Community-Driven Data Engineering for Opioid and Substance Abuse in the Rural Midwest

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The Problem:
• Ohio ranks 2nd in opioid overdose death rate (32.9/100,000 persons, 2016).
• Rural communities are disproportionately affected;
• Critical data in siloes across agencies and jurisdictions;
• Data are not harmonized;
• Lack of a privacy and security framework;
• Data are not timely/real-time;
• Lack of tools and easy-to-use apps;
• Lack of data analytics resources/expertise in rural counties;
• Lack of wireless connectivity/coverage

The Solution: Scalable, flexible, and connectivity-rich data-driven BIGDATA (BD) approach, OpenOD
OpenOD is an agile, user-driven framework for creating application-specific, to-scale, BD solutions for the Common Good.

Objective 1: Collaborate with local communities to understand strengths and gaps in cyberinfrastructure, substance use data availability, and need for data analytics workforce skills.
Objective 2: Build-out a flexible cyberinfrastructure using a variety of BD technologies that include a data commons, CommonsOD, stakeholderusable and cloud-amenable data analytics and visualization tools, and internet connectivity with both mobile and non-mobile capabilities.
Objective 3: Validate, evaluate, and disseminate cyberinfrastructure and data analytic tools to stakeholder groups throughout the region. Build upon existing partnerships and create new partnerships with the support of the MBDH to validate the cyberinfrastructure and tools. Provide workforce training in use of cyberinfrastructure and tools.

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