National Geospatial Advisory Committee

Geospatial Technology and Information Use Case:

ADDRESSING THE NATIONAL OPIOID CRISIS

Introduction
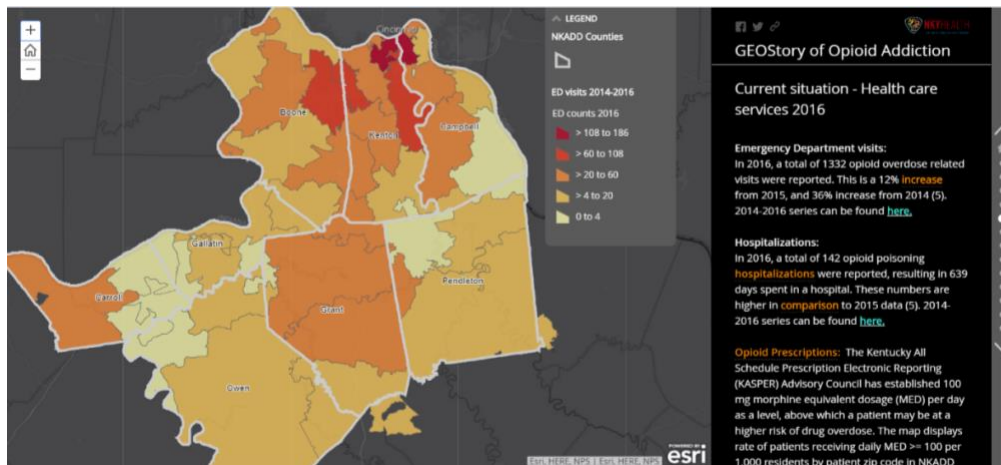
The national opioid epidemic kills 130 people each day, and has an estimated annual economic cost of $78 billion according to a deep dive of government data compiled by USA Facts in 2019. To put this crisis in perspective, USA Facts noted that the, "number of people seeking treatment for opioid addiction now outweighs alcohol abuse at reporting facilities." Furthermore, 67% of all overdose deaths were linked to synthetic opioids according to the CDC, and while prescription-related overdose rates were declining due to curtailment measures, heroin seizure rates were on the rise at that time. Local to national mapping of the crisis reveals how significant this crisis is and how the epidemic varies at the state and local level across the nation (see https://www.policymap.com/2018/09/opioid-addiction-in-your-community/).

The Value of Geospatial Data

Putting the opioid crisis in a location context – on a map – provides clarity to help understand the severity of the crisis at the state and local levels. Information about drug related arrests, overdose deaths, emergency responses, controlled substance prescription rates, and other data located on a map provides decision makers with important insight as to where to commit limited resources to fight the crisis, including treatment centers, naloxone dispensaries, and community education programs. In short, geospatial data is critical to understanding and properly responding to this crisis. The National Spatial Data Infrastructure (NSDI) facilitates sharing of geospatial resources among organizations and jurisdictions to help address this and many other challenges.

Addressing the Crisis at the Community Level

As the PolicyMap illustrates, Kentucky has been among the states with higher overdose death rates, with Northern Kentucky counties experiencing a heightened severity of the crisis. To address this situation, the Northern Kentucky Health Department collaborated with other organizations in the region to form the Heroin Impact Response Team in 2013, and worked to consolidate relevant data across counties. This data was then provided to a GIS team to map the epidemic; identify trends from a variety of opioid-related data such as arrests, deaths, 911 responses, and overdose hospital visits; and to provide visualizations and analysis to help decision makers coordinate a, "unified, place-based strategic response down to the zip-code level." This effort helped to prioritize and deploy resources to counter overdoses, treat substance use disorders, and support unused prescription drug disposal, as well as to provide locations of syringe access exchange programs, and to help reduce infections due to shared syringe use. Equally important, mapping the crisis has helped to educate the public on the impact of this crisis and the need for action in their communities.
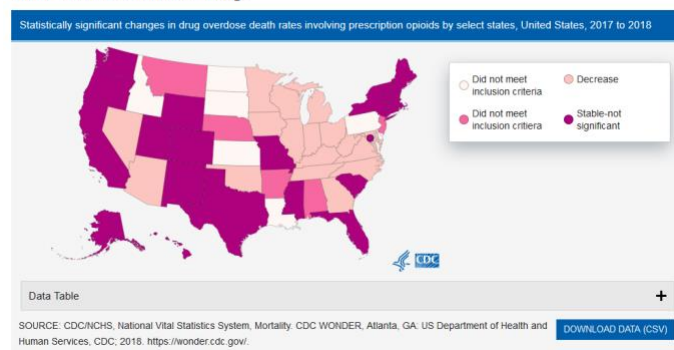
Localities are sharing their experiences in the application of geospatial information and tools to map, analyze, and address the opioid crisis. An Opioid Mapping Initiative sponsored by New America helped bring together local governments, academic institutions, and non-profit organizations to share best practices and cooperatively test new ideas.

Recent CDC data suggests improvement in the opioid situation in Kentucky. The ability to combine, visualize and analyze a wide range of opioid-related information in a location context is an important tool to help better inform decision-making and make the best use of limited resources.

As of this writing, the Northern Kentucky Office of Drug Control Policy, which took over regional response efforts in 2018, is working to expand capability to address opioids as well as broader substance use disorders.

Challenges

In reviewing the Northern Kentucky example and other state and local case studies on this crisis, major challenges have included:

- Significant time and effort required to establish agreements between agencies and neighboring jurisdictions to access/share opioid-related information, and to process opioid-related information to locate this information properly on a map and in analytics .
- Providing decision-makers with necessary level of location detail in maps and analytics while protecting personal privacy associated with opioid event data.
- Varied availability of skilled resources and mapping capacity within cooperating local governments to support maps and analytics for use by officials.

A major goal of the US NSDI is to be a "critical vehicle for facilitating seamless data development, information sharing, and collaborative decision making across multiple sectors of the economy," and to focus resources of government and public and private sector stakeholders to improve the utilization of geospatial data. Investing resources to establish and maintain consistent nationwide geospatial data that satisfies local to national needs; to advance best practices to enable communities; to protect privacy; and to build operational capacity will improve our collective ability to plan, manage, and mitigate significant challenges such as the opioid crisis.