

Harnessing Data and Leveraging Digital Tools to Combat the Opioid Crisis

CHALLENGE: Create digital tools and data sharing capabilities to support decisions across the broad range of stakeholders responding to the opioid crisis, such as public health, public safety, law enforcement, community groups, the private sector, and individuals.

PROBLEM: Opioid misuse, addiction, and overdose have reached crisis levels in the United States. From 1999 to 2016, the number of overdose **deaths involving opioids increased more than five-fold, from about 8,000 to over 42,000**. Both prescription and illicit opioids contribute to this trend. The opioid crisis extends beyond those suffering from addiction and overdose, to their families and communities. For example, the rate of **neonatal opioid withdrawal syndrome increased more than five-fold between 2004 and 2014** with rising exposure to opioids before birth. Local and state governments struggle to provide opioid treatment and preventive services and target law enforcement efforts against the increasing traffic of illicit opioids. Meanwhile, opioid addiction removes patients and caregivers from the workforce. The White House Council of Economic Advisers recently estimated the economic **toll of the opioid crisis at \$504 billion in 2015, or 2.8 percent of GDP**.

WHY THIS PROBLEM IS IMPORTANT: The opioid crisis exerts a tremendous human and economic toll on America, and shows no sign of abating. The Administration's Office of Science and Technology Policy established a Fast-Track Action Committee (FTAC), which identified critical data gaps that hinder effective decision-making in response to the opioid crisis, from the Federal level to state and local governments, to community groups and individuals.

New digital tools, data integration, and data science approaches could address key questions such as:

1. How do geographic location and local factors influence opioid misuse and addiction, and the effectiveness of prevention and treatment programs based on location?
2. How can data from law enforcement, public health, forensic laboratory, and other complementary sources be integrated and analyzed to guide real-time response?
3. How do clinical and medical coverage policies for pain management, and opioid misuse and addiction, influence the landscape of the opioid crisis?
4. What is the geographic and socio-cultural context of stigma with opioid misuse and addiction?

VISION: Holistic data systems provide real-time, large-scale, geographically-specific, multivariate data and data-analysis capabilities to guide decisions at all levels and reduce the burden of the opioid crisis on communities nationwide.

TARGET AUDIENCE/END USERS: Physicians, hospitals (care providers); CMS, insurers, VA (payers); patients; researchers; public health professionals; State and Local Health Departments; Policy makers; Elected Officials, Law Enforcement

POTENTIAL DATASETS:

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