

Dental opioid prescription characteristics and the risk of new, persistent use

ODPRN

Background

- Dentists are the second largest group of opioid prescribers in Ontario, and contribute substantially to new opioid prescribing among opioid-naïve Ontario residents.
- Recent studies have shown that persistent opioid use, defined as continued opioid prescription fills typically in the 90 to 365 days following new opioid prescribing, is associated with characteristics of the initial prescription, including dose, duration, and formulation. However, little is known about the effects of these prescription characteristics on the risk of persistent opioid use among dental indications specifically.
- Given the limited availability of guidance for opioid prescribing in the management of acute dental pain, it is important to understand the association between initial prescription characteristics and persistent opioid use to guide appropriate prescribing among dental patients.

What did we investigate?

The association between characteristics of the initial opioid prescription and new, persistent use and opioid overdose among opioid-naïve dental patients.

How was the study conducted?

- We conducted a population-based, retrospective cohort study of Ontario residents newly dispensed an oral opioid prescribed by a dentist between October 1, 2014 and September 30, 2018. People newly dispensed an opioid were defined as those who did not have a claim for a prescription opioid in the 2 years preceding the dispensing of the dental opioid prescription.
- The initial opioid prescription received by patients was characterized by the average daily opioid dose dispensed in milligram morphine equivalents (MMEs), the number of days supplied, and the formulation dispensed (long- vs. short-acting).
- The primary outcome was new, persistent opioid use, defined as the dispensing of at least one additional opioid prescription within 90 days of the initial prescription, and at least one more in the subsequent 9 months. Opioid overdose within 90 days of the initial prescription was also measured.

Key points

- Among opioid-naïve Ontarians newly dispensed an opioid prescribed by a dentist during the study period, approximately 1 in 23 developed new, persistent use. A higher daily dose, longer duration, and a long-acting formulation of the initial prescription were all associated with persistence.
- The risk of opioid overdose after starting opioid therapy for a dental indication is relatively small, however there may be an elevated risk during the first 30 days post initiation.

For more information

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What did we find?

- Between October 1, 2014 and September 30, 2018, 786,125 opioid-naïve Ontario residents were newly dispensed an opioid prescribed by a dentist.
- The majority of recipients were prescribed combination products including codeine (81.9%) or oxycodone (13.1%).
- The mean days supplied was 3.8 (standard deviation [SD] 2.3), and the median daily dose dispensed was 30 MME (interquartile range [IQR] 23 to 45 MME). The majority of recipients (99.9%) received a short-acting opioid.
- New, persistent opioid use occurred among 4.4% of recipients (N=34,880), with an average of 2.8 (SD 4.4) prescriptions dispensed to each person within 90 days after the initial prescription.
- An initial daily dose above 90 MME was associated with a 20% increased odds of persistent use compared to a daily dose of 20 MME or less (adjusted odds ratio [aOR] 1.20; 95% confidence interval [CI] 1.07 to 1.34).
- Compared to an initial prescription duration of 3 days or less, a duration of 8 to 14 days was associated with a 22% greater odds of persistent use (aOR 1.22; 95% CI 1.15 to 1.30) and a duration of 15 days or longer was associated with more than a two-fold increase (aOR 2.63; 95% CI 2.37 to 2.91).
- Although rare, receiving a long-acting opioid at initiation was associated with an almost eight-fold increase in the odds of persistent use (aOR 7.88; 95% CI 6.29 to 9.87).
- In the 90 days following opioid initiation, 140 recipients experienced an opioid overdose, with half occurring within 30 days of opioid initiation.
- Overdose events occurred most often among people dispensed more than 50 MME (0.80 per 1,000 person-years), followed by those dispensed between 21 and 50 MME (0.78 per 1,000 person-years) and those dispensed 20 MME or less (0.52 per 1,000 person-years).

Recommendations

Healthcare professionals:

- Familiarize yourself with clinical guidelines and quality standards related to opioid use for dental pain that provide recommendations on safe, appropriate pain management for acute dental pain.
- When additional pain management therapy following dental procedures is indicated, consult with other involved prescribers to ensure a coordinated treatment plan.

Patients

- Speak to your healthcare provider about how to balance the risks and benefits of opioid use and discuss any questions and concerns you have prior to starting your prescription.

