Data for Good:
Leveraging Advanced Analytics to Combat the Opioid Epidemic

Submitted to:
Pennsylvania House Health Committee
Majority Chairwoman Kathy Rapp
Minority Chairman Dan Frankel

Chairwoman Rapp, Chairman Frankel, and honorable members of the House Health Committee,

SAS is grateful for the opportunity to submit comments for the hearing of the House Health Committee today, April 12th, 2022, regarding the expiration of the opioid disaster declaration.

The Commonwealth is a long-standing and valued customer of SAS, a global leader in analytics. It is a great privilege to serve Pennsylvania's Departments of Health, State Police, and Education, among many others.

Enclosed please find details regarding the work that SAS is currently engaged in to support state governments in efforts to combat the ongoing opioid epidemic.

We welcome questions, or continued conversation regarding SAS' ability to support Pennsylvania in addressing this health crisis and offer our gratitude for the committee's consideration.

Respectfully submitted by,

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Written Testimony
PENNSYLVANIA HOUSE HEALTH COMMITTEE
Public hearing on the end of the Opioid Emergency Declaration and next steps.
April 12, 2022

Chairman Rapp, Chairman Frankel, and members of the House Health Committee:

Thank you for this opportunity to provide written testimony.

My name is Dr. Steve Kearney and I serve as the Global Medical Director for SAS. SAS is the global leader in operationalizing data and advanced analytics. We developed the first big data advanced analytics system more than forty years ago and our cofounders developed the first Statistical Analysis coding language. SAS serves more than 3500 Health Care customer sites around the world and is used by the majority of the Fortune 500 Health and Life Science company's and by more than 80 ministries of health. Here in the U.S., SAS' customers include every state department of health, CMS, the FDA, CDC, DEA, DOJ, SAMHSA, and the Office of Inspector General.

As Global Medical Director for SAS, I help lead the company's efforts to transform this world of data that we live in, into a world of intelligence. We use the most advanced artificial intelligence and machine learning solutions in a cloud native environment that includes the original SAS language but leverages world class visual analytics. We are not a black box environment. If you can code in SAS, you can understand the way we apply any of our solutions. We also include and encourage use of all open-source coding languages in our solutions that have now evolved into drag and drop, no code or low code environments. From your perspective today, we want people and agencies acting on real time data with understandable and explainable analytics to help save lives and provide services.

I have worked for more than 30 years on this journey in both the private and public sector. I was a Director in the Medical Outcomes group at Pfizer for 17 years and prior to that practiced at Duke with a joint faculty appointment at UNC. Throughout that time, I have treated patients, trained students, developed novel ways to collect and look at data using handheld devices, developed software, analyzed large data systems, trained providers how to measure patient outcomes and helped change systems of care along the way. I have been fortunate in my career to have been asked to help develop policy for states and federal agencies. I served on the North Carolina Governor's Task Force for Heart Disease and Stroke Prevention, NC's Medicaid's Behavioral Health Subcommittee and I currently serve on the Board of Directors for the Governors Institute in NC.

Relative to this discussion today, I was the Lead for Pfizer on the Project Lazarus Initiative where we worked with Pfizer's Worldwide Pain team, Community Care of North Carolina and the Governors Institute to develop an educational program to train over 2000 providers on appropriate pain management. These trainings brought together health care providers, law enforcement, social workers, public health, and other stake holders

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in many instances for the first time to try and tackle the opioid epidemic for all 100 counties in NC. What was lacking from most of these conversations around opioids was the data. I left those meetings knowing that if we gave people good data, they would act on it.

I told you earlier SAS was used by all federal and state health agencies that are responsible for dealing with the opioid epidemic. However, this usage until recently has mainly focused on reporting. For example, the CDC many times cites data that is delayed based on these reporting standards. One 2020 report started with statistics referencing 2018 data-It is difficult to make decisions with this type of delay.

We are also the common data language and data code used to do risk stratification for patient populations by CMS for Medicare and Medicaid. They use our software to calculate morphine milliequivalents for all the prescription opioids on the market. This is the common standard to determine if a patient is receiving too high of a daily dose of opioids and for too long. The Office of Inspector General built a toolkit using this code and shared it on its website. We have promoted this as a SAS team as part of our DATA FOR GOOD Efforts. You need to understand your citizens relative to the national and local standards to really make a difference.

I joined SAS 6 years ago to make data actionable and to tackle some of our most difficult Health Care challenges. To do that we can't just use data and analytics for reporting. It must be part of our everyday decision-making process. I would like to share some examples of how we have been asked to change that dynamic for some states and are advising on real time solutions.

California
We started with a very traditional approach when trying to help the Attorney General's office make sense of more than 53 million opioid prescriptions collected in their Prescription Drug Monitoring Program every year. One caveat with PDMPs is that they don't have a common patient identifier or ID. So, SAS began by implementing an entity resolution technique to identify the right patient with the right name to make sure we were providing accurate reports. For example, John Smith, JW Smith, Wayne Smith, and JW Smith Jr. – could all be the same person. SAS assisted them with this matching process and then developed a series of rules-based reports that are now ingested by all the different agencies or licensing boards through their current state logins and routine interfaces. The reports look like they come from the State of California. Most agencies are not aware that SAS is the analytic tool used to provide these reports and surfaces them through another vendor.

Virginia
The Medicaid agency and Department of Health had a problem like most states: how to provide services to a citizen that needs substance use disorder treatment? Could this individual get treatment in their community? The project entailed mapping the available treatment centers for the entire state and determining where an individual had to travel for treatment and then also automating the approval process.

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The existing process usually took one month, and SAS was able to decrease that time to a few hours. SAS also identified numerous areas throughout the state that had significantly less treatment capacity than need. The current analytics environment helps to determine where to place resources and measure outcomes.

Massachusetts
Massachusetts instituted a legislative mandate to try and understand the path of a citizen and their interactions with the commonwealth' agencies before they died of an overdose. The project began leveraging data sets from 5 agencies. The problem was that they could not legally meet the requirements using their current systems. They asked the SAS team to help them mask the data down to the zip code and individual level so that the analytics could be run but meet the stringent legal and regulatory requirements of each agency. SAS helped them achieve the goals of developing the report and analyze the insights in it, which made a real difference and enabled Massachusetts to implement better policies that provided services to citizens when they needed it most. https://chapter55.digital.mass.gov/

North Carolina
North Carolina asked SAS to help evaluate the data from a vendor that is used by many states to operationalize their PDMPs. When SAS reviewed the current process for what we call entity resolution (identifying the right patient to assess risk) - we found that the state had over 1 million records matched incorrectly. Many of the patients were not associated with the true risk for a bad outcome. SAS is also assisting North Caroline develop non-traditional reporting and performing analysis that identifies anomalies in the data so that better ways to provide citizens with services can be implemented.

New Jersey
The Attorney General in New Jersey needed a way to access data on important metrics like Drug Overdoses, Naloxone Administrations, Arrests, Shootings, and Illicit Drug seizures. We partnered with them to create the Interactive Drug Awareness Dashboard. This is a role-based analytic environment that allows for customized access to dashboards. The Attorney General's Office can see an overview of the data which is updated each morning. The State Police and the Prescription Drug Monitoring program can see statistics all the way down to the patient or citizen level depending on their credentials. This is a secure environment that can assess risk and provide services to the citizens based on a wholistic view. It allows for a collaborative public health approach and law enforcement approach to enable rapid response teams, and also allow for identification of new illicit drugs as soon as they hit the streets.

The common theme for these solution implementations is that analytically relevant data allows for better decisions and better outcomes for patients.

Unfortunately, based on the most recent U.S. data, deaths from drug overdoses soared to a record of more than 93,000 last year. We were making progress, but this dramatic turnaround has been fueled by COVID related impacts such as job loss, and inability to access care.

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There were increases in synthetic opioid overdoses as well as other drugs, as drug dealers went virtual during the pandemic. We have also seen geographical changes during the pandemic regarding overdoses and substances used. In all these instances more timely and actionable data is needed. This applies to all substances fueling the illicit drug crisis.

The Pennsylvania Legislature has acted over recent years to save lives during this crisis including sending over one dozen bills to Governor Wolf since 2016. As this crisis has deepened and you contemplate legislation replacing the opioid disaster declaration, I offer this written testimony to highlight the power and opportunity of expanding the implementation and operationalization of advanced analytics to improve the response. A powerful platform can lead to a reduction in negative outcomes and the secure flow of critical information to decisionmakers and policymakers to enable faster, smarter decision making. The expiration of the declaration and passage of a legislative solution to allow data sharing is an opportunity for all parties to do more.

Thank you for the opportunity to provide this testimony. I would be pleased to share more information regarding my experience and answer any questions.

Sincerely,

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