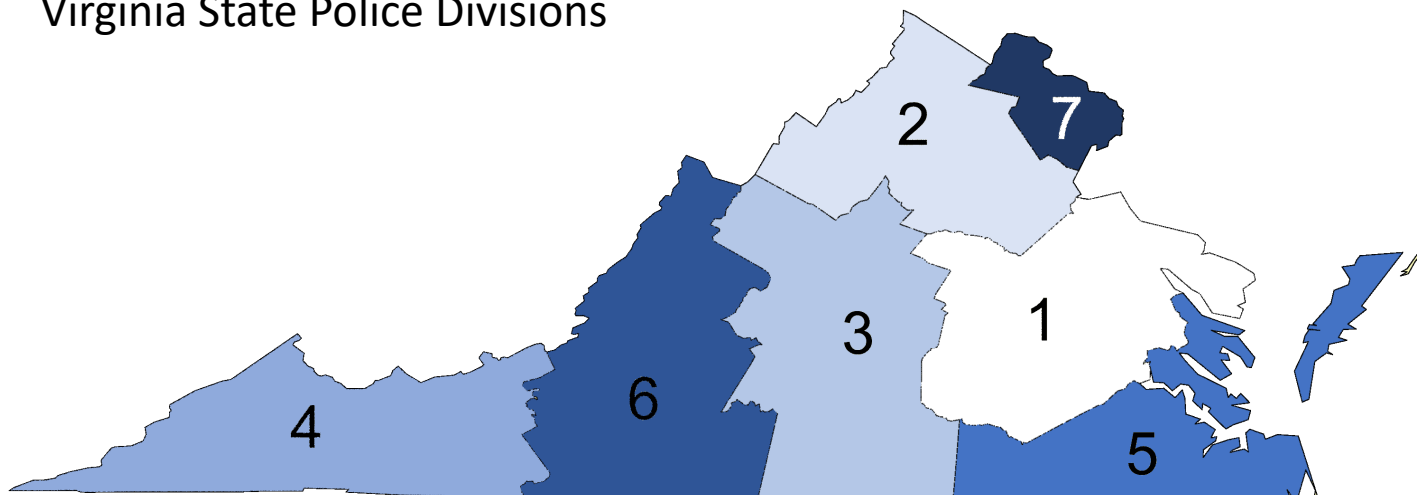
Stimulants	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
Cocaine	7,290	6,941	7,051	7,640	9,361	9,744	9,517	7,007	6,574	7,311
Methamphetamine	1,436	1,607	2,211	3,596	5,237	7,695	9,759	9,755	9,581	9,452
<b>Prescription Stimulants</b>										
Amphetamine	621	681	694	799	935	829	686	553	404	416
Lisdexamfetamine	106	90	112	135	112	89	75	46	32	43
Methylphenidate	165	157	161	149	138	123	112	66	43	52
Other	26	27	23	18	29	22	20	12	20	14
Opioids	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
Heroin	3,873	4,480	5,113	5,436	5,248	4,644	4,424	3,191	2,155	1,383
<b>Illicit Synthetic Opioids</b>										
Fentanyl	83	185	428	1,185	1,708	2,354	2,818	4,642	5,323	5,762
Para-Fluorofentanyl	0	0	0	1	0	0	0	24	462	732
Acetyl Fentanyl	0	3	42	28	12	141	276	98	65	42
FIBF	0	0	0	22	380	188	29	7	3	0
Furanyl Fentanyl	0	0	0	229	541	24	1	0	1	0
Fentanyl Analog - Other	0	0	1	12	122	85	47	26	4	12
Other	45	61	80	103	187	69	82	61	77	40
<b>Prescription Opioids</b>										
Buprenorphine	813	1,050	1,307	1,223	1,395	1,438	1,597	1,385	1,339	1,161
Codeine	110	75	80	97	88	66	67	48	38	28
Hydrocodone	1,600	1,424	1,098	982	847	598	495	325	244	226
Hydromorphone	418	392	282	296	197	164	93	52	71	44
Methadone	337	275	220	227	191	153	137	110	96	82
Morphine	445	410	325	303	261	175	155	80	72	54
Oxycodone	2,332	2,222	1,863	1,794	1,555	1,278	1,166	765	627	629
Tramadol	166	207	225	256	249	275	306	413	591	325
Other	169	180	189	224	183	123	81	36	29	22

# Appendix B – Ten-Year Trends, Statewide

Benzodiazepines	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
<b>Illicit Benzodiazepines</b>										
Clonazepam	0	0	0	5	8	55	50	221	400	124
Etizolam	0	1	7	27	61	79	353	544	374	52
Flualprazolam	0	0	0	0	0	7	111	265	81	38
Other	0	0	2	1	31	17	25	29	82	157
<b>Prescription Benzodiazepines</b>										
Alprazolam (Xanax)	1,142	1,140	1,338	1,729	1,546	1,424	932	626	532	468
Clonazepam (Klonopin)	502	469	493	472	478	422	362	284	249	254
Diazepam (Valium)	233	204	221	200	190	168	146	99	82	60
Lorazepam (Ativan)	99	112	104	101	115	95	88	37	47	39
Other	31	22	21	18	21	12	12	11	7	6
Hallucinogenic Substances	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
Benzylpiperazine (BZP)	44	25	17	13	2	0	1	0	0	0
Ketamine & analogs	59	46	58	54	64	57	66	74	62	58
LSD & analogs	55	104	142	263	358	260	239	269	226	129
PCP & analogs	188	186	148	187	181	185	194	217	192	159
Psilocyn-Psilocybin (mushrooms)	109	130	124	135	179	173	199	188	288	428
Tryptamines	53	62	45	39	39	45	60	38	36	15
Other	165	168	115	98	51	105	95	60	73	32
Cannabimimetic Agents	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
Alkoylindoles	443	387	198	33	9	9	6	8	0	1
Benzoylindoles	5	2	2	0	0	0	0	0	1	1
Indazole carboxamides	56	260	390	257	470	319	132	143	296	148
Indole carboxamides	9	0	1	0	0	3	165	106	4	1
Indole carboxylates	107	108	43	45	1	1	0	0	0	0
Naphthoylindoles	42	18	8	2	6	0	0	0	0	0
Phenylacetylindoles	4	3	2	1	0	0	0	0	0	0
Other or unclear	603	172	48	61	13	6	9	6	5	3
Other Designer Drugs	CY2013	CY2014	CY2015	CY2016	CY2017	CY2018	CY2019	CY2020	CY2021	CY2022
<b>Substituted Amphetamines</b>										
MDMA (Ecstasy)	173	140	133	173	201	170	204	102	77	84
Other	22	30	22	45	82	36	56	23	15	31
<b>Synthetic Cathinones</b>										
Alpha-PVP	100	132	77	17	3	1	0	0	1	2
Dibutylone	0	3	2	224	167	44	2	0	0	0
Ethylone	0	219	467	57	13	7	3	0	0	0
Eutylone	0	0	0	0	0	3	239	706	771	60
MDPV	44	15	4	3	1	0	2	0	0	0
Methylone	528	175	14	15	3	2	1	0	0	0
N,N-dimethylpentylone	0	0	0	0	0	0	0	0	16	378
N-ethylpentylone	0	0	0	83	354	625	66	8	2	1
Other	83	27	29	59	36	20	55	51	37	49

# Appendix C – Virginia Regions

## Virginia State Police Divisions



<u>Division 1</u>	<u>Division 2</u>	<u>Division 3</u>	<u>Division 4</u>	<u>Division 5</u>	<u>Division 6</u>	<u>Division 7</u>
Amelia County	Clarke County	Albemarle County	Bland County	Accomack County	Alleghany County	Arlington County
Caroline County	Culpeper County	Amherst County	Buchanan County	Brunswick County	Bath County	Fairfax County
Charles City County	Fauquier County	Appomattox County	Carroll County	Gloucester County	Bedford County	Loudoun County
Chesterfield County	Frederick County	Augusta County	Dickenson County	Greensville County	Botetourt County	Prince William County
Dinwiddie County	Madison County	Buckingham County	Giles County	Isle of Wight County	Craig County	Alexandria City
Essex County	Orange County	Campbell County	Grayson County	James City County	Floyd County	Fairfax City
Goochland County	Page County	Charlotte County	Lee County	Mathews County	Franklin County	Falls Church City
Hanover County	Rappahannock County	Cumberland County	Pulaski County	Middlesex County	Henry County	Manassas City
Henrico County	Rockingham County	Fluvanna County	Russell County	Northampton County	Highland County	Manassas Park City
King and Queen County	Shenandoah County	Greene County	Scott County	Southampton County	Montgomery County	
King George County	Spotsylvania County	Halifax County	Smyth County	Surry County	Patrick County	
King William County	Stafford County	Lunenburg County	Tazewell County	Sussex County	Pittsylvania County	
Lancaster County	Warren County	Mecklenburg County	Washington County	York County	Roanoke County	
Louisa County	Fredericksburg City	Nelson County	Wise County	Chesapeake City	Rockbridge County	
New Kent County	Harrisonburg City	Prince Edward County	Wythe County	Emporia City	Bedford City	
Northumberland County	Winchester City	Charlottesville City	Bristol City	Franklin City	Buena Vista City	
Nottoway County		Lynchburg City	Galax City	Hampton City	Danville City	
Powhatan County		Staunton City	Norton City	Newport News City	Lexington City	
Prince George County		Waynesboro City		Norfolk City	Martinsville City	
Richmond County				Poquoson City	Radford City	
Westmoreland County				Portsmouth City	Roanoke City	
Colonial Heights City				Suffolk City	Salem City	
Hopewell City				Virginia Beach City		
Petersburg City				Williamsburg City		
Richmond City						



# Virginia Court Districts

CY 2022 Drug Cases Submitted to the Virginia Department of Forensic Science