

Health implications of a policy shift to long-acting opioid agonist therapies for opioid use disorder in Canadian federal prisons: a modelling study

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Background:

Opioid agonist therapy (OAT) is the most effective treatment for opioid use disorder (OUD) and ~25% of people in Canadian federal prisons receive OAT during imprisonment. Effective April 1, 2026, long-acting injectable buprenorphine (LAI-BUP) became the first-line therapy for OUD (replacing sublingual buprenorphine/naloxone (SL-BUP)), with methadone available only under restricted circumstances. The health implications of this policy change remain unclear.

Methods:

A stochastic compartmental model was developed to simulate OAT uptake across Canada's 43 federal prisons, calibrated to federal prison administrative data on monthly modality stocks (methadone, SL-BUP, LAI-BUP) and hepatitis C virus (HCV) prevalence. A post-release decision tree was applied to model 6-month outcomes following release, parameterized with published OAT retention rates and post-release mortality and reincarceration rates. We projected two scenarios from 2026 to 2030: the status-quo, reflecting the policy change favouring LAI-BUP, and a counter-factual in which SL-BUP remained available at 2024 levels. Outcomes included within-prison HCV acquisitions and injecting-related infections (IRIs), and post-release all-cause mortality and re-incarcerations.

Results:

The OAT policy change was projected to result in 12 (95%CI: 6–18) additional HCV cases and 128 (95%CI: 117–140) additional IRIs in prison over 2026–2030, and 73 (95%CI: 21–152) additional deaths and 732 (95%CI: 332–1,117) additional reincarcerations post-release.

Conclusion:

Canada's federal prison OAT policy change away from patient-centred care risks increasing HCV cases and IRIs in prison and deaths and reincarcerations post-release, compromising its longstanding core strengths.

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