

Drug Cases Submitted to the Virginia Department of Forensic Science Calendar Year 2016

A Joint Report by the Virginia Departments of Forensic Science and Criminal Justice Services





Drug Cases Submitted to the Virginia Department of Forensic Science

- DFS receives tens of thousands of drug samples every year
- Data presented here are for select drug categories of interest

Cocaine

"Club Drugs"**

Heroin

Prescription Opioids***

Methamphetamine

Prescription Stimulants

Marijuana

purposes of this report.

Benzodiazepines

Cannabimimetic Agents*

Illicit Fentanyl***



^{*}Cannabimimetic agents were previously labeled "synthetic cannabinoids."

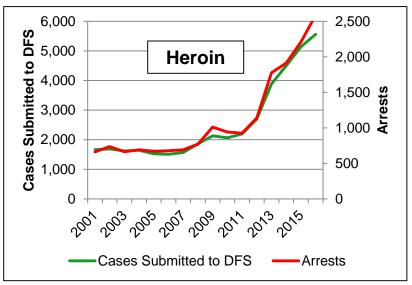
^{**}Includes various designer and other drugs including Ecstasy, Ketamine, Phenethylamines, Tryptamines, Piperazines, bath salts, and others. Use of these drugs is not limited to clubs or parties, and in fact some of these designer drugs might not be identified as "club drugs" per se, but in lieu of a better category label, they are included here. Any drug listed specifically above is not included in this category.

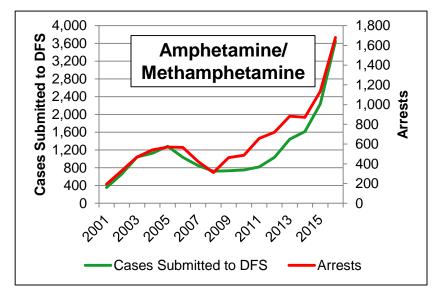
***Fentanyl submissions identified as being in the form of a transdermal patch are counted with other prescription opioids. All other forms of fentanyl and fentanyl derivatives are counted as "illicit" for

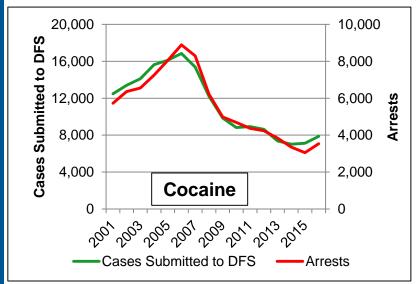


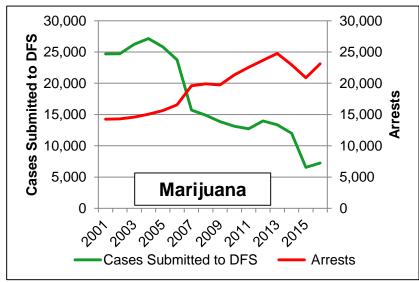
Comparing DFS Cases to Arrest Data

Select drug types, calendar years 2001-2016













Comparing DFS Cases to Arrest Data

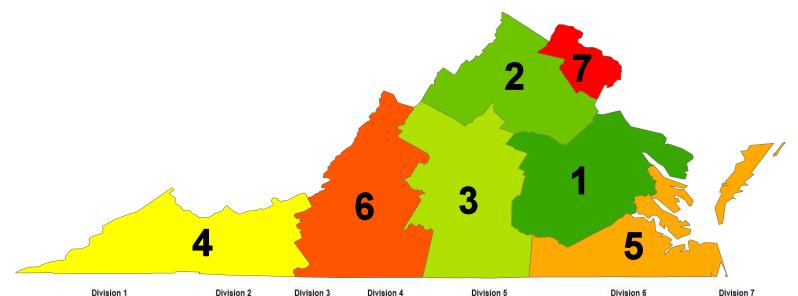
Select drug types, calendar years 2001-2016

- For cocaine, heroin, and amphetamine/methamphetamine, DFS cases and VSP arrest data show a similar pattern.
 - DFS cases (the left axis and the green line in each chart here) are consistently more numerous than arrests (right axis, red line). Each year there are 40-50% as many arrests as there are DFS cases.
- DFS cases and VSP arrest data for marijuana do not share a similar pattern. There is a clear break in the series of data for both DFS cases (left axis, green line) and arrests (right axis, red line).
 - Changes in the Code of Virginia relating to law enforcement testimony with regard to marijuana field test kits (beginning July 2006) coincided with an increase in marijuana arrests and a decrease in marijuana cases submitted to DFS.
 - Marijuana case data before and after this change cannot be compared. Because of this, marijuana cases are given less focus in this report.





Virginia State Police Divisions



Amelia County Caroline County Charles City County Chesterfield County Dinwiddie County Essex County Goochland County Hanover County

Henrico County

Lancaster County Louisa County New Kent County Nottoway County Powhatan County Prince George County Richmond County Westmoreland County King and Queen County Colonial Heights City King George County Hopewell City King William County Petersburg City Richmond City

Clarke County Culpeper County **Fauguier County** Northumberland County Frederick County Madison County Orange County Page County Rockingham County Shenandoah County Spotsylvania County

Stafford County

Warren County

Fredericksburg City

Harrisonburg City

Winchester City

Division 3 Albemarle County Amherst County Appomattox County Augusta County **Buckingham County** Campbell County Charlotte County Rappahannock County Cumberland County Fluvanna County Greene County Halifax County Lunenburg County Mecklenburg County Washington County Nelson County Prince Edward County Wythe County Charlottesville City Lynchburg City Staunton City Waynesboro City

Division 4 **Bland County** Accomack County **Buchanan County** Brunswick County Carroll County Gloucester County Dickenson County Greensville County Giles County Isle of Wight County Grayson County James City County Lee County Mathews County Middlesex County Pulaski County Russell County Northampton County Scott County Smyth County Surry County Tazewell County Sussex County

Wise County

Bristol City

Galax City

Norton City

Division 5 York County Chesapeake City **Emporia City** Franklin City Hampton City Newport News City Norfolk City Poguoson City Portsmouth City Southampton County Suffolk City Virginia Beach City Patrick County Williamsburg City Pittsylvania County

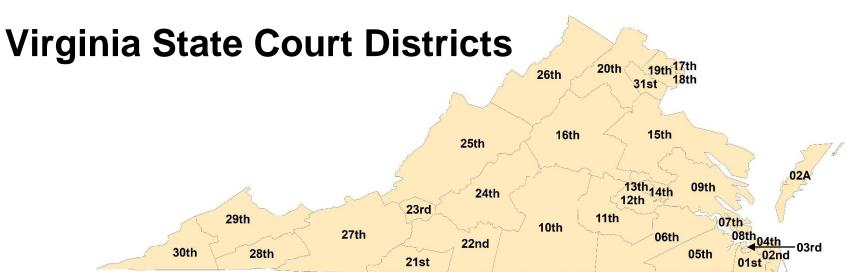
Alleghany County Bath County Bedford County **Botetourt County** Craig County Floyd County Franklin County Henry County **Highland County** Montgomery County Salem City

Division 7 Roanoke County Arlington County Rockbridge County Fairfax County Bedford City Loudoun County Buena Vista City Prince William County Danville City Alexandria City Lexington City Fairfax City Martinsville City Falls Church City Radford City Manassas City Roanoke City Manassas Park City



5





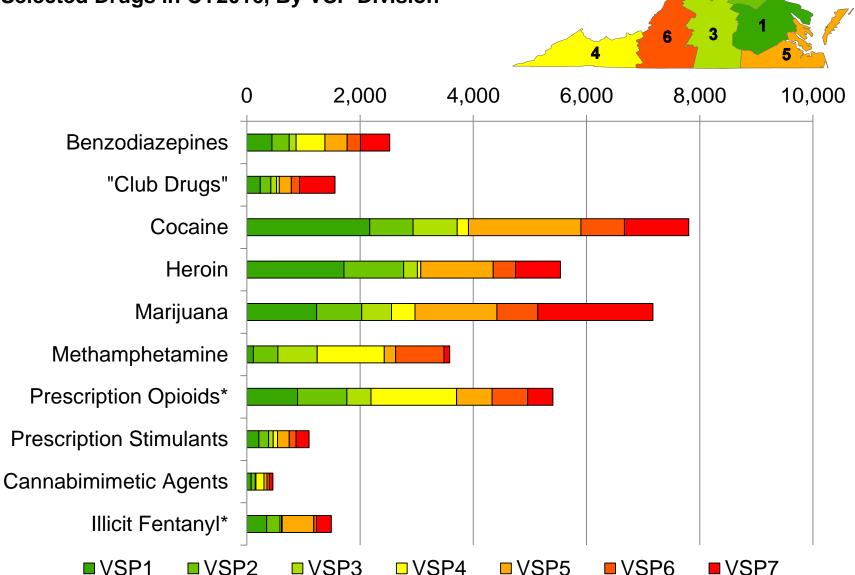
Court District Locality		Court District Locality		Court District Locality		Court District Locality		Court District Locality	
1st	Chesapeake City	10th	Appomattox County	16th	Albemarle County	24th	Amherst County	27th	Bland County
2A	Accomack County	•	Buckingham County		Charlottesville City		Bedford City		Carroll County
	Northampton County		Charlotte County		Culpeper County		Bedford County		Floyd County
2nd	Virginia Beach City		Cumberland County		Fluvanna County		Campbell County		Galax City
3rd	Portsmouth City		Halifax County		Goochland County		Lynchburg City		Giles County
4th	Norfolk City		Lunenburg County		Greene County		Nelson County	_	Grayson County
5th	Franklin City		Mecklenburg County		Louisa County	25th	Alleghany County	='	Montgomery County
	Isle of Wight County		Prince Edward County		Madison County		Augusta County		Pulaski County
	Southampton County	11th	Amelia County		Orange County	_	Bath County		Radford City
	Suffolk City		Dinwiddie County	17th	Arlington County	='	Botetourt County		Wythe County
6th	Brunswick County	•	Nottoway County		Falls Church City		Buena Vista City	28th	Bristol City
	Emporia City		Petersburg City	18th	Alexandria City	<i>-</i>	Clifton Forge		Smyth County
	Greensville County		Powhatan County	19th	Fairfax City		Covington City		Washington County
	Hopewell City	12th	Chesterfield County		Fairfax County	_	Craig County	29th	Buchanan County
	Prince George County		Colonial Heights City	20th	Fauquier County		Highland County		Dickenson County
	Surry County	13th	Richmond City	-	Loudoun County		Lexington City		Russell County
	Sussex County	14th	Henrico County		Rappahannock County		Rockbridge County		Tazewell County
7th	Newport News City	15th	Caroline County	21st	Henry County	-	Staunton City	30th	Lee County
8th	Hampton City		Essex County		Martinsville City		Waynesboro City		Norton City
9th	Charles City County		Fredericksburg City		Patrick County	26th	Clarke County	='	Scott County
	Gloucester County		Hanover County	22nd	Danville City		Frederick County		Wise County
	James City County		King George County		Franklin County		Harrisonburg City	31st	Manassas City
	King and Queen County		Lancaster County		Pittsylvania County		Page County		Manassas Park City
	King William County		Northumberland County	23rd	Roanoke City		Rockingham County		Prince William County
	Mathews County		Richmond County		Roanoke County		Shenandoah County		
	Middlesex County		Spotsylvania County		Salem City		Warren County		
	New Kent County		Stafford County				Winchester City		
	Poquoson City		Westmoreland County						



Williamsburg City York County



Drug Cases Submitted to DFS
Selected Drugs in CY2016, By VSP Division







Regional Variations in Drug Submissions

Distribution of Select Drug Cases Submitted to DFS, CY2016



Drug Category	VSP Div 1	VSP Div 2	VSP Div 3	VSP Div 4	VSP Div 5	VSP Div 6	VSP Div 7	Total
Benzodiazepines	18%	12%	5%	20%	16%	9%	20%	100%
Marijuana	17%	11%	7%	6%	20%	10%	28%	100%
"Club Drug"	15%	12%	6%	3%	14%	9%	40%	100%
Cocaine	28%	10%	10%	3%	25%	10%	15%	100%
Illicit Fentanyl*	23%	16%	2%	1%	37%	3%	18%	100%
Heroin	31%	19%	4%	1%	23%	7%	14%	100%
Methamphetamine	3%	12%	19%	33%	6%	24%	3%	100%
Presc. Opioids*	17%	16%	8%	28%	12%	12%	8%	100%
Presc. Stimulants	19%	16%	7%	7%	19%	11%	21%	100%
Cannabimimetic Agents	17%	15%	3%	31%	12%	9%	14%	100%
Census Population	17%	10%	8%	5%	22%	9%	29%	100%

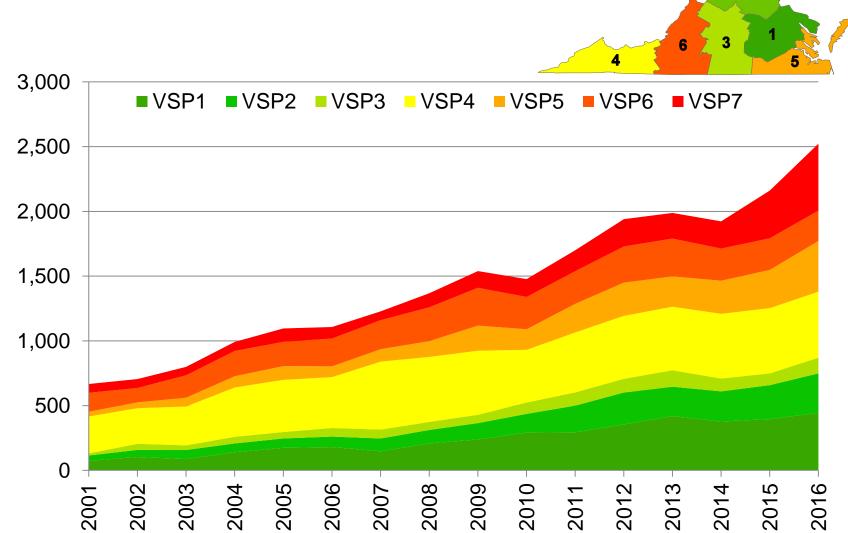
The table above presents the proportion of each of the selected drug types submitted by the individual VSP Divisions. The proportion of the state's population is also presented, for comparison. For example: 20% of benzodiazepine submissions in 2016 were submitted by Division 4, which had 5% of the state population.





Benzodiazepine Submissions



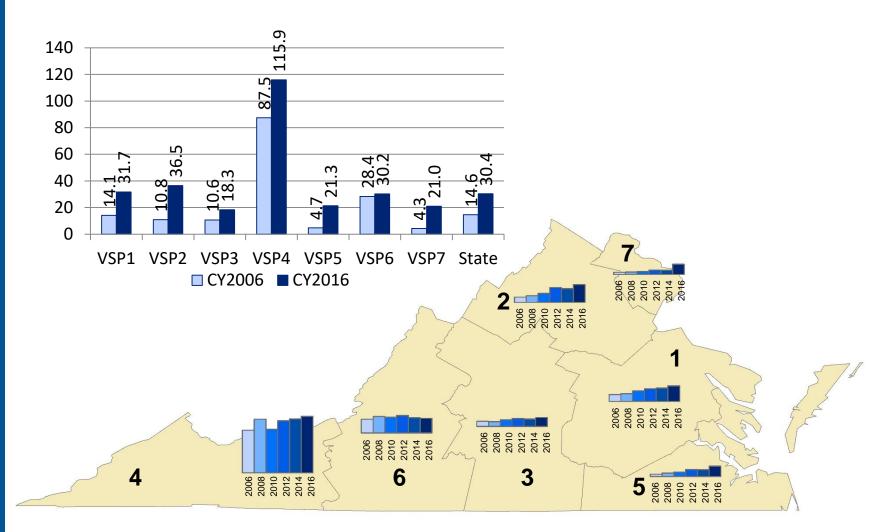






Benzodiazepine Submission Rate

Rate of submissions per 100,000 Population, calendar years 2006-2016







Benzodiazepine Summary

Statewide and by VSP Division

- Number of benzodiazepine case submissions:
 - Benzodiazepine cases submitted to DFS increased 16% statewide between 2015 and 2016.
 - Between 2011 and 2016, benzodiazepine case submissions increased 49%.
 - VSP Divisions 4 and 7 each reported 20% of the statewide total number of benzodiazepine cases in 2016.
 - Relatively few cases were submitted by Division 3 (5% of the statewide total).
- Rate of submissions, per 100,000 population
 - The 2016 rate of benzodiazepine cases submitted by Division 4 was more than three times higher than the rate for any other Division.
 - Division 7 has seen the most growth in the rate of benzodiazepine submissions, increasing 195% between 2011 and 2016.

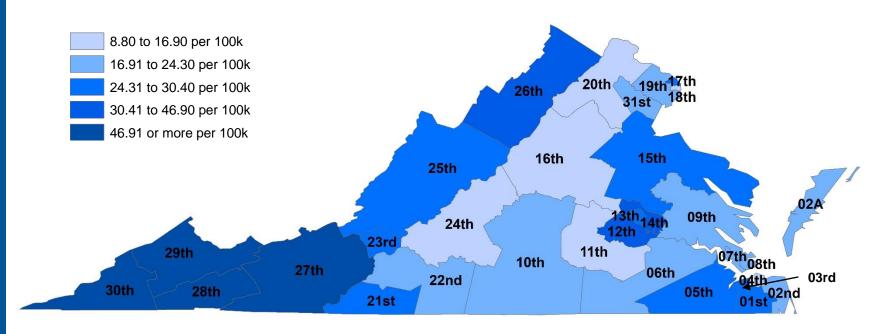




Benzodiazepine Data by Court District

Rate of submissions per 100,000 population, CY2016

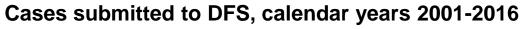
- The Court Districts with the highest rate of benzodiazepine submissions in 2016 were the 29th, 30th, and 28th.
- Between 2015 and 2016, the rate of submissions from the 28th District increased 86%. In that same period, the rate of submissions from the 29th and 30th Districts decreased (20% and 16%, respectively).

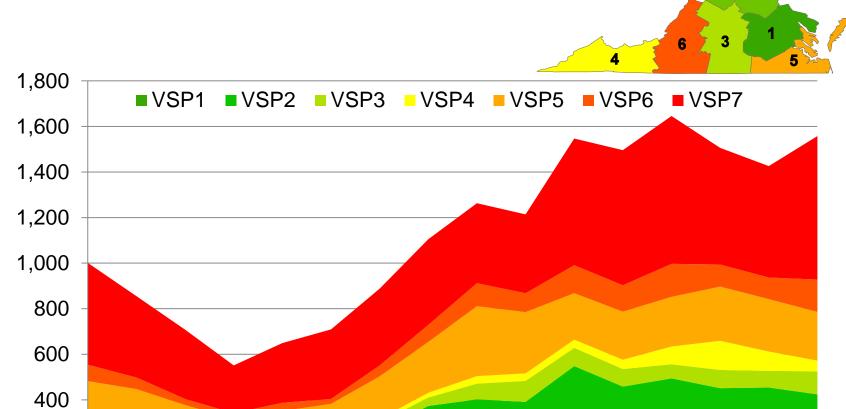






"Club Drug" Submissions





2008 -2009 -2010 -

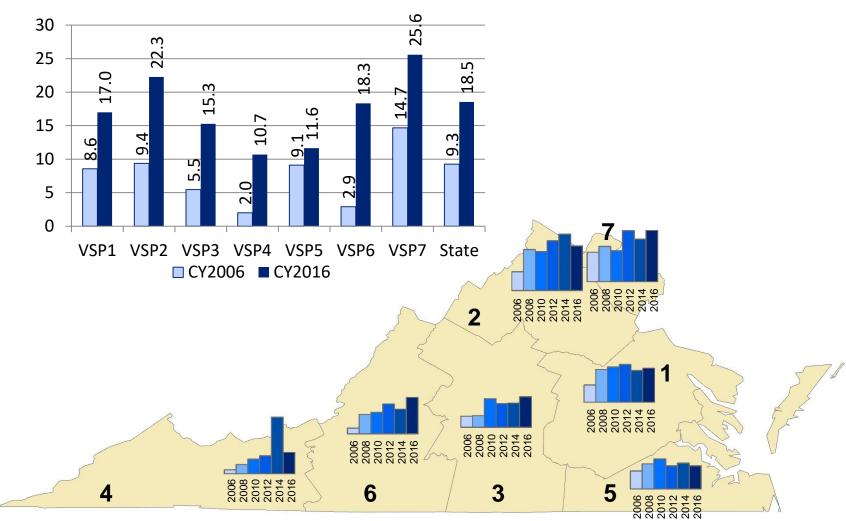
2012 2013 2014





"Club Drug" Submission Rate

Rate of submissions per 100,000 Population, calendar years 2006-2016







"Club Drug" Summary

Statewide and by VSP Division

- Number of "club drug" case submissions:
 - After dropping in 2013 and 2014, "Club drug" cases submitted to DFS increased 9% statewide between 2015 and 2016. However, submissions in 2016 were less than 1% higher than 2011.
 - VSP Division 7 reported 40% of the statewide total number "club drug" cases in 2016.
 - Relatively few cases were submitted in 2016 by Divisions 4 or 3 (3% and 6% of the statewide total, respectively).
- Rate of submissions, per 100,000 population
 - Divisions 2 and 7 have usually had the highest rates of "club drug" case submissions.
 - The spike in Division 4 in 2014 was driven by a large number of arrests for alpha-PVP, also known as "flakka," a stimulant with hallucinogenic properties.

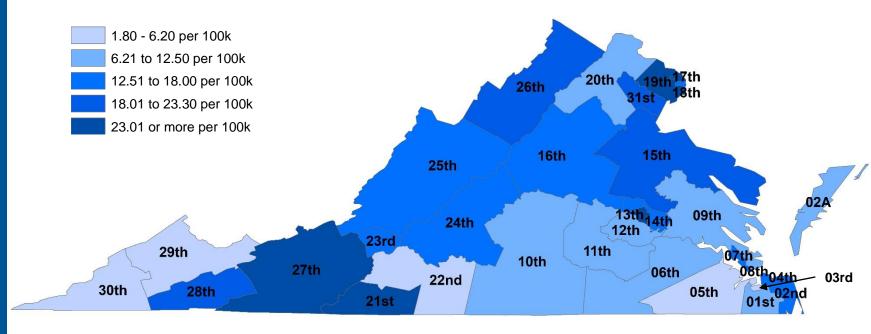




"Club Drug" Data by Court District

Rate of submissions per 100,000 population, CY2016

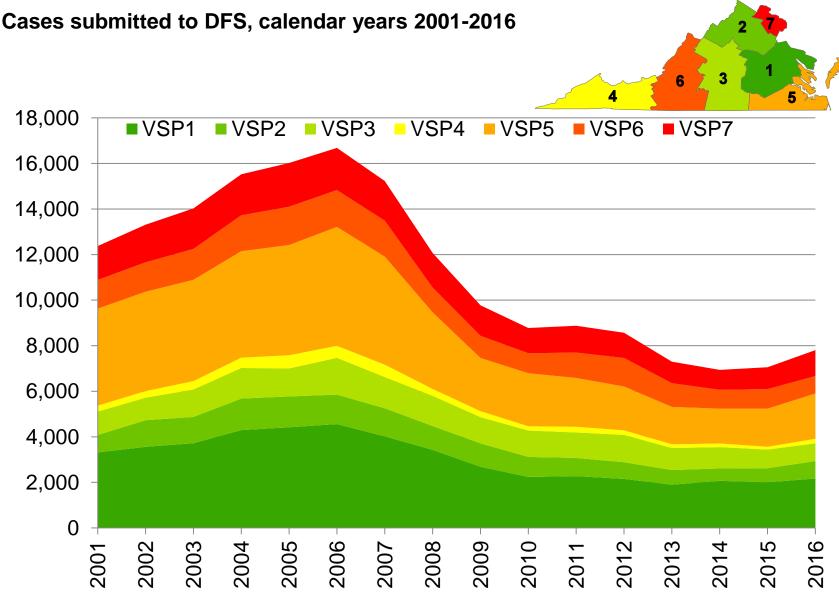
- The Court Districts with the highest rate of "club drug" submissions in 2016 were the 17th, 27th, and 19th.
- Between 2015 and 2016, the rate of submissions from the 30th District decreased 88%. In the same period, the rate of submissions from the 17th, 27th, and 19th Districts increased (98%, 71%, and 54%, respectively).







Cocaine Submissions

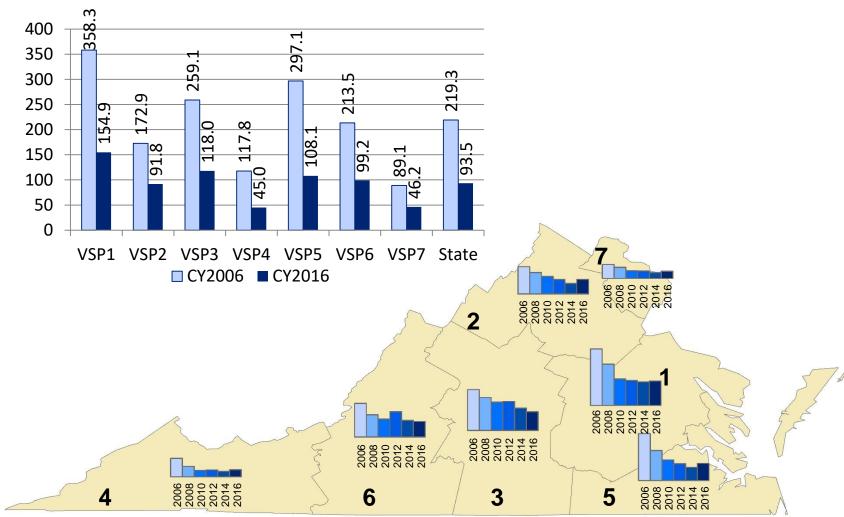






Cocaine Submission Rate

Rate of submissions per 100,000 Population, calendar years 2006-2016







Cocaine Summary

Statewide and by VSP Division

- Number of cocaine case submissions:
 - After declining 58% between 2006 and 2014, statewide cocaine cases submitted to DFS increased 2% in 2015 and 10% between 2015 and 2016.
 - VSP Divisions 1 and 5 submitted the majority of the statewide total number of cocaine cases in 2016 (28% and 25%, respectively).
 - Relatively few cases were submitted by Division 4 (3% of the statewide total).
- Rate of submissions, per 100,000 population
 - VSP Division 4 saw the greatest increase in the rate of cocaine submissions in 2016, up 62% from 2015.
 - VSP Division 1 had highest rate of cocaine submissions in 2016.

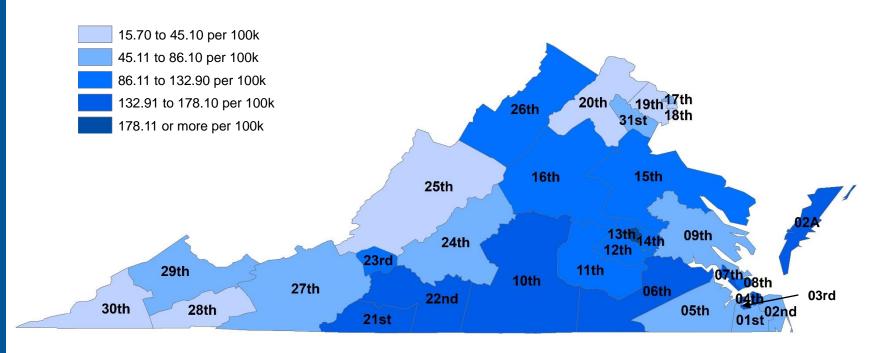




Cocaine Data by Court District

Rate of submissions per 100,000 population, CY2016

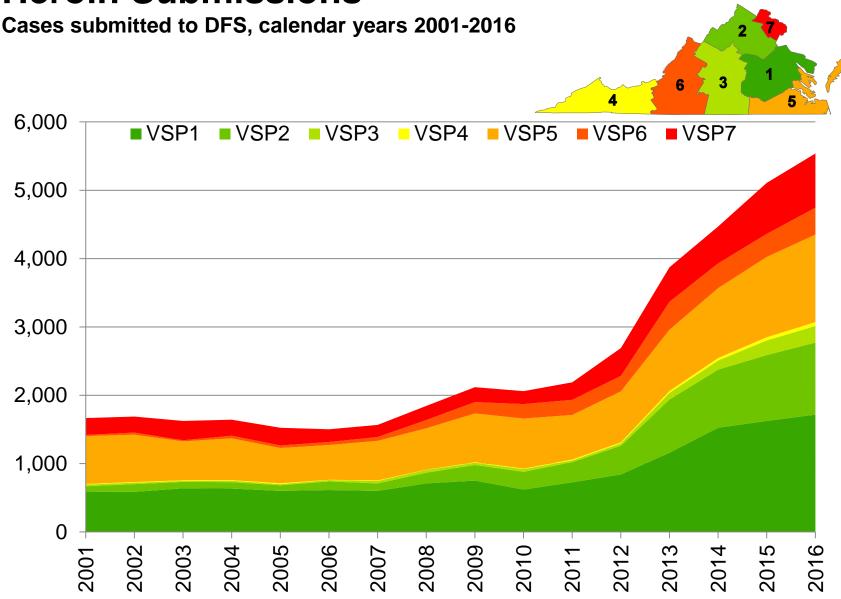
- The Court Districts with the highest rate of cocaine submissions in 2016 were the 13th, 2A, and the 7th.
- Between 2015 and 2016, the rate of submissions from the 5th District decreased 44%. In that same period, the rate of submissions from the 29th and 7th Districts, as well as District 2A, increased (87%, 43%, and 66%, respectively).







Heroin Submissions

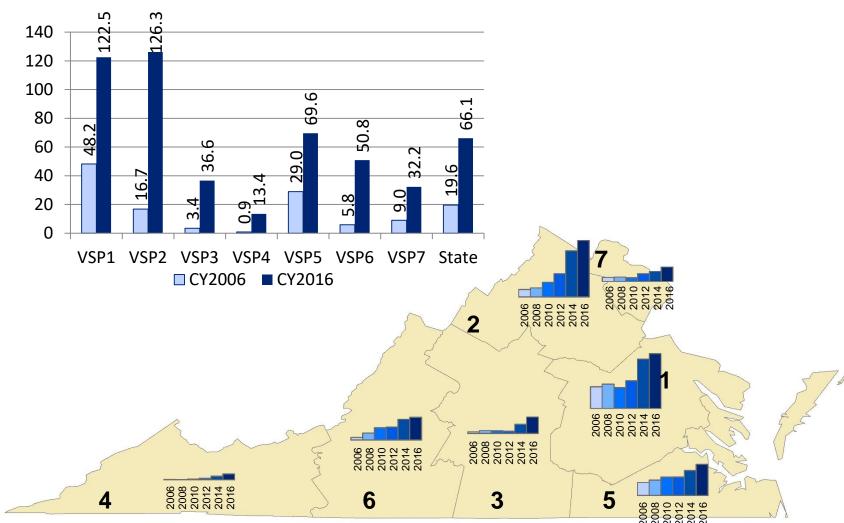






Heroin Submission Rate

Rate of submissions per 100,000 Population, calendar years 2006-2016







Heroin Summary

Statewide and by VSP Division

- Number of heroin case submissions:
 - Heroin cases submitted to DFS increased 8% statewide between 2015 and 2016.
 - Between 2011 and 2016, heroin submissions increased 154% statewide.
 - VSP Divisions 1 and 5 submitted the majority of the statewide total number of heroin cases in 2016 (31% and 23%, respectively).
 - Relatively few cases were submitted by Divisions 4 and 3 in 2016 (1% and 4%, respectively).
- Rate of submissions, per 100,000 population
 - The rate of heroin cases submitted from Divisions 1 and 2 were each almost twice as high as any other Division.

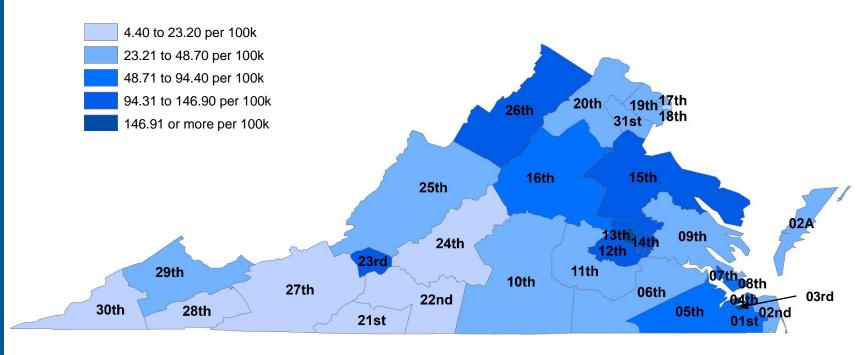




Heroin Data by Court District

Rate of submissions per 100,000 population, CY2016

- The Court Districts with the highest rate of heroin submissions were the 13th, 3rd, and 14th.
- Between 2015 and 2016, the rate of submissions from the 13th District decreased 14%. In that same period, the rate of submissions from the 12th, 14th, and 3rd Districts increased (30%, 10%, and 7%, respectively).

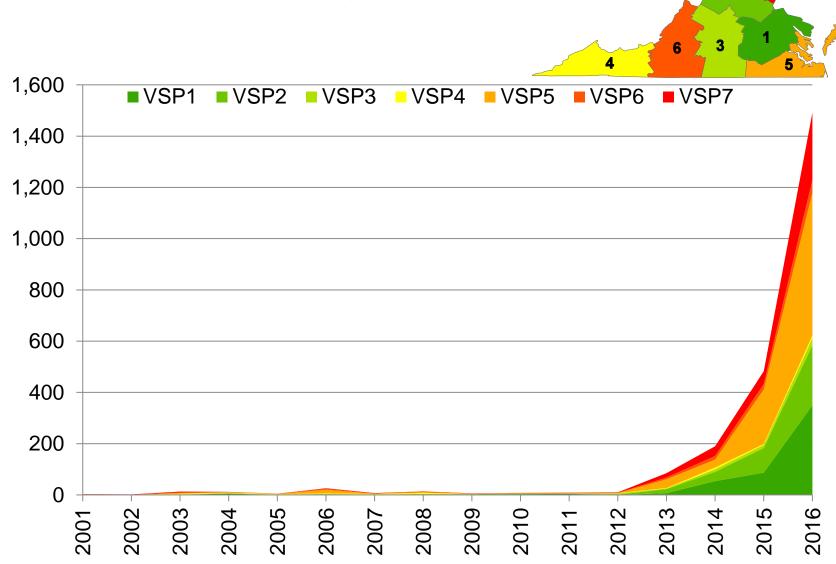






Illicit Fentanyl* Submissions



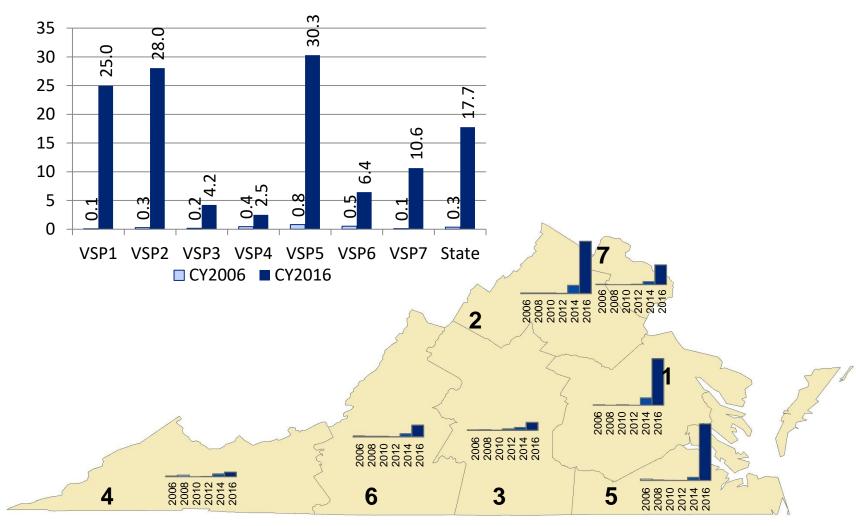






Illicit Fentanyl* Submission Rate

Rate of submissions per 100,000 Population, calendar years 2006-2016







Illicit Fentanyl* Summary

Statewide and by VSP Division

- Number of illicit fentanyl case submissions:
 - Illicit fentanyl cases submitted to DFS increased 207% statewide between 2015 and 2016.
 - Illicit fentanyl cases began increasing rapidly in 2013. Between 2013 and 2016, cases increased 1,656%.
 - VSP Divisions 5 and 1 submitted the majority of the statewide total number of illicit fentanyl cases in 2016 (37% and 23%, respectively).
 - Relatively few cases were submitted by Divisions 4 and 3 in 2016 (1% and 2%, respectively).
- Rate of submissions, per 100,000 population
 - The rate of illicit fentanyl cases submitted from Divisions 5, 2, and 1 were each more than twice as high as any other Division.

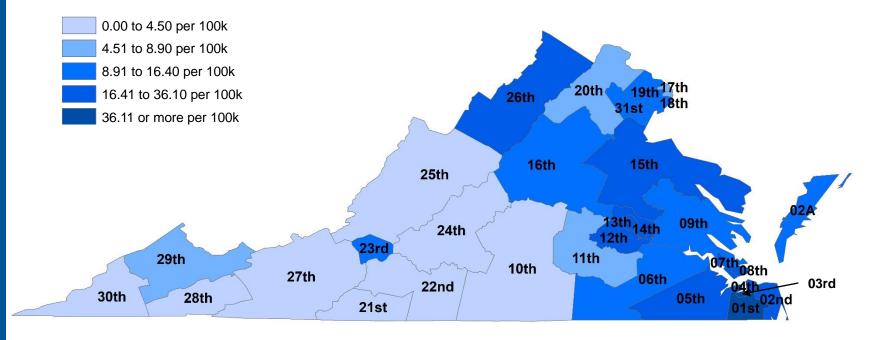




Illicit Fentanyl* Data by Court District

Rate of submissions per 100,000 population, CY2016

- The Court Districts with the highest rate of illicit fentanyl submissions were the 3rd, 1st, and 13th.
- Between 2015 and 2016, the rate of submissions from the 7th, 19th, and 8th Districts increased (1,369%, 559%, and 539% respectively). The rate of submissions from the 3rd, 1st, and 13th Districts also increased substantially (198%, 180%, and 314%, respectively).







4,000

3,500

3,000

2,500

2,000

1,500

1,000

500



■VSP2 ■VSP3

2002

2006

2004

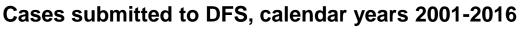
2003

2002

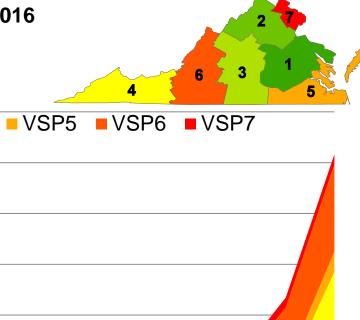
2001

VSP4

2007 - 2008 - 2009 - 2010 - 2011 - 2011



■VSP1



2012

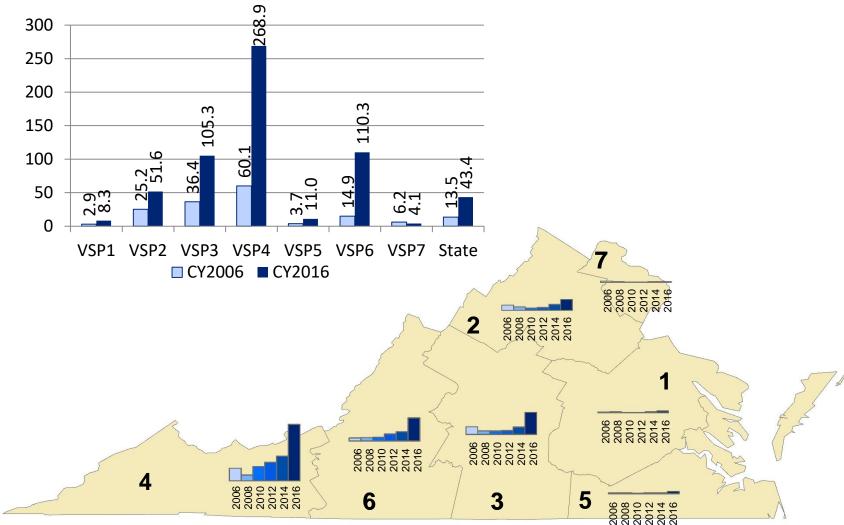
2013 2014 2015





Methamphetamine Submission Rate

Rate of submissions per 100,000 Population, calendar years 2006-2016







Methamphetamine Summary

Statewide and by VSP Division

- Number of methamphetamine case submissions:
 - Methamphetamine cases submitted to DFS increased 63% statewide between 2015 and 2016.
 - After remaining flat for several years, methamphetamine cases began to rise in 2012. Between 2011 and 2016, methamphetamine submissions increased 329% statewide.
 - VSP Divisions 4, 6, and 3 submitted three quarters of the statewide total number of methamphetamine cases in 2016 (32%, 23%, and 19% respectively).
 - Relatively few cases were submitted by Divisions 1, 7, and 5 in 2016 (3%, 3%, and 6%, respectively).
- Rate of submissions, per 100,000 population
 - The rate of methamphetamine cases submitted from Division 4 was over twice the rate from Divisions 3 and 6, which were each over twice as high as any other Division.

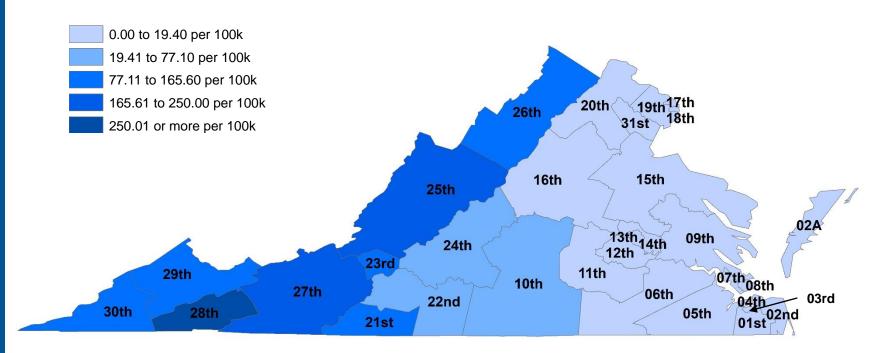




Methamphetamine Data by Court District

Rate of submissions per 100,000 population, CY2016

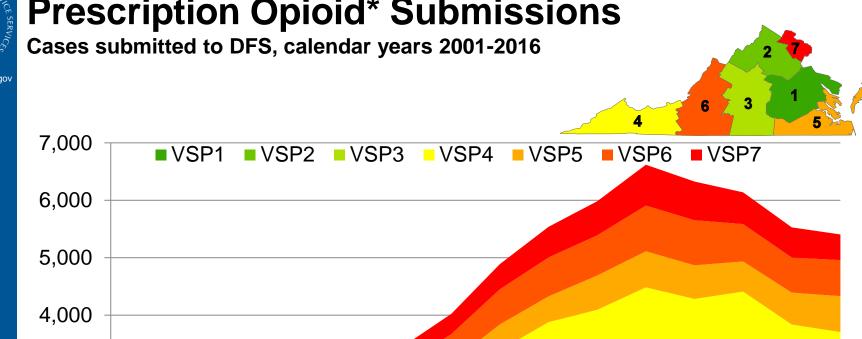
- The Court Districts with the highest rate of methamphetamine submissions were the 28th, 25th, and 27th.
- Between 2015 and 2016, the rate of submissions from the 24th, 28th, 25th, and 27th Districts increased (190%, 160%, 64%, and 28%, respectively).













3,000

2,000

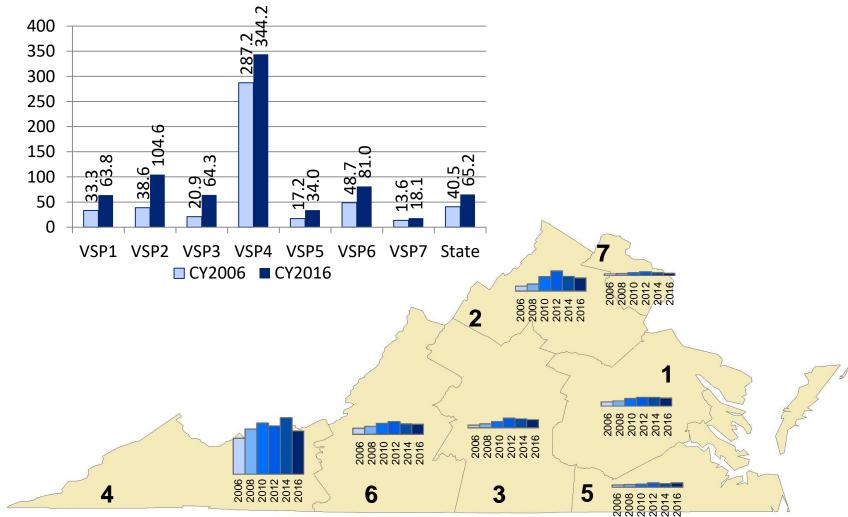
1,000

2008 2009 2011 2012 2013



Prescription Opioid* Submission Rate

Rate of submissions per 100,000 Population, calendar years 2006-2016







Prescription Opioid* Summary

Statewide and by VSP Division

- Number of prescription opioid case submissions:
 - The number of prescription opioid cases submitted to DFS decreased 3% statewide between 2015 and 2016.
 - After peaking in 2012, the number of prescription opioid submissions dropped each year. Between 2012 and 2016, submissions dropped 18% statewide.
 - VSP Division 4 has consistently submitted the most prescription opioid cases. In 2016, 28% of the statewide prescription opioid cases were from Division 4.
- Rate of submissions, per 100,000 population
 - The rate of prescription opioid submissions from Division 4 was more than three times higher than any other Division.

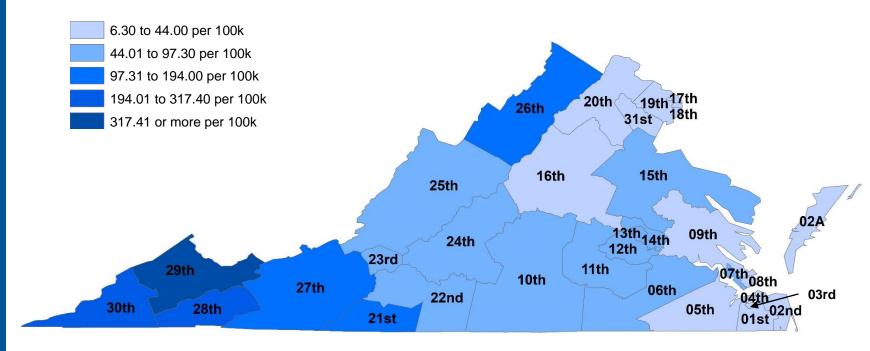




Prescription Opioid* Data by Court District

Rate of submissions per 100,000 population, CY2016

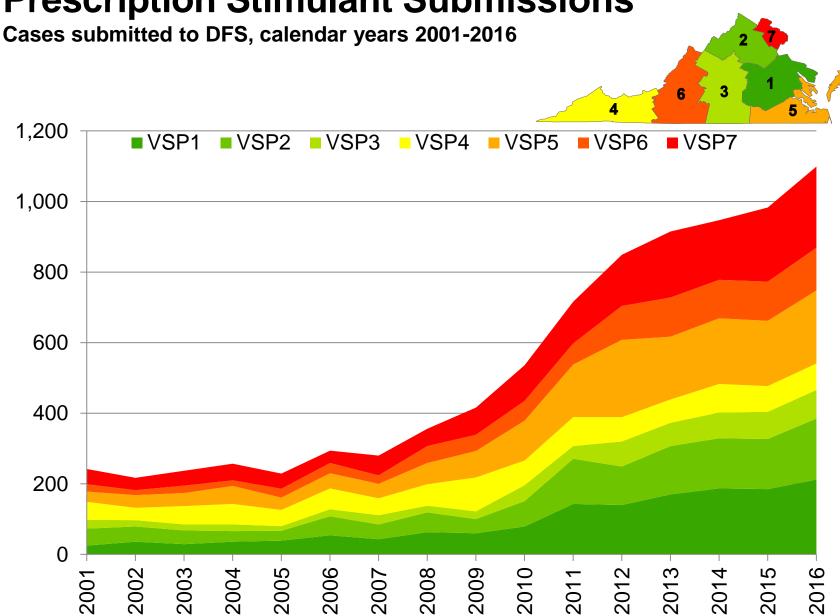
- The Court Districts with the highest rates of submissions in 2016 were the 29th, 30th, and 28th.
- Between 2015 and 2016, the rate of submissions from the 30th and 29th Districts decreased (46% and 6%, respectively). In the same period, the rate of submissions from the 28th District increased 71%.







Prescription Stimulant Submissions

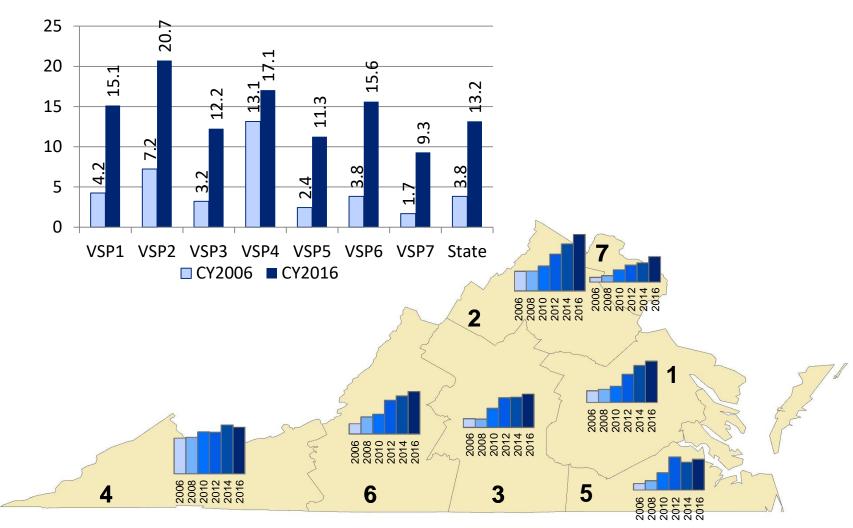






Prescription Stimulant Submission Rate

Rate of submissions per 100,000 Population, calendar years 2006-2016







Prescription Stimulant Summary

Statewide and by VSP Division

- Number of prescription stimulant case submissions:
 - The number of prescription simulant cases submitted to DFS increased 11% statewide between 2015 and 2016. Between 2011 and 2016, submissions increased 51%.
 - VSP Divisions 7, 1, and 5 submitted almost three-fifths of the statewide total in 2016 (21%, 19%, and 19%, respectively).
- Rate of submissions, per 100,000 population
 - Until 2015, Division 4 consistently had the highest rate of prescription stimulant submissions. In 2015 and 2016, Division 2 had the highest rate.
 - The rate of submissions for Division 2 increased 29% between 2011 and 2016. The rate for Division 4 dropped 6% during that period.

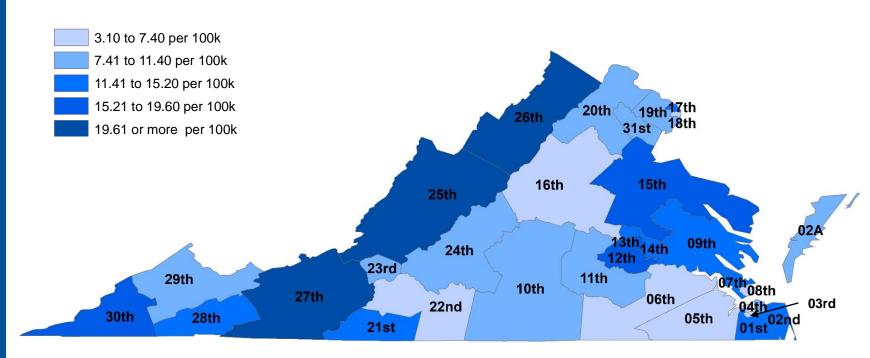




Prescription Stimulant Data by Court District

Rate of submissions per 100,000 population, CY2016

- The Court Districts with the highest rates of submissions in 2016 were the 27th, 26th, and 25th.
- Between 2015 and 2016, the rate of submissions from the 25th, 26th, and 27th Districts increased (29%, 20%, and 2%, respectively).

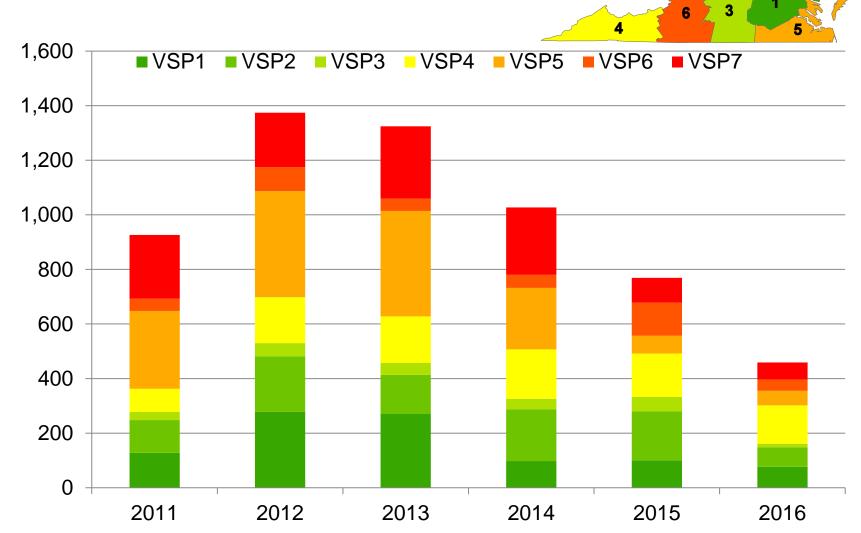






Cannabimimetic Agent* Submissions



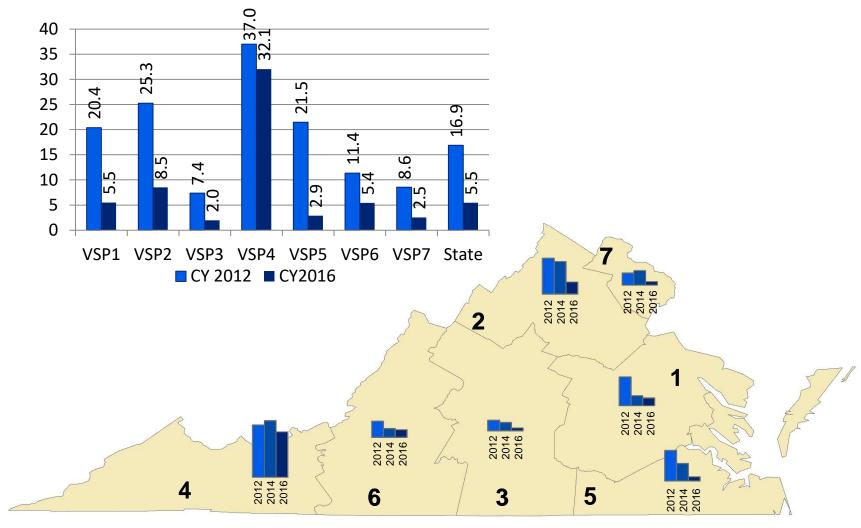






Cannabimimetic Agent* Submission Rate

Rate of submissions per 100,000 Population, calendar years 2012-2016







Cannabimimetic Agent* Summary

Statewide and by VSP Division

- Number of cannabimimetic agent case submissions:
 - The number of cannabimimetic agent cases submitted to DFS decreased 40% statewide between 2015 and 2016.
 - After peaking in 2012, the number of cannabimimetic agent submissions dropped each year. Between 2012 and 2016, submissions dropped 67%.
 - Almost one-third of submissions in 2016 were from VSP Division 4.
- Rate of submissions, per 100,000 population
 - The rate of submissions from Division 4 was more than three times the rate from any other Division in 2016.

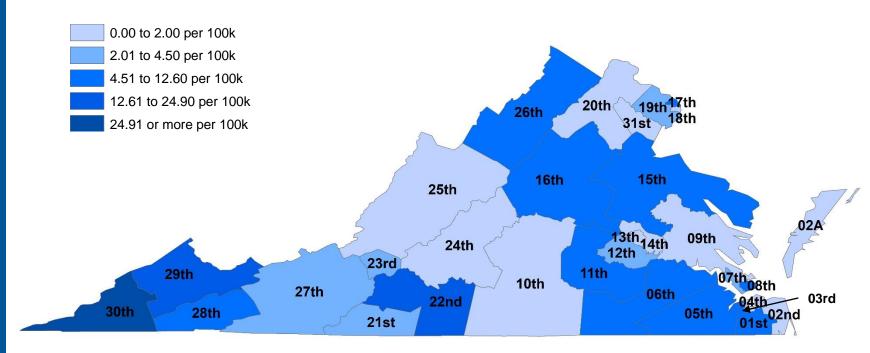




Cannabimimetic Agent* Data by Court District

Rate of submissions per 100,000 population, CY2016

- The Court District with the highest rate of submission in 2016 was the 30th, which was more than four times higher than any other District.
- Between 2015 and 2016, the rate of submissions from the 30th District increased 6%. In the same period, the rate of submissions from the 12th District decreased 81%.

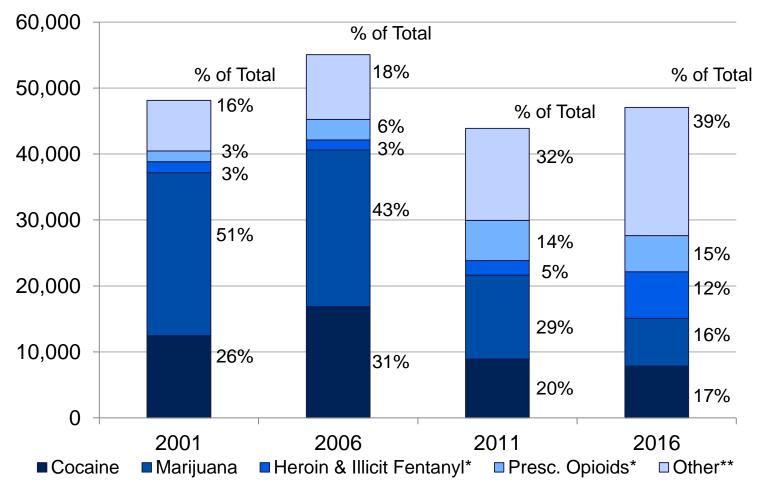






Combined Drug Submissions

Selected Drug Types





In 2001, cocaine and marijuana made up 77% of DFS cases. In 2016, they were only 33% of the total. During this same period of time, heroin, prescription opioids, and illicit fentanyl grew from 7% to 28% of the total.



Data Sources

Drug submission data for this report were provided by DFS, using information collected for the National Forensic Laboratory Information System. When multiple drug samples of the same type of drug were submitted as part of the same case, they were only counted a single time, as one case. When multiple samples of different drug types were submitted as part of the same case, they were counted as a single case for each included drug type.

Arrest data were taken from the annual *Crime in Virginia* reports prepared by the Virginia State Police (VSP), http://www.vsp.state.va.us/Crime_in_Virginia.shtm.

Population data used to calculate rates were provided by the Weldon Cooper Center for Public Service, http://www.coopercenter.org/demographics.

Data analysis was provided by the DCJS Criminal Justice Research Center.

