

Study finds data-driven intervention did not impact opioid-related overdose death rates over evaluation period

June 16 2024



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A data-driven intervention that engaged communities to rapidly deploy evidence-based practices to reduce opioid-related overdose deaths—such as increasing naloxone distribution and enhancing access to medication for opioid use disorder—did not result in a statistically significant reduction in opioid-related overdose death rates during the evaluation period, [according to results](#) from the National Institutes of Health's [HEALing \(Helping to End Addiction Long-Term\) Communities Study](#).

Researchers identified the COVID-19 pandemic and increased prevalence of fentanyl in the illicit drug market—including in mixtures with cocaine and methamphetamine—as factors that likely weakened the impact of the [intervention](#) on reducing opioid-related overdose deaths.

The findings were published in the *New England Journal of Medicine* and presented at the [College on Problems of Drug Dependence \(CPDD\) meeting](#) on Sunday, June 16, 2024. Launched in 2019, the HEALing Communities Study is the largest addiction prevention and treatment implementation study ever conducted and took place in 67 communities in Kentucky, Massachusetts, New York, and Ohio—four states that have been hard hit by the opioid crisis.

Despite facing unforeseen challenges, the HEALing Communities Study successfully engaged communities to select and implement hundreds of evidence-based strategies over the course of the intervention, demonstrating how leveraging community partnerships and using data to inform public health decisions can effectively support the uptake of evidence-based strategies at the local level.

"This study brought researchers, providers, and communities together to break down barriers and promote the use of evidence-based strategies that we know are effective, including medications for opioid use

disorder and naloxone," said NIDA director, Nora D. Volkow, M.D.

"Yet, particularly in the era of fentanyl and its increased mixture with psychostimulant drugs, it's clear we need to continue developing new tools and approaches for addressing the overdose crisis. Ongoing analyses of the rich data from this study will be critical to guiding our efforts in the future."

NIH launched the HEALing Communities Study, a four-year, multisite research study to test a set of evidence-based interventions for reducing overdose deaths across health care, justice, and behavioral health settings. [Over 100,000 people are now dying annually of a drug overdose](#), with over 75% of those deaths involving an opioid.

Numerous evidence-based practices have been proven to prevent or reverse [opioid overdose](#), but these strategies are [gravely underused](#) due to a number of barriers.

As part of the intervention, researchers collaborated with community coalitions to implement evidence-based practices for reducing opioid overdose deaths from the [Opioid-Overdose Reduction Continuum of Care Approach](#). These evidence-based practices focus on increasing opioid education and naloxone distribution, enhancing access to medication for opioid use disorder, and safer opioid prescribing and dispensing.

The intervention also included a series of communication campaigns to help reduce stigma and increase the demand for evidence-based practices.

Communities were randomly assigned to either receive the intervention (between January 2020 and June 2022) or to the control group (which received the intervention between July 2022 and December 2023). To

test the effectiveness of the intervention on reducing opioid-related overdose deaths, researchers compared the rate of overdose deaths between the communities that received the intervention immediately with those that did not during the period of July 2021 and June 2022.

Between January 2020 and June 2022, intervention communities successfully implemented 615 evidence-based practice strategies (254 related to overdose education and naloxone distribution, 256 related to medications for opioid use disorder, and 105 related to prescription opioid safety).

Despite the success in deploying evidence-based interventions in participating communities, between July 2021 and June 2022, there was not a statistically significant difference in the overall rate of opioid-involved overdose deaths between the communities receiving the intervention and those that did not, (47.2 opioid-related overdose deaths per 100,000 people in the intervention group, versus 51.7 in the control).

The study team is also examining data on the impact of the intervention on total overdose deaths and examining specific drug combinations, such as stimulants and opioids, and on non-fatal opioid overdoses, among other study outcomes.

"The implementation of evidence-based interventions is critical to addressing the evolving overdose crisis," said Miriam E. Delphin-Rittmon, Ph.D., HHS Assistant Secretary for Mental Health and Substance Use and the leader of SAMHSA.

"This study recognizes there is no quick fix to reduce opioid overdose deaths. Saving lives requires ongoing commitment to evidence-based strategies. The HEALing Communities Study facilitated the implementation of 615 evidence-based practice strategies, with the potential to yield lifesaving results in coming years."

The authors highlight three specific factors that likely weakened the impact of the intervention on reducing [opioid-related overdose deaths](#). First, the intervention launched two months before the COVID-19 shutdown which severely disrupted the ability to work with health care, behavioral health, and criminal legal systems in implementing evidence-based practices. Indeed, due in large part to the emergence of the COVID-19, only 235 of the 615 strategies (38%) were implemented before the comparison period began in July 2021.

Second, after communities selected which evidence-based practices they wanted to implement, they only had 10 months to implement them before the comparison period began.

The authors note that this was not enough time to robustly recruit necessary staff, change clinical practice workflows, or develop new collaborations across agencies and organizations. They note more time to implement these strategies, and more time between implementation and measuring results, may be needed to observe the full impact of the intervention.

Lastly, significant changes in the illicit drug market could have impacted the effectiveness of the intervention. Fentanyl increasingly permeated the illicit drug supply, and was increasingly mixed or used in combination with stimulant drugs like methamphetamine and cocaine, or in counterfeit pills made to look like prescription medications.

The increasing use of fentanyl, as well as xylazine, over the study period posed new challenges for treatment of [opioid use disorder](#) and opioid-related overdose.

"Even in the face of a global pandemic and worsening overdose crisis, the HEALing Communities Study was able to support the implementation of hundreds of strategies that we know save lives," said

Redonna Chandler, Ph.D., director of the HEALing Communities Study at NIDA.

"This is an incredible feat for implementation science, and shows that when we provide communities with an infrastructure to make data-driven decisions, they are able to effectively implement evidence-based practices based on their unique needs."

More information: JH Samet, et al. Community-based Cluster Randomized Trial to Reduce Opioid Overdose Deaths, *New England Journal of Medicine* (2024). [DOI: 10.1056/NEJMoa2401177](https://doi.org/10.1056/NEJMoa2401177).
www.nejm.org/doi/full/10.1056/NEJMoa2401177

Provided by National Institutes of Health

Citation: Study finds data-driven intervention did not impact opioid-related overdose death rates over evaluation period (2024, June 16) retrieved 25 June 2024 from <https://medicalxpress.com/news/2024-06-driven-intervention-impact-opioid-overdose.html>

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