

# Understanding the Impact of Naloxone Distribution in Underserved Communities

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**Background:** The opioid epidemic is a leading cause of preventable deaths throughout Ohio, including in Lucas County. In 2022, the Lucas County Health Department reported 221 opioid related deaths compared to 274 deaths in 2021. According to data from the Center of Disease Control and Prevention, 43605 and 43612 are consistently the two most deadly zip codes within Lucas County (1). Continued community outreach is critical to combat the opioid epidemic.

**Methods:** Addiction Medicine Club was created by medical students at the University of Toledo College of Medicine and Life Sciences to spread awareness of addiction medicine and contribute to the efforts to reduce opioid overdoses in Lucas County. We partner with the Lucas County Health Department and Community Care Clinics to provide naloxone and fentanyl test strips to underserved patients at a weekly student-run clinic in Toledo, Ohio. Areas of distribution include zip codes 43605 and 43609. Education regarding the indications and methods of use is given to patients receiving naloxone or fentanyl test strips and to medical student volunteers as part of our Train the Trainer initiative. Data on opioid deaths and naloxone distribution were acquired from the Ohio Department of Health and analyzed in Microsoft Excel.

**Results:** In 2022, 248 naloxone kits were distributed by Addiction Medicine Club in the 43605 zip code, increasing from 175 kits in 2021. Similarly in the 43609 zip code, 124 naloxone kits were distributed in 2022 and 56 kits in 2021. Distribution of fentanyl test strips by Addiction Medicine Club was started in May 2023, therefore data from previous years is not available. During 2022, there were 22 deaths attributed to opioid overdoses in the 43605 zip code, decreasing from 35 deaths in 2021. In the 43609 zip code, there were 18 deaths attributed to opioid overdoses in 2022 compared to 19 deaths in 2021.

**Conclusion:** Within Lucas County, Addiction Medicine Club distributes naloxone to zip codes 43605 and 43609. In both zip codes, there was an increase in naloxone distribution from 2021 to 2022. As naloxone distribution increased, there was a decrease in opioid deaths in both zip codes from 2021 to 2022. While this small sample size is not enough to make correlations, it is a promising sign for continuation of growing the naloxone distribution and education to reduce deaths caused by opioid overdoses in Lucas County.

Addiction Medicine Club continues to expand their efforts by initiating naloxone distribution on the University of Toledo's main campus to spread awareness on opioids and naloxone availability. Similarly, Addiction Medicine Club employs a Train the Trainer initiative with medical students at the University of Toledo College of Medicine and Life Sciences. This initiative entails educating individuals on how to recognize an opioid overdose, respond to an opioid overdose, and educate others on the proper use of naloxone. With this continued expansion, we hope to further combat the opioid epidemic in our area and reduce the number of reversible deaths by overdose.

## References

1. Centers for Disease Control and Prevention. Provisional County drug overdose deaths. Centers for Disease Control and Prevention, 2023 October 17. <https://www.cdc.gov/nchs/nvss/vsrr/prov-county-drug-overdose.htm>