

Study finds COVID-19 shutdown flipped drug overdose mortality rates among industries

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Drug overdose deaths spiked following Kentucky's COVID-19 stay-at-home and business closure orders of March 2020. But the industries that

suffered the most overdose deaths were surprising, according to research conducted by the Kentucky Injury Prevention and Research Center (KIPRC) at the University of Kentucky College of Public Health (CPH).

The study, titled "[Interrupted time series analysis of drug overdose fatalities in service-related industries versus non-service-related industries during the COVID-19 pandemic, 2018–2021.](#)" was published in the journal *Injury Prevention* in 2023.

In the years leading up to the study, researchers found Kentucky's service industry employees experienced the most drug overdose deaths. However, non-service industry workers were more likely to die by drug overdose in the months following the COVID-related shutdown of 2020.

Analysis of Kentucky drug overdose death certificate and toxicology testing data from 2018–2021 using chi-squared and interrupted time series methods revealed a significant increase in [mortality rates](#) for both sectors. In 2019, the drug overdose rate per 100,000 employees was 46.7 and 45.7 for service and non-service industries, respectively. In 2021, those rates had increased to 76.2 and 81.9.

The occupations within the service-related industry sector with the highest frequencies of drug overdose deaths were restaurant wait staff (10%), followed by cooks (7%), landscaping and groundskeeping workers (6%) and automotive service technicians and mechanics (6%). Non-service-related industry drug overdose deaths occurred more often among construction laborers (15%), carpenters (7%) and freight, stock and material movers and hand occupations (7%).

Terry Bunn, Ph.D., lead author of the study and director of KIPRC, said she wasn't surprised that both service- and non-service-related industries experienced increases in fatal drug overdoses during the pandemic gubernatorial business closure orders. "But I was surprised that the

increase in fatal drug overdose numbers within the non-service-related industries was twice that of the service-related industry," Bunn said.

Service workers experienced 1,789 drug overdose deaths during the 2018–21 period compared to 2,838 for non-service workers during the same period.

"I think that service-related industry employees may have been more resilient and adaptable to changes in employment status compared to non-service-related industries and could find employment in other essential industry sectors during the pandemic such as the home improvement and building materials industry and the grocery store industry sector," Bunn said.

Fentanyl was the most commonly identified drug in overdose deaths in both industry groupings, with 44% of identified substances among service-related industry deaths and 48% of identified substances among non-service-related deaths.

The second most common drug with elevated frequencies detected in [drug overdose deaths](#) was methamphetamine, with 24% of identified substances among service-related industry deaths and 28% of identified [substances](#) among non-service-related industry deaths.

Bunn hopes the results will alert employers in both the service and non-service industries to the need for a plan to handle on-site drug overdoses and substance use.

"It is important for businesses to know about local community resources for timely linkage to substance use disorder treatment and to recovery support services as well as availability of on-site naloxone," she said.

More information: Terry L Bunn et al, Interrupted time series analysis of drug overdose fatalities in service-related industries versus non-service-related industries during the COVID-19 pandemic, 2018–2021, *Injury Prevention* (2023). [DOI: 10.1136/ip-2023-044894](https://doi.org/10.1136/ip-2023-044894)

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