

Novel study creates new metric to illustrate disadvantaged areas nationwide

9 April 2019, by Amy Laukka

Ohio, West Virginia, and the District of Columbia have the highest disparity between opioid-related deaths and access to treatment providers for opioid use disorder (OUD) in the U.S. That finding comes from a first-of-its-kind research study conducted at The University of Texas Health Science Center at Houston (UTHealth) to investigate the regional imbalances that exist between the need for OUD treatment and access to providers nationwide. The study was recently published in the *Journal of Addiction Medicine*.

From 2001 to 2016, there was a 345% increase in deaths involving opioids, and in 2017 the opioid crisis was officially declared a public health emergency. Estimates indicate there were nearly 50,000 opioid-related deaths in 2017, as compared to 40,274 in 2016, according to research published in JAMA.

"One of the biggest hindrances providers and policymakers face when trying to combat the country's opioid crisis is the lack of reliable metrics to assess the country's hotspots where resources are most needed," said James Langabeer, Ph.D., MBA, a professor at McGovern Medical School and the School of Biomedical Informatics at UTHealth, and the founder of a unique opioid intervention program called HEROES. "Previous studies and most policy briefs have analyzed either overdose deaths or [treatment](#) capacity separately, which while useful, don't accurately depict the full scope of the [opioid crisis](#)."

Langabeer's research center overlaid the overdose mortality and treatment capacity data to create a new metric across more than 700 counties with the highest reported opioid deaths. The aim is to create a more accurate picture of the areas that are most problematic.

"The trend when addressing the opioid epidemic has been to just talk about number of deaths, but we hope this study helps people see that we also

need to simultaneously discuss number of treatment programs available to help prevent addiction from becoming fatal," Langabeer said.

The research team computed a ratio between program capacity and mortality, called the programs-per-death ratio (PPD). For example, across the contiguous 48 states, the 40,274 opioid deaths in 2016 and 12,572 treatment programs yield a ratio of 1 treatment program for every 3.2 deaths. The most challenged areas—Ohio, West Virginia, and the District of Columbia—yield an average of 1 program for every 8.5 deaths.

Furthermore, the research shows 32% of all U.S. counties do not have any treatment programs, and more than 19% of all counties have a treatment PPD ratio of less than 1:10.

"Basically a third of the country does not have access to any treatment programs at all, and about a fifth have some but not nearly enough to match the need. Targeted policies and resource investments should focus on harm reduction and capacity expansion in the areas with the most geographic imbalance. We hope this information can assist local and federal authorities initiate policies to target these geographic regions that need the most help," Langabeer said.

The Southeastern region from Texas to Florida has relatively low death rates, but also the lowest rates of treatment programs in the country, while disproportionately more are available in the north central and northwestern states.

"This trend we see in the Southeastern states could stem both from a lack of treatment capacity as well as underreporting of drug causes of death on [death certificates](#). We believe the actual rates of [opioid-related deaths](#) are actually higher than reported, due to very low rates of autopsies and medical examiner toxicology reports. More accurate and timely reporting is needed across all regions to

comprehensively address this problem," Langabeer said.

While Texas has a low number of deaths, the Lone Star State also has the absolute lowest number of treatment programs.

"Opioid abuse is a bit newer in Texas than in other parts of the country. Currently, we're seeing the most overdoses from amphetamines and cocaine, but that is changing quickly to include opioids, largely due to the rise of fentanyl," Langabeer said. "This data gives us the ability to prepare with more treatment programs like HEROES to help meet the need." HEROES is a proactive opioid intervention program Langabeer created to provide comprehensive treatment for [opioid](#) abusers and gain a more thorough understanding of the epidemic in Houston.

Langabeer and his team are currently conducting another study to investigate the most statistically significant determinants behind their geospatial analysis.

"Now that we know where the biggest problems lie, we can dig deeper to see if there are any economic, social, or health-related factors behind the trends," he said.

More information: James R. Langabeer et al, Disparities Between US Opioid Overdose Deaths and Treatment Capacity, *Journal of Addiction Medicine* (2019). [DOI: 10.1097/ADM.0000000000000523](#)

Provided by University of Texas Health Science Center at Houston

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