

Study: Wide distribution of naloxone can slash overdose deaths during epidemics

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A new study in *The Lancet Public Health* shows the rapid expansion of British Columbia's Take Home Naloxone program significantly reduced the number of fentanyl-related overdose deaths in 2016.

The BC Centre for Disease Control, in partnership with the Institute of Applied Mathematics at the University of British Columbia, has developed a mathematical model—the first of its kind—that can be used to estimate the effectiveness of different public-health interventions in preventing opioid overdose deaths.

The first use of the model examined the impact of the expansion of the Take-Home Naloxone program by quantifying the number of overdose-related deaths in BC that were averted with use of [naloxone](#) kits.

Key findings include the following:

- Rapid, wide-scale distribution of naloxone kits effectively prevents overdose deaths
- Between January 1 and October 31, 2016, the expansion of the Take-Home Naloxone program prevented 226 deaths in BC, or 26 per cent of all possible overdose-related deaths in that time period
- For every 10 THN kits that were used, one overdose [death](#) is estimated to have been prevented

"It is very encouraging to see that our coordinated efforts to expand

access to Take-Home Naloxone kits have proven to save so many people from overdose during this crisis," said Judy Darcy, Minister of Mental Health and Addictions. "Since this study was completed, we have expanded access to naloxone even further, increasing to 80 per cent of community pharmacies, hundreds of other locations, front line workers and families across BC. This is one of the many ways we are working to keep people alive so they can find a pathway to hope and recovery."

"Clearly, fast and wide distribution of naloxone is key," said Dr. Mark Gilbert, a BCCDC medical director who oversees the Take Home Naloxone program. "We hope other jurisdictions in Canada and the world will take note and use our experience to make their own harm reduction programs as effective as possible."

The model developed by the BCCDC and UBC uses multiple data sources including THN data, provincial data for overdose and fentanyl-related deaths, ambulance attended overdoses and estimates of the number of people who use illicit drugs in BC.

"We are now expanding the scope of the project for the next phase of this research," said Mike Irvine, a postdoctoral fellow in mathematics at UBC and BCCDC. "We plan to incorporate data from other sources including overdose prevention sites and opioid agonist therapy programs, as well as to examine the impact of more potent fentanyl analogues such as carfentanil."

Take Home Naloxone program quick facts:

- Since the program launched in 2012, more than 75,000 kits have been distributed across BC
- Nearly 20,000 of those kits have been reported as used to reverse an overdose
- No-charge kits are available to those at high risk of an opioid

overdose, or to people who are likely to witness and respond to an [overdose](#)

- There are now more than 1,500 active distribution sites in BC, including hospitals, corrections facilities, First Nations sites and community pharmacies

More information: Michael A Irvine et al, Distribution of take-home opioid antagonist kits during a synthetic opioid epidemic in British Columbia, Canada: a modelling study, *The Lancet Public Health* (2018). DOI: [10.1016/S2468-2667\(18\)30044-6](https://doi.org/10.1016/S2468-2667(18)30044-6)

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