



# Framework for Addiction Analysis and Community Transformation (FAACT)

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*Cross-Boundary Collaboration and Partnerships Category*

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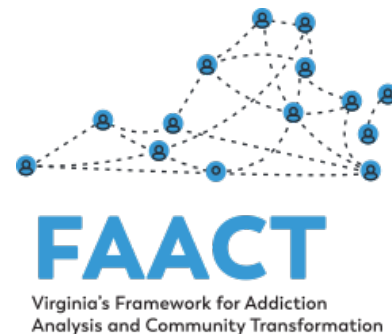
# FAACT: A Data-Driven Alliance to Fight the Opioid Epidemic

## Executive Summary

*“As a Commonwealth, we must be strategic and proactive in helping individuals struggling with addiction and addressing the opioid crisis in our communities. As a physician, I know that we cannot defeat this epidemic in isolation. With the expansion of this platform, we will enable more of our government agencies and local organizations to share important data, and work together to translate that information into real solutions that can save lives.”*

*- Virginia Governor Ralph Northam*

Virginia’s Framework for Addiction Analysis and Community Transformation (FAACT) is a secure data-sharing platform led by the Department of Criminal Justice Services (DCJS) in collaboration with Virginia’s chief data officer (CDO). It combines previously siloed data from different agencies, secretariats, localities, social services, public safety and corrections, drug courts, community coalitions and private healthcare systems. It generates insights about contributing factors, brings awareness and delivers actionable intelligence to community leaders supporting their timely and effective response.



The platform was enabled by Virginia’s Government Data Collection and Dissemination Practices Act (§ 2.2-3800 et seq.), July 2018. The act enabled data sharing and created the cabinet-level position of chief data officer. It directed “initial efforts on data related to substance abuse, with a focus on opioid addiction, abuse and overdose.”

Information existed in each organization’s respective silos, stored in spreadsheets, databases, forms and even paper files. There was no easy way to pool data and share information. The lack of standards for data processing, collection and management made it difficult for users, who are civil servants and not data scientists, to maximize the data’s value.

DCJS partnered with the CDO, engaged local health, public safety and social service leaders, developed business requirements, procured a vendor partner and began the build. The resulting data process and platform, FAACT, was introduced in January 2019.

The platform now actively collects data from multiple sources. It provides local governments and community organizations with a vast amount of information to help them understand and combat the opioid drug epidemic in their neighborhoods. Advanced data analytics and pre-built visualizations enable quick and informed decisions on how to address—and successfully respond to—the growing opioid crisis in a more proactive manner.

Importantly, the FAACT platform is now being engaged in the fight against the COVID-19 pandemic. Local participants use its data analysis tools to help determine where cases are rising, where containment measures are working and to help maintain an adequate supply of resources.

## Concept

### **Evidence-based guidance for community partners**

Prior to development of FAACT, many organizations were tackling the opioid crisis, but information existed in each group's respective silos and was stored in spreadsheets, databases, forms and even paper files. There was no easy way to pool data resources and share information. The lack of standards for data processing, collection and management made it difficult for users, who are civil servants and not data scientists, to maximize the data's value.

The FAACT platform was developed to address this problem. Agencies securely collect information from various sources and store it one repository. The system documents and catalogs the data, anonymizes sensitive information, and allows non-information technology professionals to create customized dashboards and analytical applications. Information from multiple sources is presented in an easy-to-understand manner. It provides actionable intelligence so users can make evidence-based decisions.

FAACT was created from the belief that the best people to respond to the opioid epidemic are those who are on the front lines witnessing the effects of drug abuse within their own communities. A self-service analytics layer was designed to give community organizations powerful new tools to create reports and dashboards in a timely manner, view incident maps and more effectively collaborate as they respond to the crisis.

*"Based on the collective analysis of the platform, we have gained incredible insight, like when our area has experienced a spike in overdoses, and, in turn, we have been able to deploy resources and make key adjustments to prevent further harm."*

*-Lauren Cummings, Executive Director of the Northern Shenandoah Valley Substance Abuse Council*

### **The opioid triple threat**

FAACT was developed to address an escalating triple threat caused by opioid abuse: a rising number of opioid-related deaths, escalating treatment costs and increased crime rates. The Commonwealth of Virginia saw an opportunity for the FAACT platform to reduce the numbers in each of these areas.

### **Opioid-related deaths**

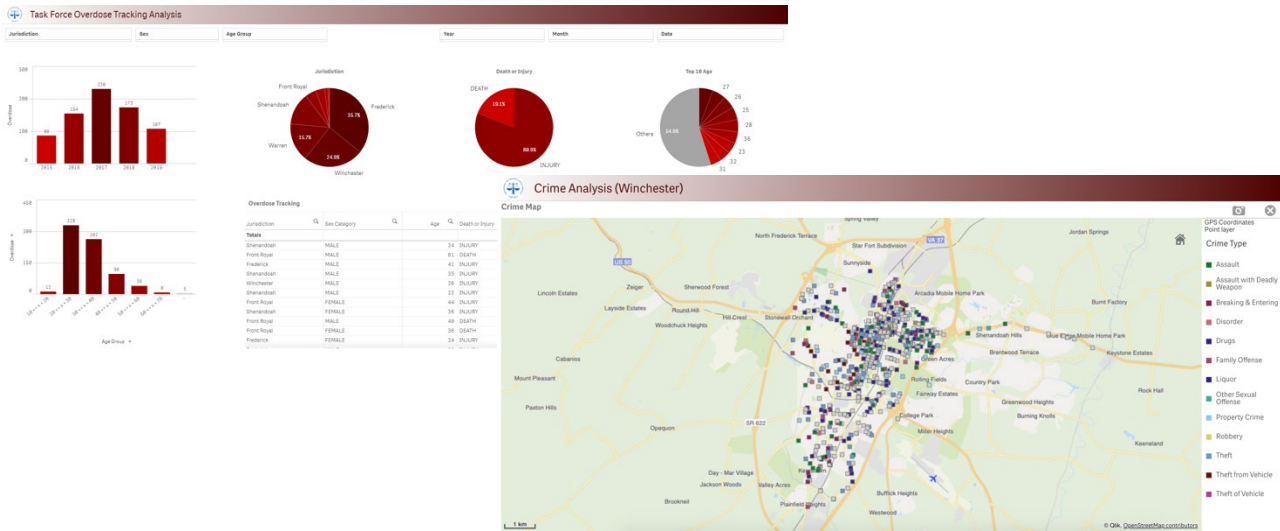
Opioids are a problem across the country, and Virginia is no exception. According to the National Institute of Drug Abuse, there were 1,241 drug overdose deaths involving opioid abuse in Virginia in 2017—a rate of 14.8 deaths per 100,000 persons. In 2016, fatal drug overdoses became the number one cause of natural deaths in the state.

The broadening epidemic has deeply affected local communities like those in the Northern Shenandoah and Roanoke Valleys. Between 2016 and 2017, opioid-related deaths quadrupled in the Roanoke Valley, with 39 deaths in Roanoke County alone within those two years. Meanwhile, there were 30 opiate overdose deaths in the Northern Shenandoah Valley region in 2016, according to the Northern Shenandoah Valley Substance Abuse Coalition.

### **Escalating treatment costs**

In addition to saving lives, Virginia needed to proactively combat the growing challenge posed by opioid addiction and reduce costs associated with treatment. Improving the efficacy of treatment helps achieve this goal by providing better outcomes for those seeking relief from addiction. It

normally takes seven to eight treatment cycles for an individual to enter recovery. Through the actionable intelligence provided by the FAACT platform, community organizations can better target age-appropriate outreach and engagement efforts to help prevent addictions before they occur.



### Increased criminal activity

DCJS wanted to learn more about the links between opioid addiction and criminal activity within local communities and designed the FAACT platform to learn about both issues simultaneously. The data shared on the platform showed illicit drug use is often accompanied by corresponding crimes, such as prescription fraud, home invasion and robbery.

Being able to identify areas where crime is more likely to occur can help local government and community organizations better understand where to focus their drug prevention efforts and result in an overall decrease in criminal activity. Delineating these connections—through a visual representation of shared data—helps communities decrease substance use and associated crimes.

### The Origins of FAACT

It was in this environment that the FAACT platform was created. FAACT was made possible by the data collection and dissemination legislation, and DCJS partnered with the CDO to make FAACT a reality. The agency laid the groundwork for the program by establishing a data governance framework and data sharing agreements among several government and community agencies.

This entailed coordinating logistics among key stakeholders, including teams responsible for legal representation, data governance and technical implementation. A vigorous amount of work was put into addressing legal and regulatory issues related to the sensitivities around data sharing. Putting that trust in place was fundamental to establishing a data governance framework that could be used for opioid crisis response and other future use cases.

## Significance

The FAACT platform successfully brought together information from multiple federal, state, local and private organizations to create a better way for leaders on the front lines to combat the opioid epidemic and crime within their communities.

The FAACT program was initially launched in Winchester, Virginia, in the heart of the Northern Shenandoah Valley. Local officials in that area, including the police department, the Northwest Virginia Regional Drug and Gang Task Force from the Virginia State Police, the Winchester Public Defender's Office and Valley Health, have been using FAACT to share, analyze, correlate and view a wealth of information pertaining to everything from the effects of opioid abuse on an individual to crimes related to drug use.

After a successful launch in Winchester, the program has expanded to other Virginia communities. Recently, FAACT was used by the Roanoke Valley Collective Response, which represents a 26-county, 13-city area (including Roanoke and Lynchburg) in southwestern Virginia. Participants include three police departments (cities of Roanoke and Vinton, county of Roanoke), Roanoke City EMS, Carillion and Lewis Gale Regional Health groups. The initiative is funded by a multi-million dollar state opioid response grant from the federal government. Additional memorandums of agreement are underway.

*"Access to the FAACT system will allow our region to share information and coordinate our response. This will enhance our abilities and understanding of what is happening in our community and enable us to better address the issues we're seeing."*

*-Nancy Hans, co-chair, Roanoke Valley Collective Response*

Rather than simply providing high-level numbers for state policymakers to consider, the FAACT platform gives local community leaders specific information to help them proactively and effectively respond to the crisis. This community-centric approach is critical in dealing with a dynamic challenge that is constantly shifting, and presents itself differently from community to community. FAACT is unique in that it does not take a one-size-fits-all approach; instead, it is based on the idea that a coordinated, local response is the best response to the crisis.

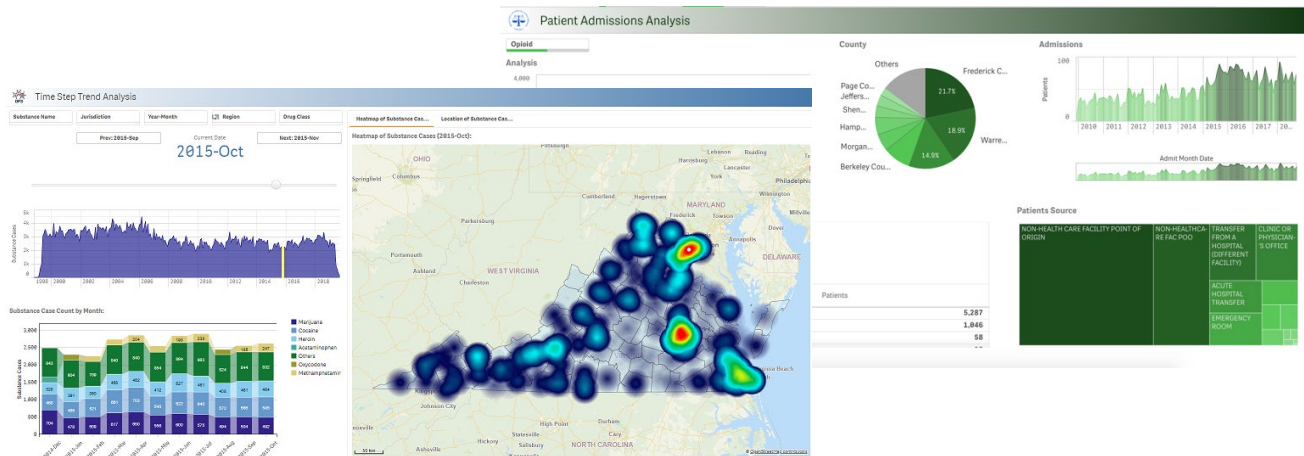
FAACT is Virginia's premier cross-secretariat data-sharing initiative, and it aligns with the priorities of Virginia's governor, legislature, CDO, CIO and the strategic plan for information technology. It also aligns with NASCIO's priorities, particularly data management and analytics and innovation through technology.

The platform now combines previously siloed data from different agencies, secretariats, localities, social services, public safety and corrections, drug courts, community coalitions, and private healthcare systems. It generates insights about contributing factors, brings awareness and delivers actionable intelligence to community leaders supporting their timely and effective response.

### **Detailed yet digestible data**

The data is deep and extremely detailed yet presented in a way that allows workers to quickly digest the information and make informed decisions. For example, a simple pie chart compiled from 80,000 police records can tell a worker which day of the week a person with a substance user disorder (SUD) is more likely to use a particular substance in any given county. A graph can show how likely a cocaine user suffering from mental illness is to harm themselves. Data visualizations can discern how drug use

relates to increases in violent crimes or burglaries and how many drug overdoses result in hospital admissions.



In addition to being able to treat people and identify criminal activity, workers can use historical data to identify trends that can help them proactively treat addiction. For instance, a historical correlation between trauma and later drug addiction can provide guidance on how to focus prevention efforts on at-risk kids.

Providers on the front lines are using this information to identify individuals who need help now, as well as those who may be more susceptible to opioid use in the future based on their individual circumstances. FAACT is distinct from other programs around the nation due to its community involvement model; while other states use data to measure the impact of the opioid crisis, FAACT uses data to empower on-the-ground decision-making by community responders.

In short—FAACT is a solution that helps people in need today and stops addiction before it begins.

## Impact

Here is a sampling of some of the valuable insights and actions FAACT has generated:

- Agreements exist among 18 different government and community organizations, with efforts currently underway to onboard over a dozen more.
- Police are better able to identify emerging drug threats and correlate criminal activity with drug use. In one community, cocaine use was strongly correlated with an increase in violent crimes, whereas heroin addiction resulted in an increase in burglaries. In addition, public safety officials can micro-target and identify specific neighborhoods, and even specific streets, that are likely to need intervention based on drug usage trends.
- By comparing data on “Age of First Use” and “Age of First Arrest,” one county saw a strong connection between middle school marijuana experimentation and future addiction. As a result, the county worked with the school district to create an early intervention program called the “Give Me a Reason” program.
- Another community saw higher police and emergency room encounters with opioids on Tuesdays, Wednesdays and Thursdays (versus a higher propensity for drugs like marijuana, which was more prevalent on the weekends). That community realized they needed to conduct

opioid prevention outreach mid-week and then quickly shift its focus to marijuana prevention programs over the weekend.

- Health and public safety officials now have insight into health conditions someone is likely to have as they enter the system, as well as crimes they may have committed.
- Hospitals can adjust staffing and other resources to better align with community needs.
- FAACT program users are able to identify and investigate reasons for spikes in overdoses. Overdoses were down 45% year-over-year, but deeper analysis with the platform shows that there were big spikes in February and October on almost the exact same day each year. Targeted outreach and support efforts were ramped up as a result.
- Yet another community discovered that 20% of the people seeking drug-related treatment were from West Virginia or Maryland, resulting in high-cost uncompensated care. This led to an effort to point these individuals to resources within their states of residence.
- Lastly, successful program outcomes led to a \$1.1 million grant from CVS Health to continue the critical work of the FAACT program.
- As of today, FAACT:
  - Covers Virginia's 8.6 million citizens
  - Includes 62 unique datasets (including 25 million police incidents, 55 million mental health encounters and 600,000 hospital admissions)
  - Includes more than 1,200 unique data elements
  - Has tracked more than 2,100 unique substances
  - Includes 20 years of data

As more communities continue to utilize the platform, greater amounts of data will be collected and analyzed. The resulting insights will help communities throughout the Commonwealth of Virginia prepare themselves with the right information to prevent the unnecessary loss of life from overdoses and eventually prevent the onset of addiction for thousands of Virginians.

The FAACT project, which began with an initial \$500,000 investment of federal grant funds, has now grown with the help of additional federal grants and commonwealth budget allocations. The monetary contributions have given Virginia the data sharing and analysis platform it needs to combat—and eventually eliminate—its opioid epidemic.

Further, the groundwork laid by the establishment of the FAACT platform provides Virginia with a data-sharing model that has prepared the state to respond more quickly and effectively to situations that go well beyond opioid use.

For instance, Virginia has used the platform to mitigate the spread of COVID-19, with data analysis that helps local leaders determine where cases are rising, where containment measures are working and to help maintain an adequate supply of resources.

Indeed, FAACT is transforming communities, reforming traditional notions of managing crises, and assisting multiple entities in performing data-driven responses for public safety and health issues. This model crosses and combines boundaries and ultimately serves as a tool to make life better for residents of the Commonwealth of Virginia.

*"We're already seeing the benefits that come from combining data sets to focus our efforts. With our technology partners, we are well on our way to creating a data sharing and analytics platform for the entire commonwealth."*

*-Chief Data Officer for the Commonwealth of Virginia, Carlos Rivero*