

An Opioid Overdose Vulnerability Assessment Across Indiana

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Bio:

Robert Gottlieb, MS – Robert serves as a GIS Data Analyst in the Indiana Department of Health (IDOH) Office of Data and Analytics (ODA). He develops maps, spatial analysis, vulnerability assessments, and applications for partners throughout the department and outside partners. He recently assumed GIS coordinator responsibilities for IDOH.

Robert has worked at IDOH for over five years. He graduated from Cornell University with a Bachelor of Science degree in Atmospheric Sciences in 2009, the University of Oklahoma with a Master of Science degree in Meteorology in 2011, and the University of South Carolina with a Master of Science degree in Geography in 2015.

Jared Sawyer - Jared Sawyer, MPH – Jared currently works as a Research Analyst for NORC at the University of Chicago (NORC). At NORC Jared conducts mixed methods evaluations and needs assessments for government agencies and foundations.

In 2020, Jared graduated from Tufts University with a Master of Public Health in Biostatistics and Epidemiology where he focused on state-level and national opioid vulnerability analyses. In 2019, Jared received a Bachelor of Arts in International Relations and a Bachelor of Science in Biology from Tufts University.

Abstract:

The Indiana Department of Health partnered with Tufts University, the Centers for Disease Control and Prevention, and the Council of State and Territorial Epidemiologists to conduct an opioid overdose vulnerability assessment for Indiana. The team also evaluated spatial accessibility to opioid use disorder treatment, harm reduction services, and opioid response programs. We compiled county-level data on opioid-related and socio-economic indicators from publicly available sources. First, we assessed the spatial distribution of opioid-related indicators with GIS. Next, we used a novel regression-weighted ranking approach to calculate county-level vulnerability scores. Finally, we examined accessibility to opioid use disorder treatment services and opioid response programs at the census-tract level using two-step floating catchment area analysis. Opioid-related emergency department visit rate, opioid-related arrest rate, chronic hepatitis C virus infection rate, and percent of female-positively associated with opioid-identified high-risk counties across the east central Indiana. We found that only one of the 19 most vulnerable counties was in the top quintile for provider accessibility in all of its



rate, opioid prescription rate, unemployed households were independently and involved overdose mortality. We identified rural-urban continuum and primarily in that only one of the 19 most vulnerable treatment services and had naloxone census tracts.