



SAFE STATES

Safe States Alliance
2018 Innovative Initiatives
Finalist Summaries for Review

Initiative #1: Aiming for Equity in Sexual Violence Prevention - Mapping Risks, Policies, Outcomes and Resources

Statement of Purpose:

This project is supporting prevention of sexual violence among Oregon youth by evaluating implementation of mandated comprehensive sexual health education in Oregon K-12 schools. The purpose of the project is to increase the reach and effectiveness of comprehensive K-12 sex ed by highlighting bright spots and shortfalls in policy implementation across the state that are likely related to inequity due to variations in school- and community-level resources.

Program Methods, Results, and Significance:

To help us better understand the factors that contribute to sexual violence and protect against it, this project uses data visualization tools as integrative as the scope of the problem we are addressing. We built a web-based GIS map portal to show multiple layers of community-level data, including risk and protective factors associated with sexual violence among youth.

When viewed together, these data more comprehensively demonstrate the scope of the problem of sexual violence, and its contributing risk factors and protective factors. This project is still in process, so outcomes are not yet available. Initial results will be shared at Safe States as they become available.

This project demonstrates how the use of data mapping can help us better understand the syndemic of sexual violence, including factors that contribute to sexual violence and protect against it. The project also shines a light on geographic inequities by highlighting bright spots and shortfalls in policy implementation across the state that are likely related to variations in school- and community-level resources.

Innovative Characteristics:

This project uses data from a variety of sources and mapping technology to describe the syndemic of youth sexual violence from a geographic perspective. The tool helps to shine a light in geographic variations in risk and protective factors related to sexual violence among youth, as well as the potential inequities that cause these variations.

The project a collaboration between staff from Injury and Violence Prevention; Adolescent, Genetics and Reproductive Health; Maternal and Child Health; Program Design and Evaluation Services; student interns from the PSU MPH program; and stakeholders at the Oregon Department of Education and Planned Parenthood Advocates of Oregon. We are planning to create similar tools for our work in traumatic brain injury prevention and child abuse and neglect prevention.

Barriers & Obstacles:

We faced a lack of data regarding implementation of the comprehensive sex ed policy by school district, as well as limited data on community level sexual violence prevention and response resources. To address the first issue, we partnered with a local school of public health to acquire the assistance of three masters-level interns to collect policy implementation data. To address the second issue, we partnered with our Sexual Assault Task Force and other community partners to provide and vet community-level resource data.

Initiative #2: Integrating Electronic Medical Records and Pharmacy Management Systems with Kansas's Prescription Drug Monitoring Program: An Inter-agency Collaboration to Address the Opioid Epidemic in Kansas

Statement of Purpose:

Across the U.S., prescribers and dispensers of controlled substances are encouraged, and in some states mandated, to check the prescription drug monitoring program (PDMP) to reduce high-risk prescribing or dispensing practices. However, checking the PDMP involves accessing PDMP data through a separate website, with some practitioners reporting it is a hindrance to their clinical workflow.

Program Methods, Results, and Significance:

The Kansas Department of Health and Environment has a collaborative agreement with the Centers for Disease Control and Prevention (CDC) Data-Driven Prevention Initiative Program to work closely with the Kansas Board of Pharmacy to maximize the use of the Kansas's PDMP, Kansas Tracking and Reporting of Controlled Substances (K-TRACS). This collaboration involves integrating electronic health records (EHR) and pharmacy management systems (PMS) to the Prescription Monitoring Program (PMP) Gateway, which facilitates PDMP data into the clinical workflow of an EHR/PMS. This integration allows authorized users to access their patients' PDMP data through a single sign-on in real-time.

As of April 1, 2018, there were 15 hospitals, 13 pharmacies, and 2 clinics fully integrated and operational through this project. In March 2018, these facilities made a total of 196,874 total requests for K-TRACS data through the EHR/PMS integration. On average these facilities were onboarded after approval of the terms and conditions in approximately 20.7 days (median: 12.5 days). With an average 4.2 minutes to complete a manual PDMP request when interacting with a patient (patient-contact time), this integration has saved Kansas clinicians and pharmacists 826,870.8 minutes in March 2018. This is equivalent to 13,781.8 patient-contact hours, 574.2 patient-contact days, or 1.6 patient-contact years.

Collaborating with key public and private partners is important to ensure there are reduced barriers to maximizing the use of PDMPs. Together, these findings will help identify promising practices to reduce harms associated with high-risk prescribing or dispensing patterns by reviewing the controlled substance prescription drug history of patients in near-real time.

Innovative Characteristics:

There has been more than 600,000 Americans who died from drug overdose since 1999. Most of these deaths are due to prescription opioids or opioid use disorder. Researchers have recently found that most individuals with opioid use disorder today started on prescription opioid. According to the Center for Disease Control and Prevention Service's (CDC) Opioid Prescribing Guidelines, prescribers and pharmacists are encouraged to check their patients' controlled substance prescription drug history prior to prescribing or dispensing a drug that may carry risk of harm to them. As a result, many states have encouraged or mandated that prescribers or pharmacists review a patient's prescription drug history prior to prescribing or dispensing prescription drugs to them. However, this task can be cumbersome since it involves interrupting the clinical workflow to access a web-form outside their electronic medical record or pharmacy management system.

As a result, the Kansas Department of Health and Environment (KDHE) collaborated with the Kansas Board of Pharmacy (KBOP) to examine whether having prescription drug data for patients within the workflow of an electronic medical record or pharmacy management system may increase use and assessment of patients' prescription drug history. This work was completed as part of a Prevention in Action strategy of the Center for Disease Control and Prevention Service's Data-Driven Prevention Initiative Program. This project involves covering the cost of connecting electronic medical record or pharmacy management system to the Prescription Monitoring Program (PMP) Gateway, which is a platform for facilitating the exchange of prescription drug data from a PDMP into the electronic medical record or pharmacy management system. This platform was created and operated by Appriss Health, a private company that manages the technical solutions for at least 40 PDMPs.

Prior to this project, reviewing a single patient's prescription drug history would have taken on average 4.2 minutes and up to 10 minutes per patient. However, this project has allowed them to reduce this time to 1 second or less per patient -- since there is an automated transmission of data from the PDMP into their patients' electronic medical chart or pharmacy system. Thus, this project has allowed KDHE and KBOP to work closely with the Kansas Hospital Association and key champions of K-TRACS, Kansas' prescription drug monitoring program (PDMP), to encourage prescribers and pharmacists to connect and be able to review patients' prescription drug history in real-time.

This project is unique because it creates a real-time system for prescription drug data sent to clinicians and pharmacists within their electronic medical record or pharmacy management system. This project is an important step towards having increase utilization of a state's PDMP and other states who are involved in ensuring compliance with state controlled substance prescribing laws may be encouraged to replicate this effort. Several states are also pursuing a similar integration and at least one state is considering mandating integration of PDMP and electronic medical record or pharmacy management system.

Overall, the Kansas Department of Health and Environment and Kansas Board of Pharmacy was successful in building the foundation for higher and meaningful utilization of controlled substance data. Through this innovative public and private collaboration with Appriss Health there has been at least 118 licensed pharmacists, hospitals, and clinic health systems approved to begin this process. These entities include the Kansas Health Information Network (KHIN) and potentially all CVS pharmacy chain stores soon. For the 30 entities already integrated as of April 2018, there has been more than 200,000 queries from prescribers and pharmacists since January 2018. This number is expected to grow as the rest of the approved entities are fully integrated.

In the future, this project hopes to include data from other states and add other advanced analytics metrics, which for systems integrated through this project will then have access to real-time and robust data on their patients' risk of drug poisoning and related harms. The project aims to optimize patient care and improve health outcomes associated with the misuse and abuse of controlled substance prescription drugs by providing real-time prescription drug data within the clinical workflow of a provider's electronic health record system or a pharmacist's pharmacy management system.

Barriers & Obstacles:

With any major information technology and healthcare system intervention, there is always the technical barriers involved in completing this project. The first barrier to overcome was identifying the feasibility of a large-scale intervention and whether the technology was in place to do so. Fortunately, there has been previous projects completed in Kansas that involved integrating PDMP data within the clinical workflow of several large hospitals in Kansas. This successful pilot project was leveraged to advocate for a statewide project. KDHE could accomplish this by working closely with the Kansas Board of Pharmacy who also worked closely with their PDMP vendor, Appriss Health, to identify solutions to implement this project.

A major barrier to overcome with this project is drafting terms and conditions that can satisfy PDMP vendors, electronic health record vendors, hospital systems, providers, and pharmacies. This task is not easy. However, by working closely with the Kansas Board of Pharmacy and providing a single web-page with clear instructions (See link for example: <https://pharmacy.ks.gov/k-tracs-responsive/k-tracs-statewide-integration>) this barrier was overcome. The Kansas Board of Pharmacy has unique experience and understanding in negotiating terms and conditions that can address a variety of concerns (e.g., proper use of data, technical requirements, and legal obstacles). As a result, the Kansas Board of Pharmacy took on the full responsibility of approving and on-boarding interested pharmacies, hospitals, and clinics in the states. This barrier was overcome by creating a single terms and conditions that all parties must agree to have the PMP Gateway integration funded through this project

Another barrier to overcome is outreach to pharmacies, hospitals, and clinics to encourage them to join this project. This barrier was overcome by sharing data on this project's usefulness (i.e. saving each provider 4.2 minutes on average per patient encounter every day) with the Kansas Pharmacists Association, the Kansas Hospital Association, through various press releases, and during presentations to hospital's chief executive officer (CEO) or board of directors. When the health system leaders learned they can save up to at 4.2 minutes or even 10 minutes per patient, this is transformed into a significant improvement in patient outcomes and reduction in cost. Since patients who abuse drugs or divert them may visit emergency rooms for prescription drugs, this was an important step in encouraging emergency room providers to use the PDMP prior to discharging patients from the emergency room with a prescription. At least one large health care system has noted in a press release that this project has allowed them to identify these patients who are learning how to navigate through the clinical system for prescription opioids for the sole purpose of diversion or abuse.

Overall, state agencies that manages the PDMP have close working relationships with key public and private partners, including healthcare systems, that can be leveraged to initiate such a project. This was done in Kansas successfully.

Initiative #3: Colorado's Shared Risk and Protective Factor Dashboard: How being resolute was necessary to realize its purpose and development

Statement of Purpose:

Through its Violence and Injury Prevention-Mental Health Promotion (VIP-MHP) Branch Strategic Plan, Colorado prioritizes shared risk and protective factors that impact multiple forms of violence and injury. Within the Strategic Plan, prevention strategies are mapped to five overarching protective factors: connectedness, social norms, behavioral health, economic stability, and resilience. To operationalize this framework, Colorado leverages both state and federal funding to implement and evaluate activities that impact the factors. One of the challenges to evaluating a shared risk and protective factor approach is determining how to measure progress towards impacting the factors over time and presenting this data to partners in a cohesive and digestible format.

Program Methods, Results, and Significance:

Evaluators, epidemiologists, and program staff conceptualized and developed a VIP-MHP Dashboard to operationalize the Strategic Plan and visualize connections across prioritized shared protective factors. The VIP-MHP Dashboard serves as an evaluation tool by showing trends toward certain indicators and tracking this data over time. To create the dashboard, the VIP-MHP Branch work group was responsible for determining the process and goals of the project; defining key terms; selecting indicators and data sources to measure shared risk and protective factors; creating the dashboard using Tableau software; and populating the dashboard with data.

The data collected as part of the VIP-MHP Dashboard will be tracked over time to measure progress towards impacting shared risk and protective factors. In addition, the VIP-MHP Branch will monitor use of the dashboard to determine if it is applied as intended. Ideas for potential uses include opportunities to better understand how indicators, which represent risk and protective factors, connect to shared factors in the Strategic Plan; use data and trends for evaluation and performance monitoring; and use data to inform programmatic and policy decisions.

The VIP-MHP Dashboard uses intuitive data visualization and an interactive platform to show indicators and data sources that measure shared risk and protective factors. Programmatic staff can use this dashboard for evaluation monitoring and to inform decisions related to the implementation of prevention strategies. Finally, violence and injury prevention practitioners can apply lessons learned by Colorado to evaluate shared risk and protective factor efforts in their states.

Innovative Characteristics:

The creation of the VIP-MHP Dashboard is an innovative project and, to date, a dashboard of this scope does not exist. While shared risk and protective factor indicator toolkits developed by the Centers for Disease Control and Prevention (CDC) were used as reference for the indicator and data source selection process, the VIP-MHP Dashboard is representative of an expanded list of risk and protective factors that impact multiple forms of violence and injury including child maltreatment, intimate partner violence/sexual violence, motor vehicle crashes, traumatic brain injuries, suicide, opioid overdose, and substance use. In addition, the VIP-MHP Dashboard visualizes state and county-level data for the selected indicators in one place, which allows for data transparency and efficiency for evaluators, epidemiologists, and programmatic staff to facilitate programmatic and policy decision-making. Colorado plans to share the process for creating the dashboard so that other violence and injury prevention practitioners and researchers can utilize or replicate it for use in their states.

Barriers & Obstacle:

The primary barrier to the creation of the VIP-MHP Dashboard was underestimating the amount of time it would take to conceptualize and create the dashboard. As a result, it was necessary to be clear about the goals of the dashboard and steps necessary to take throughout development to ensure that the end product is useful. In addition, the development of the dashboard required a considerable staff time commitment, which was funded from multiple state and federal sources. Since multiple funding sources were leveraged to support staff time and access to Tableau software, these same diversified sources will be used to maintain the VIP-MHP Dashboard. Sustaining the VIP-MHP Dashboard will be a priority activity of the VIP-MHP Branch if it is determined that the dashboard is useful for evaluation monitoring and informing programmatic and policy decisions to prevent violence and injuries.

Initiative #4: Innovations in Database Technology: Providing Quick Patient Alerts to Utah's Controlled Substance Prescribers and Dispensers

Statement of Purpose:

Prescription drug monitoring program data has proven to be an informative public health data source and contains important information for prescription drug overdose prevention efforts. However, it has limited analytical capacity to meet the increased public health needs to access and use the data. Through a unique partnership, an innovative clinical decision making tool was developed for controlled substance prescribers and dispensers to utilize when prescribing an opioid. The prescriber and dispenser are alerted to the number of active morphine milligram equivalents prescribed to the patient, whether the patient has engaged in doctor shopping behavior, and whether the patient is at higher risk for an overdose.

Program Methods, Results, and Significance:

An existing provider workgroup was utilized to identify and prioritize metrics that would assist in reducing risky prescribing by healthcare providers. Once the metrics were prioritized, usability testing was conducted and results were used to improve the system. Through a process of several meetings, business requirements, design features, and functionality for the overall project was developed and implemented ahead of schedule, greatly facilitated by housing a public health professional within the regulatory agency that housed the prescription drug monitoring program.

Four alerts, or metrics, are provided for each patient in the prescription drug monitoring program to assist with making clinical decisions. The four metrics are: 1) Total Active Daily Morphine Milligram Equivalents, 2) The Number of Prescribers a Patient Has Visited for Opioids in the Past Six Months, 3) The Number of Pharmacies a Patient Has Visited for Opioids in the Past Six Months, and 4) Whether there is an Active Benzodiazepine and Opioid Combination. The metrics are color and symbol-coded by risk level. In addition, a "Learn More" link takes the prescriber or dispenser to the Utah Clinical Guidelines on Prescribing Opioids for Treatment of Pain to leverage and promote that provider intervention and provide consistent messages to reduce risky prescribing behavior.

Understanding the behaviors driving over-prescribing is a critical step in addressing the opioid problem. Alerting controlled substance prescribers and dispensers to key metrics and linking them to recommended prescribing guidelines may positively influence the culture of risky prescribing behaviors.

Innovative Characteristics:

There are efforts in other states to develop alerts, or metrics, within the prescription drug monitoring program, however, this effort links and promotes an additional provider intervention, the clinical guidelines on prescribing opioids. This is part of an overall plan to complement prescriber intervention efforts to reinforce each strategy. Further, the unique partnership between three state agencies to bring this project to fruition has evolved to implement additional projects that build off of this one: the development of prescriber level metrics, rather than patients, comparing them to their peers and including provider utilization of the prescription drug monitoring program and the development of community level metrics to help focus on risky prescribing behavior on a local level. Finally, and most importantly, housing a public health professional within the regulatory agency that houses the prescription drug monitoring data greatly assisted in the understanding of that agency the utility of the data as a public health tool, which is something that other states can replicate to build a bridge between two agencies with very different fields of practice.

Barriers & Obstacles:

Understanding the field of practice and scope of work between public health and a regulatory agency was a barrier in the beginning of this project. It took several years of building rapport and working on the project incrementally to gain trust between the two agencies. The result of housing a public health professional within the regulatory agency propelled the project. The outcome of "sharing" this position, serving as a liaison between the agencies, has evolved from this project to multiple others with a common goal of reducing prescription drug overdose deaths in the state.