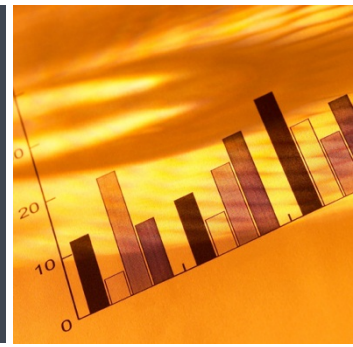


Assessment of the Impact of the Ontario Fentanyl Patch-for-Patch Return Program



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Background

Canada has one of the highest consumption rates of opioids per capita in the world.¹ Consequently, Canada has high rates of opioid misuse, addiction, and overdose-related mortality. Growing fentanyl availability and use has led to the recognition that it is one of the most common opioids contributing to the rising patterns of opioid overdose. Recent findings from the Canadian Centre on Substance Abuse (CCSA) found that 655 deaths in Canada were attributable to fentanyl between 2009 and 2014.²

To address this growing problem, one proposed strategy has been the launch of the fentanyl Patch-for-Patch (P4P) return programs. These programs require patients who are prescribed fentanyl to return their used patches to the pharmacy before receiving a prescription refill. These P4P return programs were first proposed in Nipissing County in Ontario in December 2013. The program was later expanded to other counties across Ontario.³

Although the P4P program was designed with the expectation that minimizing the diversion of fentanyl patches would reduce the adverse events (i.e., overdoses) attributable to fentanyl in the population, the impact of these programs on patient outcomes is unknown. There is also concern that restrictions might lead to the displacement of fentanyl with other prescribed or non-prescribed (i.e., heroin) opioids. The objective of this report was to evaluate the impact of the P4P return programs' early implementation in Ontario.

Method

Cross-sectional time-series analyses were conducted to evaluate the impact of the fentanyl P4P return program. This included an analysis of the volume of fentanyl patches and other opioids dispensed from retail pharmacies, the rate of opioid toxicity-related hospital visits, the rate of opioid-related deaths and the rate of

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fentanyl-patch related police incidents. Analyses were conducted overall, and at the individual county level.

The analyses used prescription claims data reimbursed by the Ontario Public Drug Programs (OPDP). These programs are available for all those with financial needs (due to high drug costs and/or low income) and all residents 65 years of age and older. Hospital admissions and emergency department visits were identified from the Canadian Institute for Health Information databases. The Drug and Drug/Alcohol Related Death (DDARD) database from the Office of the Chief Coroner was used to identify all deaths investigated by provincial medical coroners that were opioid-related. These databases which are available through the Institute for Clinical Evaluative Sciences (ICES), are linked by encoded health card numbers and are routinely used in drug research. Prescription and clinical outcomes were studied from January 1, 2008 to March 31, 2015. Lastly, we used information on fentanyl-patch related police incidents reported from all Ontario Provincial Police (OPP) precincts. Police data was studied from January 1, 2008 to December 31, 2016.

Interventional autoregressive integrated moving average (ARIMA) models were used to conduct time-series analyses to determine the impact of the introduction of the P4P return program on prescribing and clinical outcomes. Police incidents were reported overall and annually among P4P participating counties and non-P4P participating counties. Small sample sizes precluded time-series analysis of police data.

Findings

Eleven of the 21 counties studied had a statistically significant reduction ($p < 0.05$) in the rate of fentanyl patch dispensing after the introduction of the P4P program. Counties with higher rates of fentanyl dispensing prior to program implementation and with earlier intervention dates were more likely to demonstrate a significant reduction in fentanyl dispensing after the P4P program



was introduced. In the combined 24 month analysis, a statistically significant reduction in the rate of fentanyl dispensing was found following the P4P program implementation, with rates falling 32% between intervention date and the 24 month follow-up date ($p < 0.001$). Non-fentanyl opioid dispensing was relatively stable over the entire study period, and was not impacted by the introduction of the P4P program ($p = 0.27$ and $p = 0.49$, for 12 and 24 month follow-up analysis, respectively). We observed no statistically significant impact of the P4P program on rates of opioid-related hospital visits after both 6 months ($p = 0.30$) and 12 months ($p = 0.59$) of follow-up. Similarly, the P4P program did not lead to changes in the rate of opioid-related deaths after both 6 months ($p = 0.50$) and 12 months ($p = 0.96$) of follow-up.

During the observation period there were 488 fentanyl-patch related OPP incidents. Over half (57.6%) of the incidents resulted in an arrest. There was little difference in the characteristics of incidents that occurred in counties with and without P4P programs. There was a steady increase in the number of fentanyl-patch related police incidents in both counties with (1 incident in Q1-2008 to 13 incidents in Q4-2016) and without (2 incidents in Q1-2008 to 19 incidents in Q4-2016) P4P programs.

Implications

This report found that the implementation of the P4P program reduced the number of fentanyl patches dispensed from pharmacies in most participating counties, however this did not lead to reduced rates of opioid-related hospital visits or opioid-related deaths. These results are similar to those described in other evaluations of policies and programs that have been designed to reduce misuse and abuse of prescription opioids.⁴ This report also found that the number of fentanyl-patch related police incidents has been increasing across the province, with no tangible differences between participating or non-participating P4P counties. Our findings may be reflective of a shift in police awareness of the potential for criminal activity related to fentanyl.

It is imperative that programs such as the fentanyl P4P program be accompanied with increased access to addiction treatment programs, such as opioid maintenance therapy and other harm-reduction programs, as it is the combination of these interventions that is likely to have

the largest impact on reducing opioid-related harms. Furthermore, front-line healthcare workers, including pharmacists, need to be better trained to both enforce policies and to provide information and support to patients wishing to access harm-reduction programs and addiction therapy.

The finding of no increase in measured patient outcomes is reassuring and supports the notion that such programs are generally safe. This is particularly important because there is a concern that as access to prescription fentanyl is limited, those dependent on opioids may turn to heroin or illicit fentanyl products that may have higher risks of overdose. Future work must study the long-term impacts on patient outcomes broadly.

Overall, the joint OPP-public health fentanyl P4P return program appears to have reduced the dispensing of fentanyl patches that may have been diverted for illicit use, without obvious, measurable adverse consequences for patients in Ontario. The findings of this report support the use of P4P programs as part of a larger opioid-abuse reduction strategy rather than a stand-alone solution.

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