Case Study
State of Virginia

Develop, configure, and implement an easy-to-use **data sharing system.**

Facilitate data-sharing across **six state agencies** and four local entities using Tyler's Data & Insights.

Perform advanced **data analysis** including predictive analytics that involve the creation of risk profiles.

RICHMOND, VIRGINA

Addiction, abuse, and misuse.

These three words dominate headlines as the nation's relationship with opioids reaches overwhelming levels.

The crisis cuts across government agencies, jurisdictions, and nonprofit organizations, leaving public servants and policymakers in every corner of the U.S. searching for collaborative, evidence-based solutions.

However, reality stands in the way. The data for analysis and strategic planning is siloed across agencies and districts in disparate systems that were never designed to talk to each other. Without real-time, comprehensive insights, policymakers and those at the frontlines are caught in a reactive state while the cost of the crisis rises — in both dollars and lives.

Leaders in Virginia wouldn't settle for the status quo.

Nearly 4 in 5 drug overdose deaths in 2017 were caused by prescription opioids, heroin and fentanyl, according to information from the Virginia Secretary of Health and Human Resources. That year, more Virginians died from drug overdoses than car accidents.

CHALLENGE: AD HOC DATA-SHARING AGREEMENTS ARE INEFFECTIVE

When it comes to addressing emerging issues such as the opioids crisis, data-sharing is a key component to building a holistic strategy.

On the organizational side, Virginia lacked a uniform approach for developing data-sharing agreements. When agencies wanted to share data with each other, it was done on a point-to-point basis, said Carlos Rivero, Virginia's chief data officer.

"Agency A and Agency B will negotiate directly with each other, and if Agency C wants data, they'll negotiate directly with Agency A," Rivero said. "There hadn't been a centralized authority or source for coordination and oversight of these activities."

While the approach worked, it wasn't scalable for emerging crises and data-sharing across jurisdictions and agencies.

Law enforcement needs to coordinate and share data with emergency responders and local hospital networks, which all have insights to address the crisis. For example, officials can dig into behaviors from discharged patient data and measure the timeframe until a patient is readmitted. They can combine geospatial data, see a timeline, and make decisions on a broader scope of data. However, they can only do this if their systems communicate.

To demonstrate the utility of improved data-sharing and analytics, which could then support evidence-based decision-making and policymaking, Rivero had a long checklist and a short timeline. He needed an approach that granted internal availability of, and access to, the right data to the right employees across the organization. He wanted a secure solution that could connect isolated silos across the commonwealth, promote interoperability, and generate trust in the platform.

SOLUTION: BUILD SCALE WITH A MODERN DATA PLATFORM

Backed by a Technology Innovation for Public Safety grant from the U.S. Department of Justice, Virginia leaders set out to find a data platform that worked.

Through Qlarion, a Tyler Technologies partner, Virginia implemented Tyler's Enterprise Data Platform. This advanced internal data-sharing platform gives users across agencies the ability to easily and securely pull data in and out of the platform; understand and analyze the data without the need for support from a data analyst; and manage the implementation of data-sharing agreements.

"Tyler has been a critical partner for Qlarion," Jake Bittner, CEO of Qlarion, said. "The technology creates that trust factor that people are handling the data appropriately and the security is there. When data is shared, it's documented and explained appropriately, and [the Enterprise Data Platform] is a key component of that."

With Tyler's data platform, the commonwealth established a governance structure around data-sharing and is developing intuitive and cross-discipline self-service analytics to empower those on the frontlines. This effort moves Virginia from a reactive to a proactive stance in addressing emerging issues.

The platform features an intuitive navigation for users; quick customizations for project needs; database connections and API endpoints for data ingress and access; rich metadata documentation and search capability; access controls to uphold agreements; and visualization tools.

"[Tyler] gives us the agility we need to move forward and onboard data onto the platform quickly and efficiently bringing agencies into a collaborative environment," Rivero said. "It engenders trust from our agency partners … I feel positive and confident about putting our data on this platform."

Platform users cut across all areas of the crisis. Users include community-based organizations, medical professionals, social services professionals, law enforcement, research institutions, and state agencies.

Foundations have taken notice that Virginia is making data available beyond government agencies. For example, CVS Health awarded the Aetna Foundation's $1 million grant in March to the Northern Shenandoah Valley Substance Abuse Coalition, based in Winchester, Virginia.

"[Tyler] was able to go through our enterprise cloud oversight service assessment and be approved for sensitive data," Rivero said. "That gives me the assurance I need to confidently engage with agency and community partners knowing that VITA assessed this solution and they've got the security controls in place. Knowing the architecture, security controls, processes and procedures are approved by VITA speaks volumes."

Through September 2020, Virginia is following a plan to continue developing its internal data-sharing approach for the opioid crisis. The data platform will expand to include the departments of corrections, education, transportation, and social services as well as regions in hard-hit Southwest Virginia.

During the project's next phase, Rivero wants to update the governance and architecture to include sensitive data such as personally identifiable information and data protected by the Health Insurance Portability and Accountability Act, commonly known as HIPAA. This phase will be funded through a State Opioid Response grant from the Substance Abuse and Mental Health Services Administration within the U.S. Department of Health and Human Services.

Data programs have "always been percolating below the surface, but they never had a change-agent who's pushed things forward the way Carlos has," Bittner said.

RESULT: BUILD TRUST AND COLLABORATION

Rivero's biggest win is in changing Virginia's culture toward sharing data.

"The primary challenges have been cultural and organizational, not necessarily technical — although the technical helps instill confidence in the folks that will allow the culture to shift," Rivero said. "Through that, we've turned a corner on the attitude toward data-sharing. In 11 months, we've made a lot of progress."

Since Rivero was hired as Virginia's first chief data officer in 2018, he has formalized the practice of data-sharing. His office, created by the legislature, provides coordination and oversight of data-sharing agreements, platforms, monitoring, compliance, best practices, and standards.

"We started working together with Qlarion on the opioid project and saw how Qlarion has been able to develop the data governance around the [Enterprise Data] Platform, implement the master data dictionary, and do a lot of core infrastructure work to support data analytics on a sustainable basis," Rivero said. "We've been able to expand upon that and start looking at that as a more generalized approach for data governance and development of the data catalogued across the commonwealth."

While there are still some silos ingrained in the organization, Rivero's office has leveraged the platform to establish an inter-agency data trust, which in turn facilitates collaboration and improves decision-making, and ripples through the community to enrich the lives of the public.

"We would not be making the progress we have without [Tyler] and Qlarion," Rivero said. "You had people on the frontlines seeing data that had never been surfaced before — insights such as demographics on Fentanyl overdoses, when people started using, what they use, and where."

Rivero's objective now is to build a data catalogue of all assets across the commonwealth, where more than 1,400 data systems are in place.

"People want data, and we need to know where to start," Rivero said. "You've got to have a catalogue of the assets."

Once that work is complete, there are countless opportunities where the data platform can facilitate data sharing to improve outcomes, Rivero said.

"There is plenty of great work that needs to be done here," Rivero said. "There's homelessness and early childhood development to address, workforce development, and increasing prosperity across our rural communities. There's a ton of work that crosses jurisdictional boundaries and agency missions — executive, legislative, and judicial branch delineations. It's just a matter of being able to govern and organize the moving parts correctly."

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