

Pharmacy naloxone standing order distribution may have reduced opioid fatality rates in Massachusetts

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Expanding access to naloxone is a key component of the national strategy to end the opioid crisis in America, and community pharmacies

play a central role in distributing this overdose-reversing medication.

Prior to naloxone receiving [federal approval](#) for over-the-counter availability as Narcan nasal spray in 2023, almost all US states allowed individuals to obtain the life-saving drug at community pharmacies without a prescription through a state authorization known as a standing order. But there remains a limited understanding of whether pharmacy naloxone distribution has had any effect on reducing [opioid overdose deaths](#) in communities.

A new study led by a Boston University School of Public Health (BUSPH) researcher has examined Massachusetts's standing order for pharmacy naloxone distribution and found that communities with pharmacies dispensing standing order naloxone to [community residents](#) showed a significant decrease in opioid fatality rates, compared to communities that did not implement standing order naloxone programs.

For the study, [published](#) in *JAMA Network Open*, researchers from BUSPH, Boston Medical Center, Brandeis University, and West Virginia University conducted a retrospective multi-site interrupted time series analysis and found that despite an increase in opioid fatality rates overall in Massachusetts during the study period from 2013 to 2018, individual communities where standing order naloxone was dispensed at pharmacies observed a decrease in opioid deaths over time.

Although the study occurred before the Food and Drug Administration (FDA) approved naloxone as an over-the-counter product in 2023, these new findings provide valuable data that underscore the continuing need for state and federal efforts that expand access to naloxone—including over-the-counter availability—as part of a multifaceted approach to solving the opioid epidemic. More than 80,000 overdose deaths in the US were linked to opioids in 2023, and a community pharmacy is a key place that community members turn to for emergency harm reduction

support.

"Expanding access to naloxone through state-mandated standing orders saved lives and reduced opioid fatality rates across communities," says study lead and corresponding author Dr. Ziming Xuan, professor of community health sciences and epidemiology at BUSPH. "This new finding lends support to the FDA's approval of certain over-the-counter naloxone products as a key step for ensuring that community members who need this life-saving medication are able to access it."

In the absence of a federal standing order for naloxone, all 50 states and Washington, DC have some form of naloxone access laws that allow individuals to obtain access to the medication without a prescription in some capacity, but these laws may vary by state. In Massachusetts, implementing naloxone standing orders became voluntary for pharmacies in 2014 and mandatory by the end of 2017.

The study utilized Massachusetts pharmacy data and public death records to examine [pharmacy](#) naloxone distribution and city-level opioid fatality rates across all 351 municipalities in the Commonwealth from 2013 to 2018, during which pharmacies gradually implemented the standing order, first voluntarily and then eventually by mandate.

After accounting for municipality-level sociodemographic and opioid prevention factors, the team observed a gradual and significant decrease—by an average of 16% per year—in opioid fatality rates in cities with pharmacies that implemented the naloxone standing order compared to cities that did not implement the standing order.

The analysis also examined changes that occurred within the first quarter after pharmacies implemented the naloxone standing order, but did not detect significant changes. The gradual decline in deaths could in part reflect the time it takes to spread awareness to community members

about the availability of nonprescription naloxone in their local pharmacies.

Importantly, the researchers say that these findings decrease stigma around naloxone usage and contribute to a substantial body of research that refutes the framing of naloxone as a moral hazard that encourages substance use. They also emphasize the need to evaluate over-the-counter naloxone distribution and its impact on opioid overdose, as well as examine how disadvantaged communities may benefit from this availability.

"Supply factors, pricing, and overall awareness of over-the-counter availability of naloxone may affect its impact, so it is important to assess the diffusion of over-the-counter [naloxone](#) across communities over time and further evaluate its impact on reducing opioid fatalities, especially by communities that have been disproportionately affected by the [opioid crisis](#)," says Dr. Xuan.

More information: Ziming Xuan et al, Pharmacy Naloxone Standing Order and Community Opioid Fatality Rates Over Time, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2024.27236](https://doi.org/10.1001/jamanetworkopen.2024.27236)

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