



Drug Cases Submitted to the Virginia Department of Forensic Science



Co-written by the Virginia Department of Forensic Science and the
Virginia Department of Criminal Justice Services

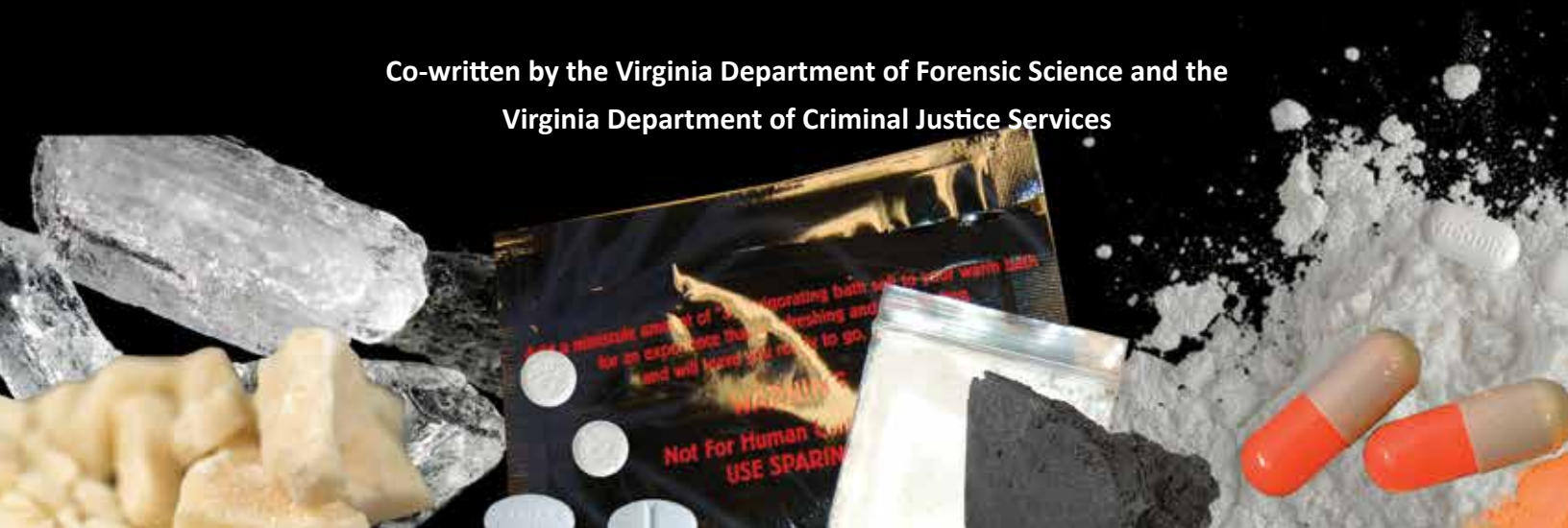


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Introduction

The Virginia Department of Forensic Science (DFS) receives tens of thousands of drug samples every year, submitted by law enforcement agencies across the state. This report, a joint effort by DFS and the Virginia Department of Criminal Justice Services (DCJS), highlights the frequency with which various selected drugs are submitted, broken out by the seven Virginia State Police divisions.

The drugs and drug categories presented here include:

- Benzodiazepines – Prescription anxiety medications such as Valium and Xanax.
- “Club Drugs” – 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 below is not included in this category.
- Cocaine
- Heroin
- Marijuana
- Methamphetamine
- Prescription Opioids – Various prescription opioid painkillers, such as Vicodin and OxyContin. Note that these drugs may not be illegal to possess, if the individual has a valid prescription. It is impossible to identify the existence or validity of a prescription in the DFS data.
- Prescription Stimulants – Various prescription medications that provide a stimulant effect, frequently used to treat Attention Deficit-Hyperactivity Disorder. Note that these drugs may not be illegal to possess, if the individual has a valid prescription. It is impossible to identify the existence or validity of a prescription in the DFS data.

- Synthetic Cannabinoids – Compounds that bind to the cannabinoid receptors in the brain, but often have widely differing effects than marijuana.
- Not all of the drugs counted in these categories are illegal to possess. Some controlled substances may be legally prescribed, as noted above. Also, designer drugs such as those included in the “Club Drugs” category above, and synthetic cannabinoids, are frequently designed with the intention of creating a substance that provides the effects of illicit recreational drugs but is chemically different from those drugs. When drugs such as these are identified, they are included in the data presented here, regardless of whether they have been added to the federal or Virginia list of controlled substances.

These data serve as a useful indicator of drug trends, but are not intended to present a complete picture of drug availability in Virginia. Other sources, such as arrest data in the Crime in Virginia report produced annually by the Virginia State Police (VSP), also have useful information.

Typically, VSP arrest data for a specific drug will show a similar pattern to DFS case submission data for the same drug, though the level (actual number of arrests/cases) will be significantly lower for arrests. In part this is because the arresting officer may be unable to make a probable identification of the drug at the time of arrest, so the substance is noted as simply “Unknown.” Also, in many instances, a drug may be seized as part of an arrest for other, more serious crimes, and the substance is therefore not noted in the arrest data.

Comparisons between DFS case submissions and arrest data for a few select drug types are shown on page 3.

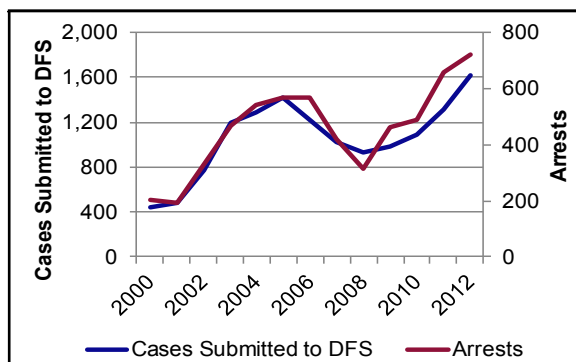
Comparing DFS Cases to Arrest Data

Cocaine, Heroin, Amphetamine/ Methamphetamine, and Marijuana

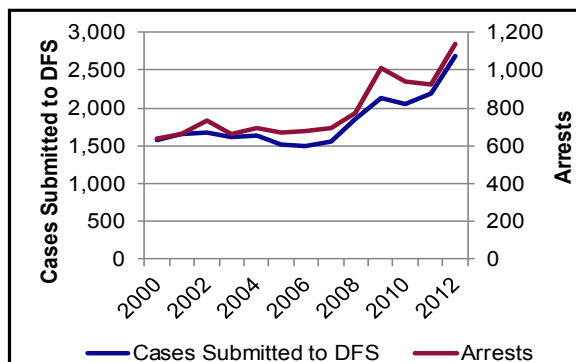
For cocaine, heroin, and amphetamine/
methamphetamine, DFS cases and VSP arrest data
show a similar pattern. Note that amphetamine and
methamphetamine are combined here, as that is
how they are identified in arrest data.

However, though the pattern is the same, the levels
are not. DFS cases (the left axis, and the blue 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.

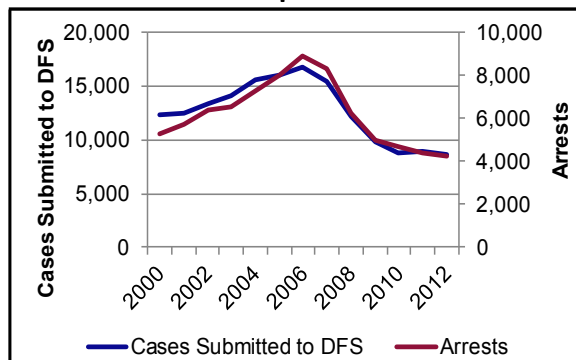
Cocaine



Heroin



Amphetamine/ Methamphetamine

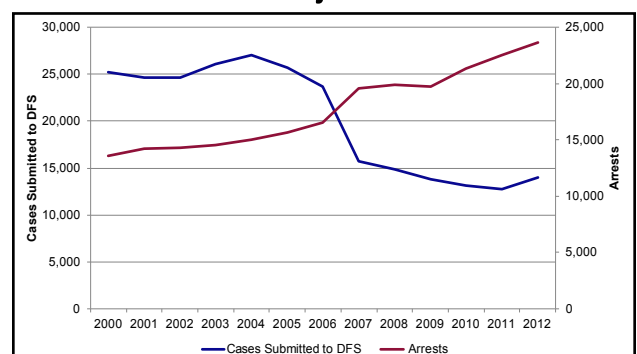


In contrast, DFS cases and VSP arrest data for
marijuana do not share a similar pattern. There is a
clear break in the series of data for both DFS cases
(left axis, blue line) and arrests (right axis, red line).

Beginning July 2006, in possession of marijuana
cases, law enforcement officers could testify at
trial as to the results of a marijuana field test kit.
Previously, courts required a positive result on a
marijuana sample tested by DFS. This change greatly
reduced the number marijuana cases submitted to
DFS.¹

Between 2006 and 2007, marijuana cases submitted
to DFS dropped 34%. In that same period,
marijuana-related arrests increased 18%.

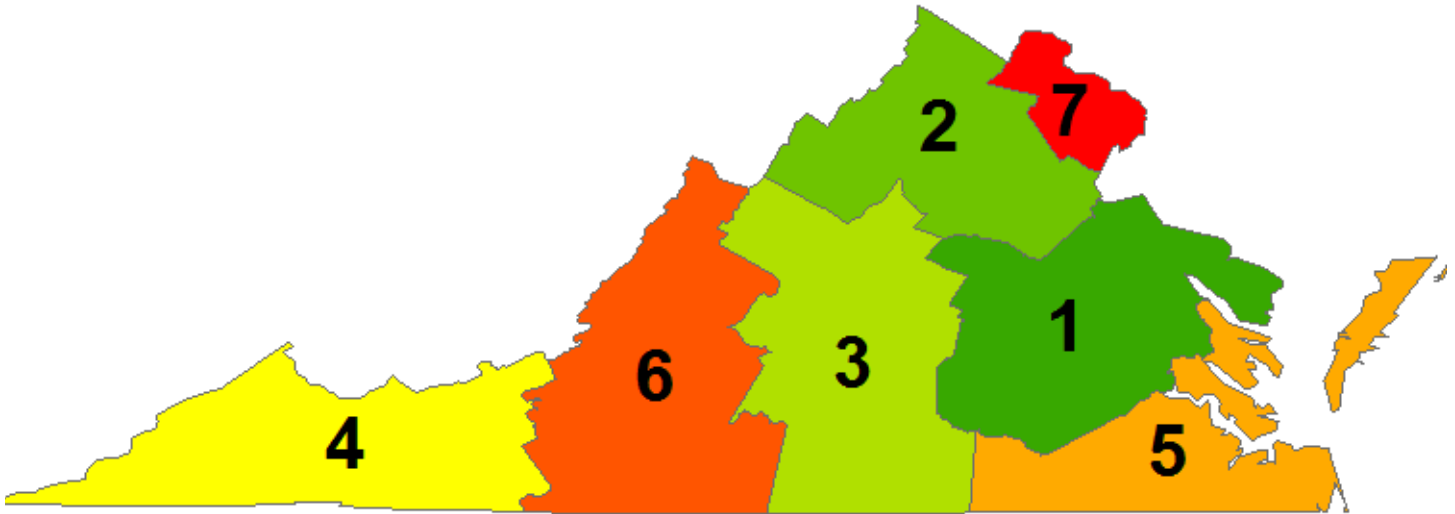
Marijuana



¹ Virginia Register of Regulations, Vol. 23, Issue 21. June 25, 2007.

Virginia State Police Divisions

The various maps in this report are broken out by Virginia State Police (VSP) Division. The localities in each of the seven divisions are listed below.



Division 1

Amelia County
Caroline County
Charles City County
Chesterfield County
Colonial Heights City
Dinwiddie County
Essex County
Goochland County
Hanover County
Henrico County
Hopewell City
King and Queen County
King George County
King William County
Lancaster County
Louisa County
New Kent County
Northumberland County
Nottoway County
Petersburg City
Powhatan County
Prince George County
Richmond City
Richmond County
Westmoreland County

Division 2

Clarke County
Culpeper County
Fauquier County
Frederick County
Madison County
Orange County
Page County
Rappahannock 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
Cumberland County
Fluvanna County
Greene County
Halifax County
Lunenburg County
Mecklenburg County
Nelson County
Prince Edward County
Charlottesville City
Lynchburg City
Staunton City
Waynesboro City

Division 4

Bland County
Bristol City
Buchanan County
Carroll County
Dickenson County
Galax City
Giles County
Grayson County
Lee County
Norton City
Pulaski County
Russell County
Scott County
Smyth County
Tazewell County
Washington County
Wise County
Wythe County

Division 5

Accomack County
Brunswick County
Chesapeake City
Emporia City
Franklin City
Gloucester County
Greensville County
Hampton City
Isle of Wight County
James City County
Mathews County
Middlesex County
Newport News City
Norfolk City
Northampton County
Poquoson City
Portsmouth City
Southampton County
Suffolk City
Surry County
Sussex County
Virginia Beach City
Williamsburg City
York County

Division 6

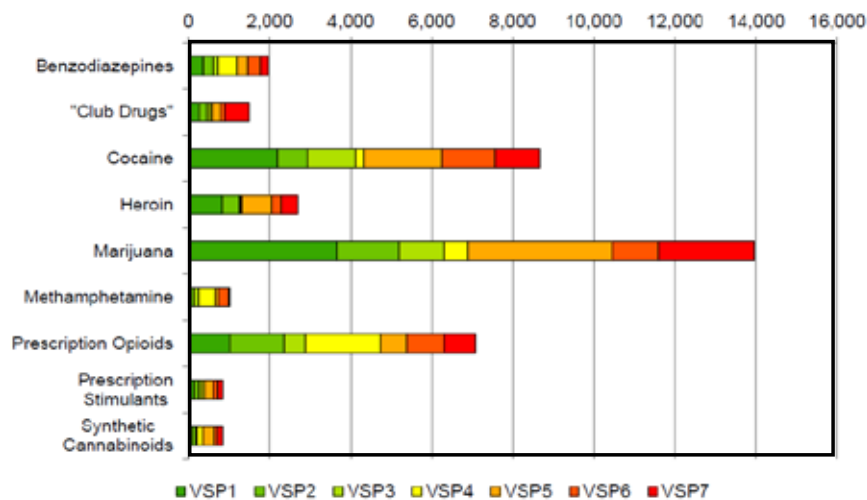
Alleghany County
Bath County
Bedford County
Botetourt County
Craig County
Floyd County
Franklin County
Henry County
Highland County
Montgomery County
Patrick County
Pittsylvania County
Roanoke County
Rockbridge County
Bedford City
Buena Vista City
Danville City
Lexington City
Martinsville City
Radford City
Roanoke City
Salem City

Division 7

Alexandria City
Arlington County
Fairfax City
Fairfax County
Falls Church City
Loudoun County
Manassas City
Manassas Park City
Prince William County

Drug Cases Submitted to DFS

Selected Drugs in 2012, By Virginia State Police Division

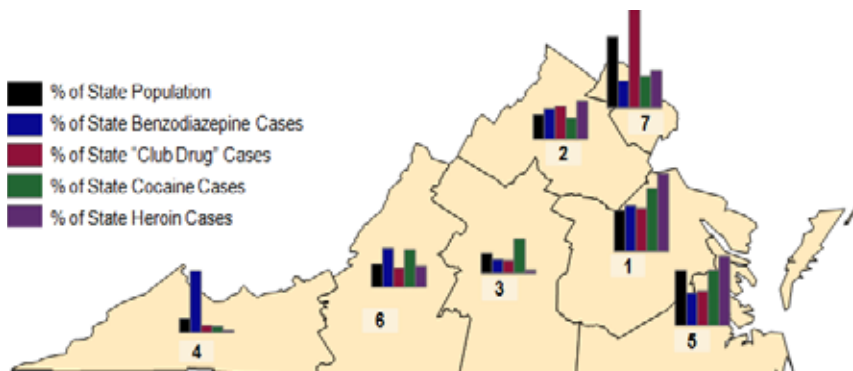


As the chart demonstrates, the three drug categories responsible for the greatest number of drug cases submitted to DFS in 2012, are marijuana, cocaine, and prescription opioids.

The chart also gives some indication of the number of submissions from each Division, for each drug category. The maps below will give a better understanding of the proportion of drugs of each type submitted by each Division.

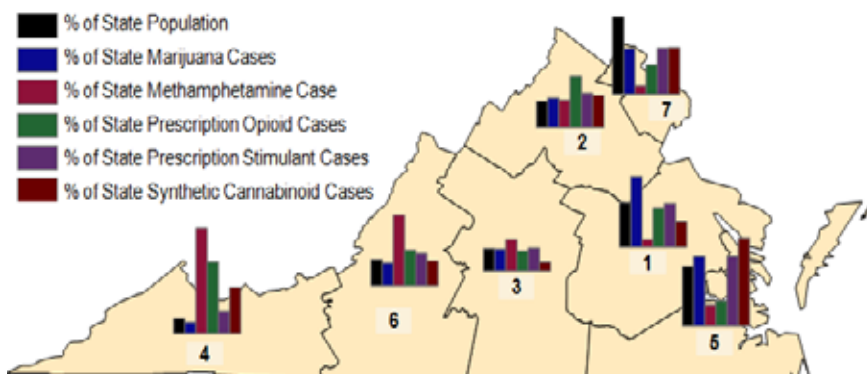
Regional Variations in Drug Submissions

Distribution of Benzodiazepine, Club Drug, Cocaine and Heroin Drug Cases Submitted to DFS, CY2012



The graphs on the map compare the proportion of the state's population that lived in that Division in 2012 (black bar) to the proportion of drug cases submitted to DFS in 2012, for select drug types.

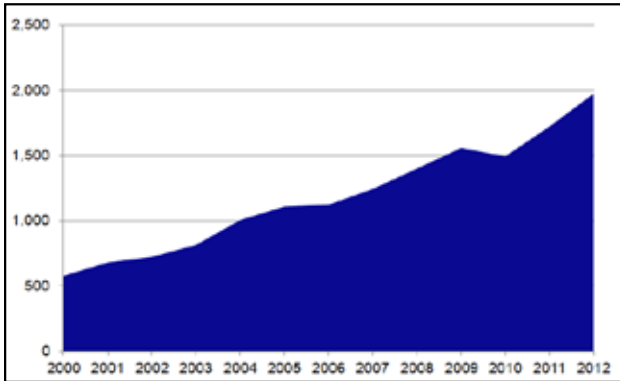
Distribution of Marijuana, Methamphetamine, Prescription Opioid, Prescription Stimulant, and Synthetic Cannabinoid Prescription Drug Cases Submitted to DFS, CY2012



The graphs on the map compare the proportion of the state's population that lived in that Division in 2012 (black bar) to the proportion of drug cases submitted to DFS in 2012, for select drug types.

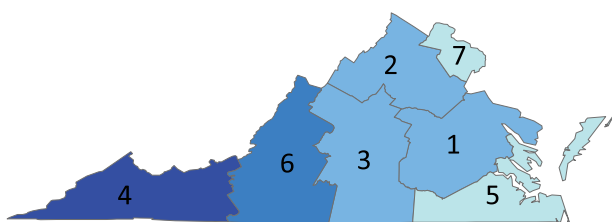
Benzodiazepine Cases Submitted to DFS

Number of Cases Submitted Calendar Years 2000–2012

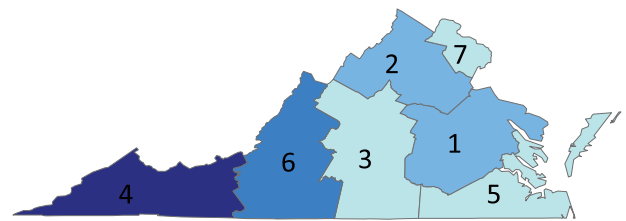


Benzodiazepine cases submitted to DFS increased 241% between 2000 and 2012. Between 2011 and 2012, they increased 15%.

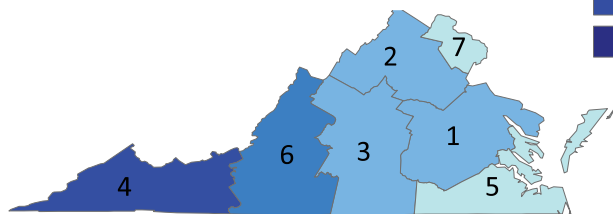
*Rate of Submissions per 100,000 Population**



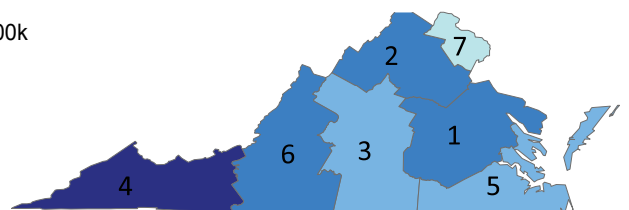
2006 Statewide Rate 14.6



2008 Statewide Rate 17.9



2010 Statewide Rate 18.6



2012 Statewide Rate 24.1

Consistently, the VSP Division with the highest rate of submission for benzodiazepine cases has been Division 4.

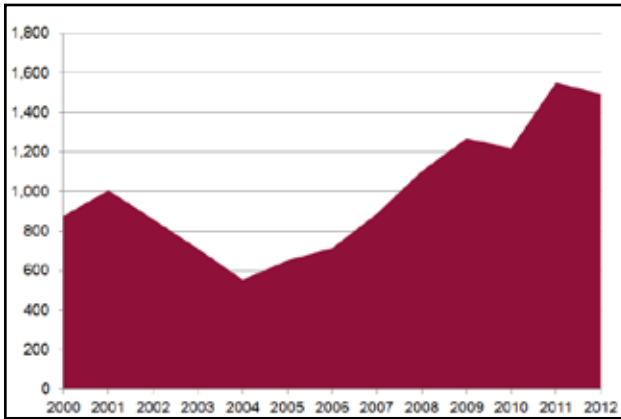
Although Division 4 continues to have the highest submission rate for benzodiazepines, the rate of growth between 2006 and 2012 was lower than any other Division. Divisions 5 and 2 saw the largest growth in benzodiazepine cases submitted to DFS, increasing 200% and 181%, respectively, between 2006 and 2012.

Statewide, the rate of benzodiazepine DFS cases increased 65% between 2006 and 2012.

**Indicates the number of cases from each Division, per 100,000 people in that Division. Rates assist in the comparison of localities of different sizes.*

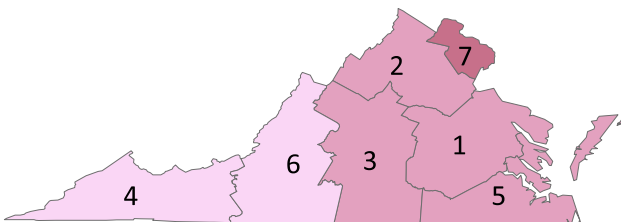
“Club Drug” Cases Submitted to DFS

Number of Cases Submitted Calendar Years 2000–2012

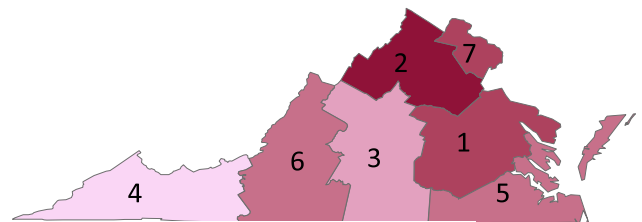


“Club Drug” cases submitted to DFS dropped 37% between 2000 and 2004. Between 2004 and 2012, they increased 170%. This increase is at least in part due to 43 drugs in this category being added to the list of Schedule I drugs in the *Code of Virginia*, in 2011–2013.

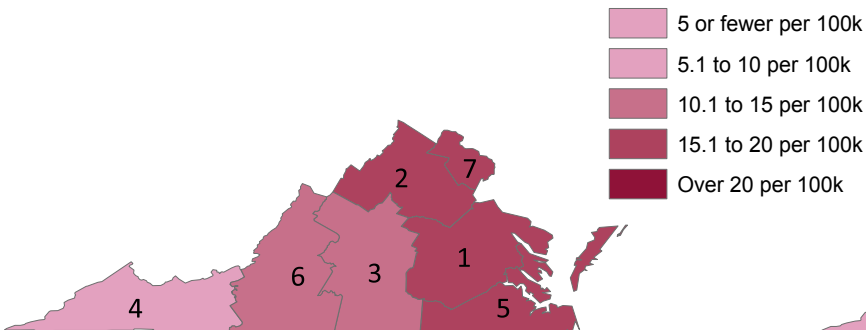
*Rate of Submissions per 100,000 Population**



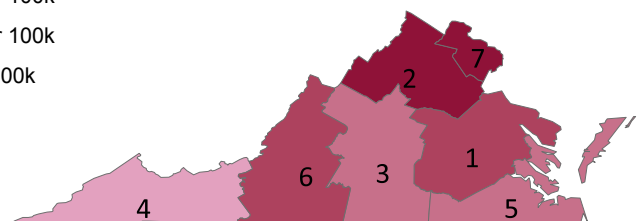
2006 Statewide Rate 9.3



2008 Statewide Rate 14.0



2010 Statewide Rate 15.2



2012 Statewide Rate 18.2

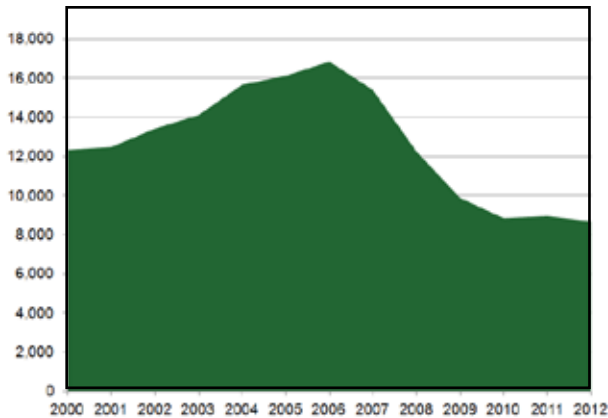
The rate of club drug submissions to DFS has typically been highest in the two northern VSP Divisions, Divisions 2 and 7. However, club drug cases have spread out somewhat over time.

In 2006, Division 7 submitted club drug cases to DFS at a rate of 14.7 per 100,000 population. By 2012, every Division except 4 and 5 had a higher rate of club drug submissions. Divisions 2 and 7 continued to have the highest rate, however (24.7 and 25.3 per 100,000, respectively). Statewide, the rate of club drug DFS cases increased 97% between 2006 and 2012.

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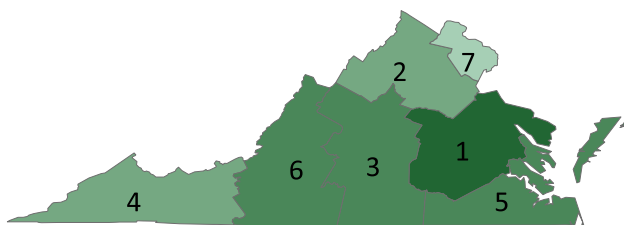
Cocaine Cases Submitted to DFS

Number of Cases Submitted Calendar Years 2000-2012

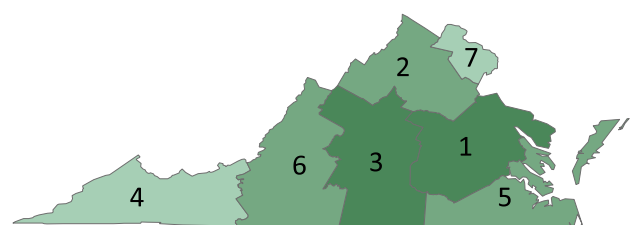


Cocaine cases submitted to DFS increased 37% between 2000 and 2006. Between 2006 and 2012, they dropped 49%.

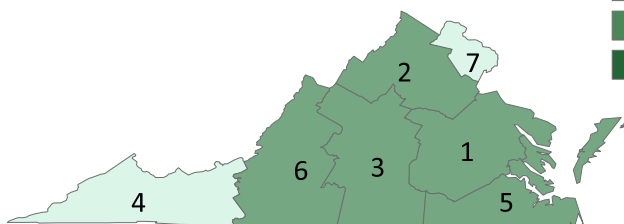
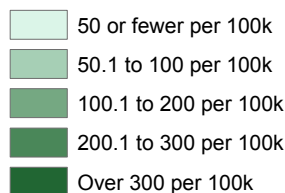
*Rate of Submissions per 100,000 Population**



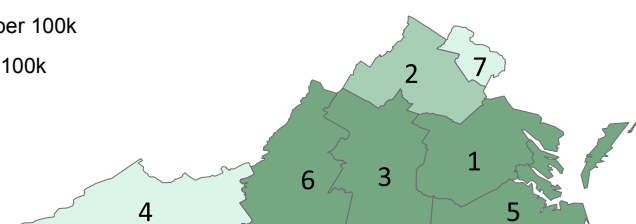
2006 Statewide Rate 219.2



2008 Statewide Rate 155.8



2010 Statewide Rate 110.1



2012 Statewide Rate 105.9

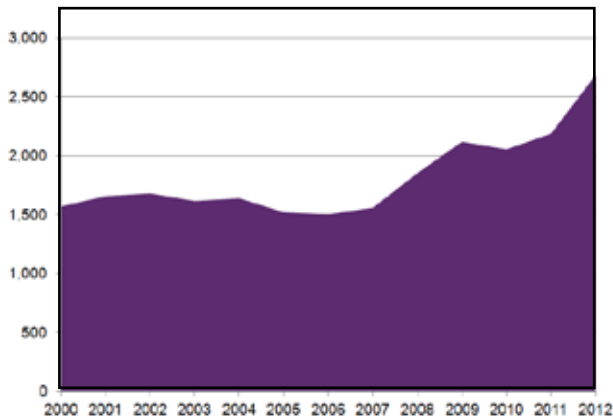
The number of cocaine cases submitted to DFS has dropped substantially since 2006, due to a number of factors (e.g., destruction of coca plantations in South America, substantial seizures by law enforcement, and disruption caused by the drug war in Mexico; see, for example, the 2011 National Drug Threat Assessment, <http://www.justice.gov/archive/ndic/topics/ndtas.htm>).

The drop in rate of cocaine case submissions has occurred across the state, to varying degrees. Division 6 saw the smallest drop, 28%, and Division 5 saw the largest drop, 64%. Statewide, the rate of cocaine DFS cases decreased 52% between 2006 and 2012.

**Indicates the number of cases from each Division, per 100,000 people in that Division. Rates assist in the comparison of localities of different sizes.*

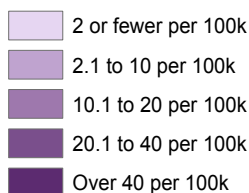
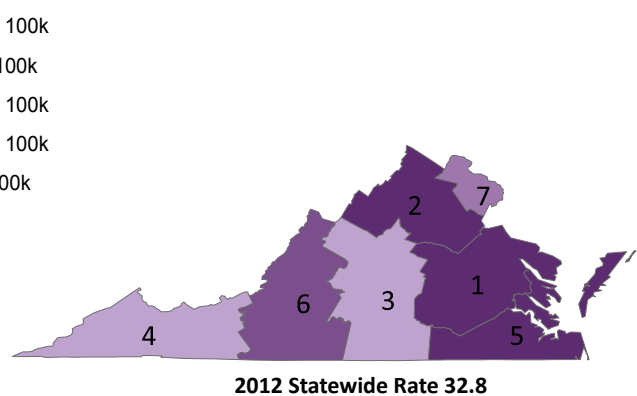
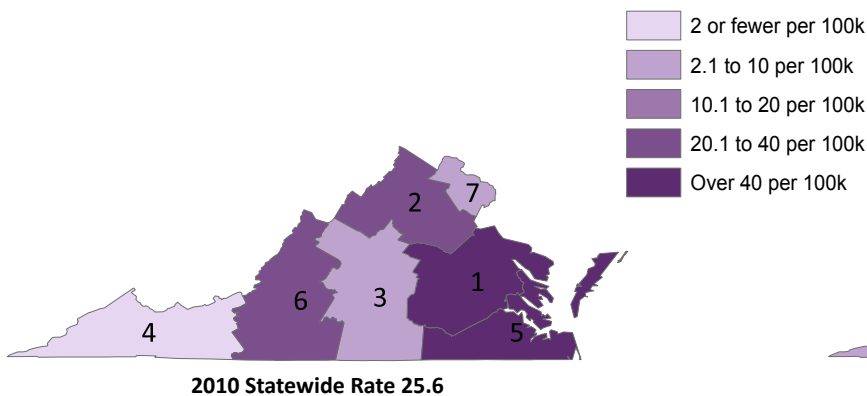
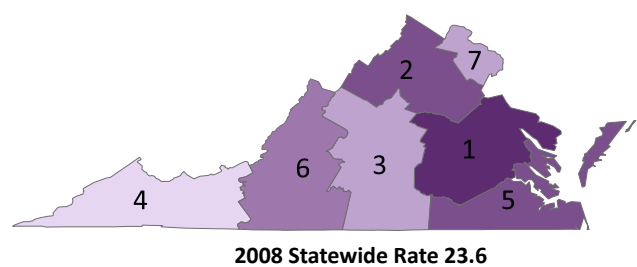
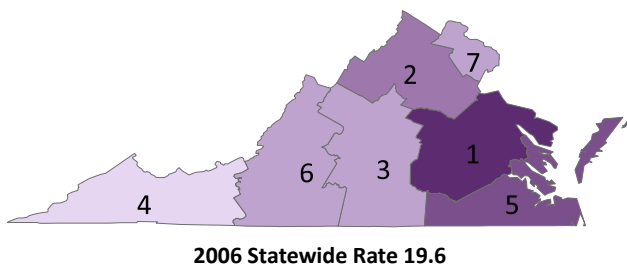
Heroin Cases Submitted to DFS

Number of Cases Submitted Calendar Years 2000–2012



Heroin cases submitted to DFS dropped 4% between 2000 and 2006. Between 2006 and 2012, they increased 79%.

*Rate of Submissions per 100,000 Population**



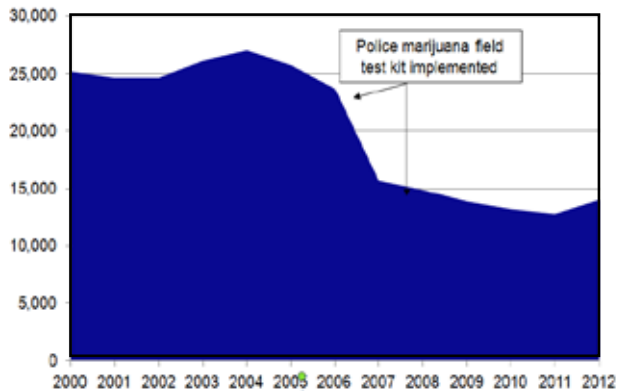
The rate of heroin submissions to DFS, per 100,000 population, has typically been highest in VSP Divisions 5 and 1. However, other Divisions have experienced a larger increase in the rate of heroin submissions, and by 2012, Division 2 had a higher rate of submission than Division 5.

But the largest growth in the rate of heroin cases was seen in Division 6, which had a 365% increase between 2006 and 2012. Statewide, the rate of heroin DFS cases increased 68% between 2006 and 2012.

**Indicates the number of cases from each Division, per 100,000 people in that Division. Rates assist in the comparison of localities of different sizes.*

Marijuana Cases Submitted to DFS

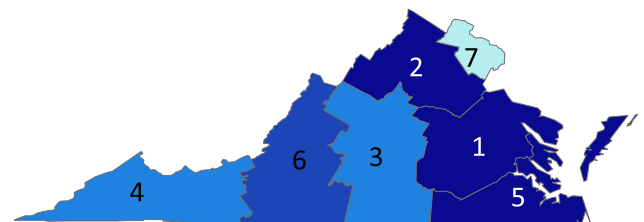
Number of Cases Submitted Calendar Years 2000-2012



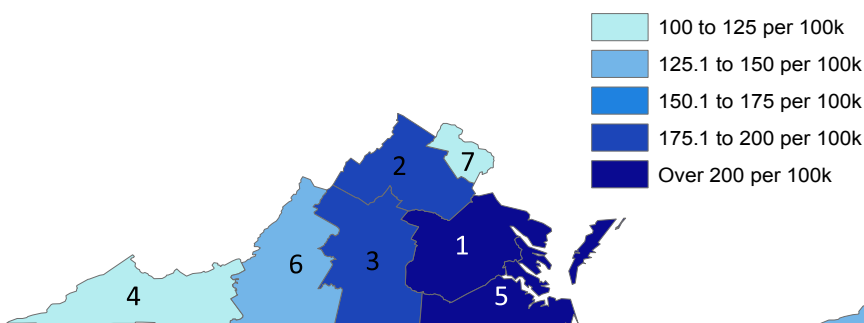
Beginning July 2006, in possession of marijuana cases, law enforcement officers could testify at trial as to the results of a marijuana field test kit. This greatly reduced the number of marijuana cases submitted to DFS (see page 3). As a result, rates prior to 2007 are not comparable to those presented here. As is noted above, the change allowing the use of marijuana field test kits resulted in many fewer marijuana samples being submitted to DFS after 2006. The difference between 2006 and 2007 was extreme. This change may be continuing to lower marijuana submissions to a lesser extent, but it appears that the number of submissions has leveled off.

The drop in cases submitted to DFS may have ended. Marijuana cases increased 10% between 2011 and 2012. In 2008, Division 5 had the highest rate of submissions, but in 2010 and 2012 Division 1 had the highest. Statewide, the rate of marijuana DFS cases decreased 13% between 2008 and 2010, then increased 4% in 2012.

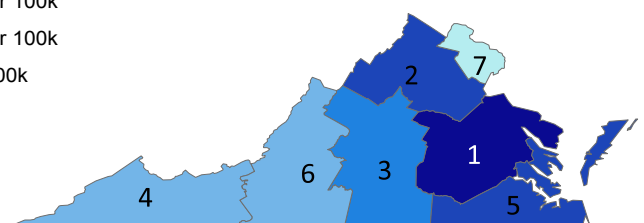
Rate of Submissions per 100,000 Population*



2008 Statewide Rate 189.4



2010 Statewide Rate 164.0

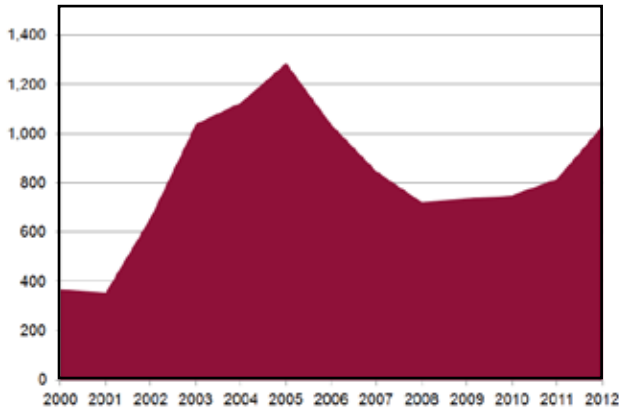


2012 Statewide Rate 170.6

*Indicates the number of cases from each Division, per 100,000 people in that Division. Rates assist in the comparison of localities of different sizes.

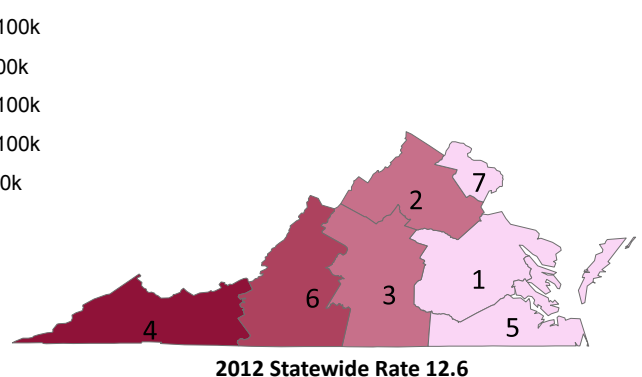
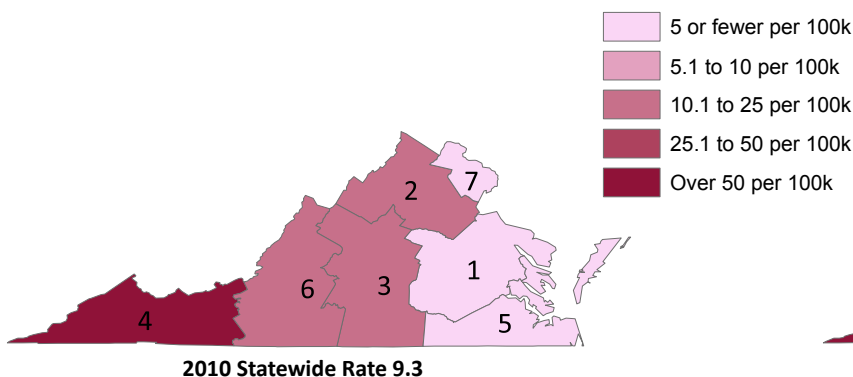
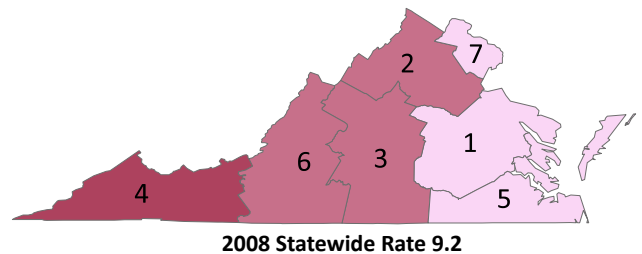
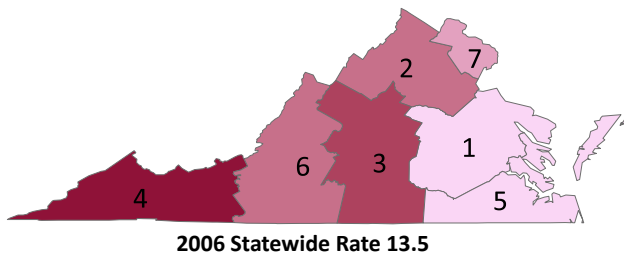
Methamphetamine Cases Submitted to DFS

Number of Cases Submitted Calendar Years 2000–2012



Methamphetamine cases submitted to DFS increased 251% between 2000 and 2005. Following a high number of methamphetamine lab seizures in 2004 and 2005, the number of methamphetamine cases dropped for several years, dropping 44% between 2005 and 2008. Between 2008 and 2012, cases increased 43%.

Rate of Submissions per 100,000 Population*

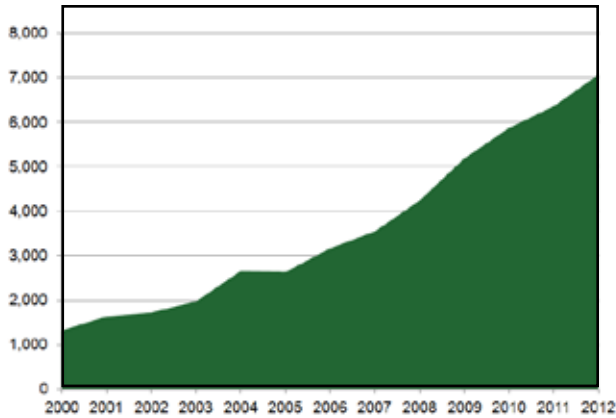


Consistently, the VSP Division with the highest rate of submission for methamphetamine cases has been Division 4. Between 2006 and 2008, the rate of methamphetamine submissions dropped 32% statewide. The statewide rate increased little (1.5%) in 2010, but almost all of the increase was attributable to Divisions 4 and 6. The rate of methamphetamine cases increased 68% in Division 4, and 18% in Division 6, with all other Divisions seeing a decrease. The statewide rate increased 35% in 2012, with the largest increases occurring in Division 4 (74%) and Division 6 (79%).

*Indicates the number of cases from each Division, per 100,000 people in that Division. Rates assist in the comparison of localities of different sizes.

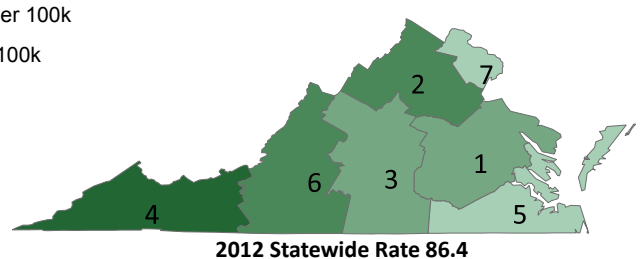
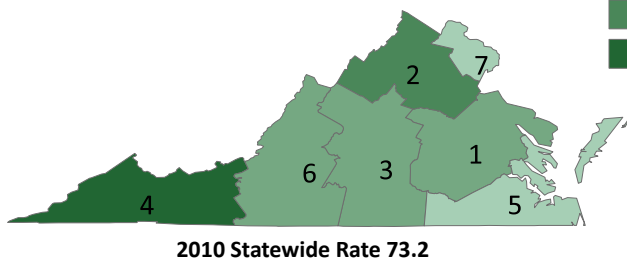
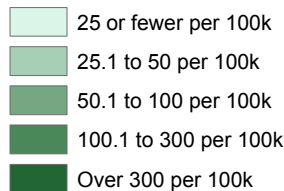
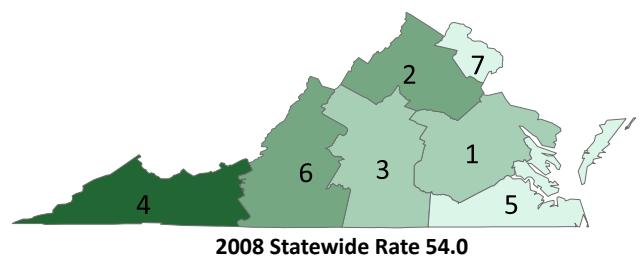
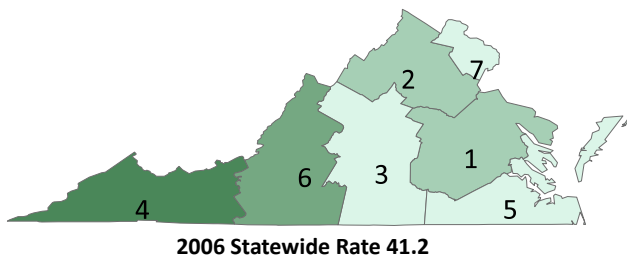
Prescription Opioid Cases Submitted to DFS

Number of Cases Submitted Calendar Years 2000-2012



Prescription opioid cases submitted to DFS increased 437% between 2000 and 2012. Between 2011 and 2012, they increased 11%.

Rate of Submissions per 100,000 Population*



Consistently, the VSP Division with the highest rate of submission for prescription opioid cases has been Division 4.

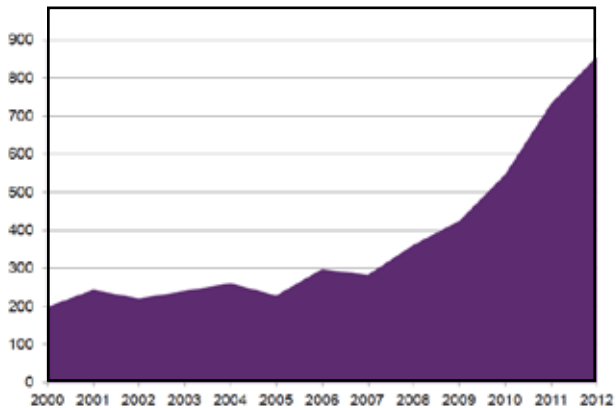
However, between 2006 and 2012, the rate of cases for Division 4 grew less than any other Division. In 2006 and 2008, the rate for Division 4 was seven times higher than the statewide rate. By 2012, it had dropped to less than five times the statewide rate. Divisions 2 and 3 saw the largest growth in prescription opioid cases submitted to DFS, increasing 321% and 274%, respectively, between 2006 and 2012. The rate for Division 4 increased 42%, the lowest among the Divisions.

Statewide, the rate of prescription opioid DFS cases increased 108% between 2006 and 2012.

*Indicates the number of cases from each Division, per 100,000 people in that Division. Rates assist in the comparison of localities of different sizes.

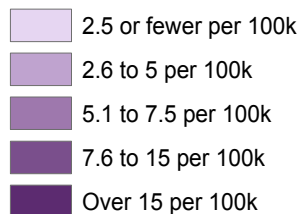
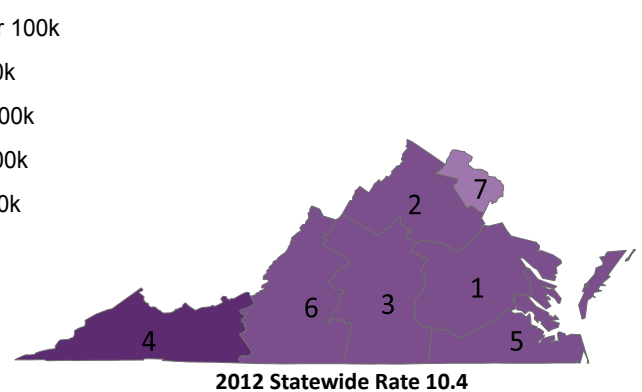
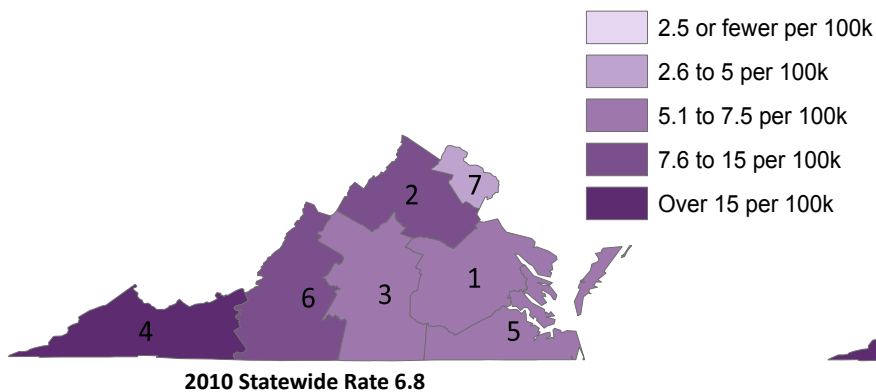
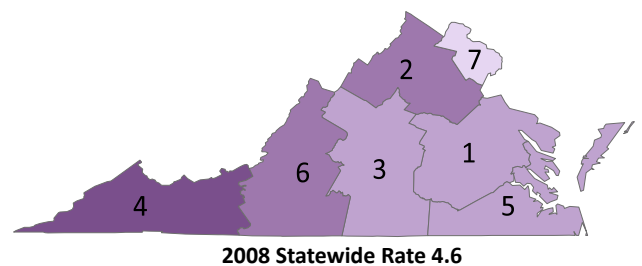
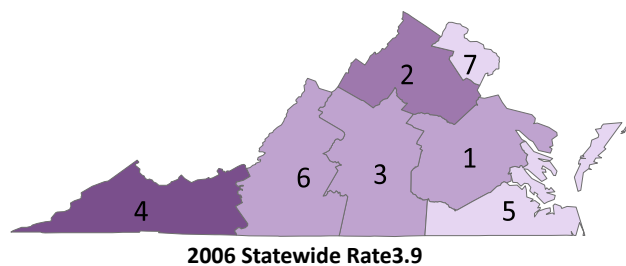
Prescription Stimulant Cases Submitted to DFS

Number of Cases Submitted Calendar Years 2000-2012



Prescription stimulant cases submitted to DFS increased 50% between 2000 and 2006. Between 2006 and 2012, they increased 188%.

*Rate of Submissions per 100,000 Population**



Consistently, the VSP Division with the highest rate of submission for prescription stimulant cases has been Division 4. However, between 2006 and 2012, the rate of cases for Division 4 grew less than any other Division.

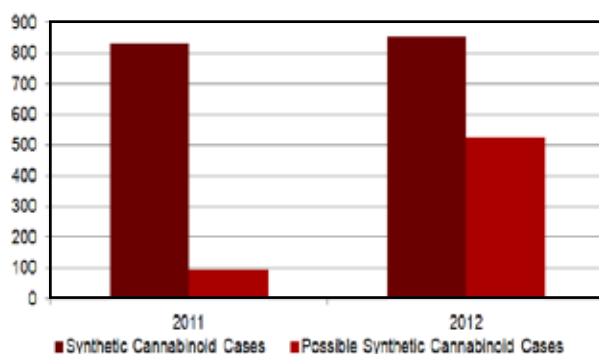
Divisions 2, 5 and 7 saw the largest growth in prescription stimulant cases submitted to DFS, increasing 239%, 394%, and 270%, respectively, between 2006 and 2012.

Statewide, the rate of prescription stimulant DFS cases increased 170% between 2006 and 2012.

**Indicates the number of cases from each Division, per 100,000 people in that Division. Rates assist in the comparison of localities of different sizes.*

Synthetic Cannabinoid Cases Submitted to DFS

Number of Cases Submitted Calendar Years 2011–2012

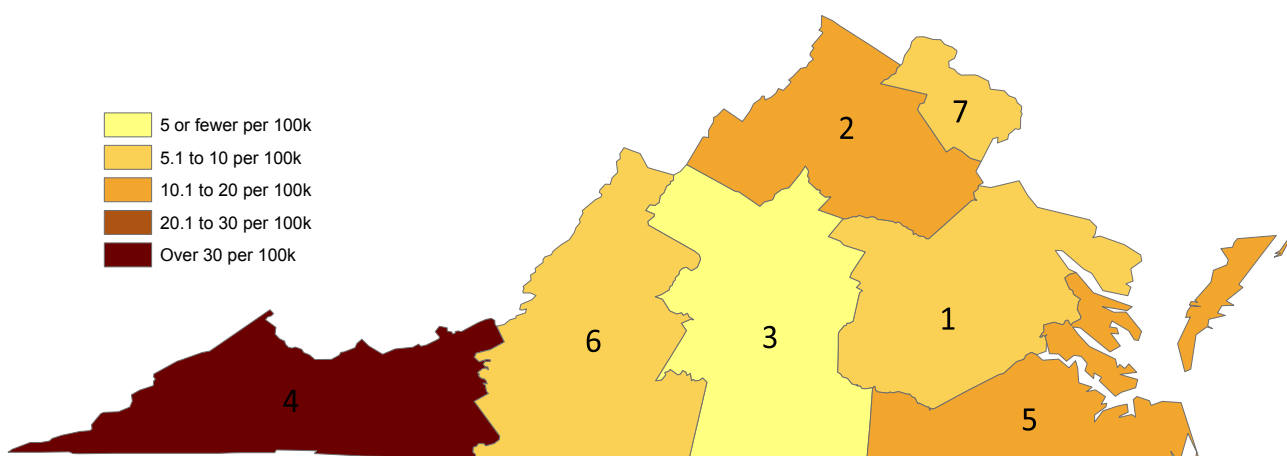


On March 1, 2011, the DEA exercised its emergency powers to add five of the most common chemicals in synthetic cannabinoids to the list of Schedule I drugs. And on March 23, of that year, Virginia legislation (HB1434 and SB745) took effect, outlawing a longer list of substances. Synthetic cannabinoid cases increased 2% between 2011 and 2012.

Until a substance is legally defined as a synthetic cannabinoid (*Code of Virginia* §18.2-248.1:1), it will not be identified as such in the data. Therefore,

some submissions of drugs that would eventually be counted as synthetic cannabinoids, might have been identified as simply “No controlled substance” at the time of testing. The chart to the left indicates the number of cases that may have contained a non-prohibited, synthetic cannabinoid-type compound. If these were combined with the confirmed cases, it would result in a 62% increase in the number of synthetic cannabinoid cases in 2012.

*Rate of Submissions per 100,000 Population**



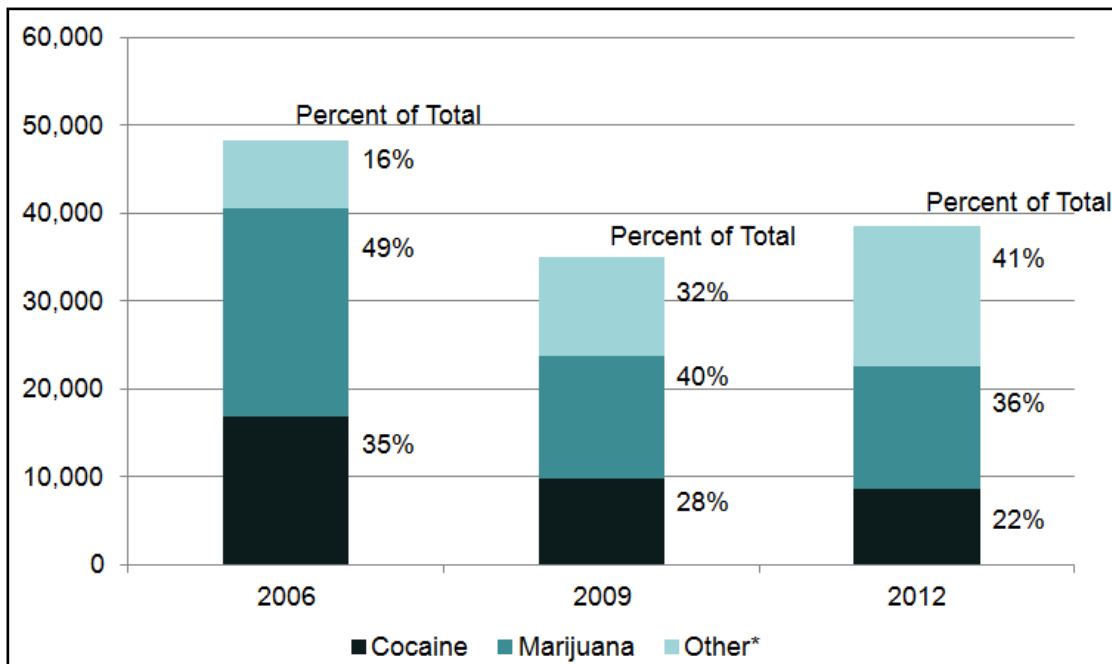
2012 Statewide Rate 10.4

Division 4 had the highest rate of synthetic cannabinoid cases submitted to DFS, over three times the statewide rate and more than twice the rate of the second highest, Division 5.

**Indicates the number of cases from each Division, per 100,000 people in that Division. Rates assist in the comparison of localities of different sizes.*

Combined Drug Submissions

Selected Drug Types



**Sum of Benzodiazepines, "Club Drugs", Heroin, Methamphetamine, Prescription Opioids, Prescription Stimulants, and Synthetic Cannabinoids*

Changing Drug Patterns

The chart above demonstrates the changes in the number (rather than rate) of cases submitted to DFS in recent years, for the drug types discussed in this report.

The chart makes two points clear:

First, cocaine and marijuana have historically represented the overwhelmingly majority of cases submitted to DFS.

Second, that trend is changing.

A clear drop in submissions is visible after 2006, with the total submissions for the drug types presented here dropping 28% by 2009. However, this decrease is due entirely to a drop in cocaine and marijuana cases, dropping 41% and 42% respectively (see pages 8 and 10 for more information). Meanwhile, cases for the other drug types, combined, increased 44%.

Cocaine cases dropped another 12% by 2012, while marijuana cases were largely unchanged, increasing less than 1%. But cases for the other drug types,

combined, increased 41%. As a result, the total number of cases for the drug types presented here increased 10% between 2009 and 2012.

Although submissions are still below 2006 levels, the pattern of drug submissions has changed substantially. Cocaine cases have been cut in half, while "club drug", prescription stimulant, and prescription opioid cases have each more than doubled, and heroin and benzodiazepine cases are both up more than 75%.

And as the maps on page 5 demonstrate, some of these drug types are highly concentrated within one or two specific regions (though they can be found across Virginia).

These changes in drug case submissions imply changes in the availability and use of various types of drugs. This knowledge may help guide the development of drug treatment and law enforcement programs. DFS and DCJS will continue to monitor these trends in drug submissions, to better inform state and local decision-makers.



Virginia Department of Forensic Science

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