

Clinical outcomes and healthcare costs among people entering a safer opioid supply program in Ontario

Background

- The opioid overdose crisis continues to be a major public health concern in Canada. Safer opioid supply (SOS) programs provide prescription opioids as well as health and social supports to individuals who are at high risk of overdose as a harm reduction measure.
- Canada's first SOS program began at the London Intercommunity Health Centre (LIHC) in 2016.

What did we investigate?

The impact of the LIHC SOS program on health service use and healthcare costs.

Key findings

- Overall, there was a rapid decrease in emergency department (ED) visits, hospital admissions, and healthcare costs (excluding primary care and medication costs) among individuals enrolled in the SOS program.
- Among people in the SOS program, there was also a significant decrease in emergency department (ED) visits, hospital admissions, admissions for incident infections, and healthcare costs (excluding primary care and medication costs) in the year following entry into the program compared to the year prior.
- No significant changes in these outcomes were found among a comparison group of London residents with opioid use disorder who were not clients of the SOS program.
- Medication costs increased among clients in the SOS program; however, medication costs for prescribed opioids were relatively modest (\$3,128 out of \$21,119 in total medication costs, or 14.8%). This likely reflects improved access to treatment for other conditions, such as HIV or hepatitis C.

How was the study conducted?

- *Design:* Interrupted time series analysis.
- *Population:* London, Ontario residents diagnosed with opioid use disorder (OUD) who entered the SOS program and a comparison group of individuals matched on demographic and clinical characteristics unexposed to the program.
- *Study period:* Between January 2016 and March 2019.
- *Data source:* Client data was obtained from the LIHC SOS program and linked to Ontario's administrative health databases at ICES.
- *Primary outcomes:* Emergency department visits, hospital admissions, hospital admissions for infections, and healthcare costs (excluding primary care and medication costs).
- *Secondary outcomes:* Mental health-related hospital visits, opioid-related hospital visits, substance use disorder-related hospital visits, opioid-related deaths, and medication costs.



What did we find?

- In this time series analysis, we studied 82 of the 94 SOS clients and matched them with 303 residents of London, Ontario with opioid use disorder who were not clients of the SOS program.
- Among SOS clients, ED visits ($p=0.02$), inpatient hospital admissions ($p=0.005$) and non-primary care related healthcare costs ($p=0.008$) all declined rapidly after entry into the safer supply program.
- In the year following cohort entry, the rate of emergency department visits (rate ratio [RR] 0.69, 95% confidence interval [CI] 0.53-0.90), hospital admissions (RR 0.46, 95% CI 0.29-0.74), admissions for incident infections (RR 0.51, 95% CI 0.27-0.96), and total non-primary care related healthcare costs (\$15,635 vs. \$7,310/person-year; $p=0.002$) declined significantly among SOS clients compared to the year prior. Among SOS clients eligible for public drug benefits, medication costs increased significantly in the year following cohort-entry ($p<0.001$).
- Among London residents with OUD who were not part of the program, there were no significant changes in the primary outcomes. However, significant decreases were observed in some secondary outcomes, including the number of mental-health-related hospital visits, substance use disorder-related hospital visits and costs for hydromorphone and OAT.

Recommendations

The results from this study provide preliminary evidence that SOS programs can play an important role in the expansion of harm reduction programs available to assist people who use drugs at high risk of drug poisoning.

For more information

Gomes T., Kolla G., McCormack D., Sereda A., Kitchen S., and Antoniou T. (2022). [Clinical outcomes and healthcare costs among people entering a safer opioid supply program in Ontario: A comparative time series analysis.](#) *CMAJ*.