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:

- TBD

The Opportunity Project // U.S. Census Bureau & U.S. Department of Transportation

Helping Tribal, State and Local Governments with Local Address Data Collection

CHALLENGE: Develop resources that help tribal, state, and local governments to create and maintain open address point data. These resources might include:

- Tools that can be used in the field and in the office to collect, validate, maintain and share data
- "Seed" data that can serve as a starting point for data collection and can be shared openly (address lists, address point data, parcel data, structure outlines, imagery)
- Linkages to open data sharing platforms

PROBLEM: Many state and local governments do not have a database of addresses with geospatial coordinates (also known as address point data), which is critical for high priority issues like emergency response. In some cases, where the governments have address point data, it is not openly available due to propriety or legal constraints. Many state and local governments do not have the resources to plan, implement, and maintain address point data collection activities. Resources needed to overcome data collection challenges include software tools, starter data, human capital, collection processes and guidelines, and data system integration.

WHY THIS PROBLEM IS IMPORTANT: Tribal, state, and local address point data are critical to all levels of government. During catastrophic events such as hurricanes and wild fires, residences and businesses cannot be located using traditional means of address navigation since the structures, street signs, and landmarks no longer exist. An easily accessible data base of reliable, accurate, and uniform/standardized address point data can meet the immediate needs of emergency responders and communities in crisis. A complete address data base is also needed to accurately count citizens through censuses and surveys in order for governments to receive their share of federal funds and be accurately represented. For example, in 2015, Census Bureau data was used to distribute more than $675 billion in funds. Address data is also critical for the Master Address File (MAF) used for the decennial census and ongoing surveys.

For the Department of Transportation (DOT), complete, accurate, and up-to-date addresses with location data is critical to transportation safety and the National 911 Program, which envisions an emergency response system that best serves the public, providing immediate help in all emergency situations. Mail delivery, real estate and land use decisions, and public health tracking also depend on address point data. The Census Bureau and DOT are committed to improving data completeness, accuracy and currency, which are key to successful development of a National Address Database (NAD) as a National Geospatial Data Asset (NGDA).

VISION: Outcomes from The Opportunity Project provide the momentum needed for tribal, state, and local governments to begin to fill in address point data gaps across the nation and to share the data openly, and help to share best practices for workflows and processes, including metadata.

TARGET AUDIENCE: Tribal, state, and local governments.

POTENTIAL DATASETS:

- The National Address Database (NAD) version 1 (beta)
- U.S. Postal Service (USPS) enhanced NAD (includes zip codes and standardized addresses)
- TIGER/Line Roads
- TIGER/Line Address Range-Feature
- TIGER/Line Address Range-Feature Name Relationship File
- TIGER/Line Address Ranges
- USA Structures – building structure outlines (available for Delaware, Hawaii, Louisiana, Maryland, Pennsylvania, Texas, Virginia, West Virginia)
- Suggested format for address point data: The NAD Schema (data sets should at least include fields identified as "always used")
- USDA NAIP Imagery