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## Abstract

**Aim:** The purpose of this study is to compare provincial differences (Manitoba, British Columbia, Quebec and Ontario) of diversion of select prescription (oxycodone and fentanyl products) opioids; illicit (illicitly manufactured fentanyl and heroin) opioid cases were also examined.

**Methods:** Data were drawn from the Canada Drug Diversion Program, a systematic countrywide examination of prescription drug diversion. Participants complete a quarterly survey documenting new diversion cases of targeted prescription opioids, and cases involving heroin and illicitly manufactured fentanyl. Case counts of diversion per quarterly population rate and standard dispensed units were calculated for prescription fentanyl and oxycodone products, and case counts of heroin and illicitly manufactured fentanyl per quarterly population rate were also calculated; rates are scaled per 100,000 population and units, respectively.

**Results:** Between prescription products, oxycodone had the highest population rates for diversion in Ontario in 2Q17 (3.37) and 4Q17 (3.75); for fentanyl, the highest population rates for diversion were also found in Ontario (0.97 in 1Q17 and 5.98 in 2Q17). When comparing standard dispensed units, oxycodone was the most frequently diverted opioid in British Columbia, whereas fentanyl was the most commonly diverted opioid in Ontario. For illicitly trafficked opioids, case counts of diversion per quarterly population rate were highest in British Columbia for illicitly manufactured fentanyl (ranging from 4.82 through 40.18) and heroin (ranging from 0 to 12.34).

**Conclusion:** Case counts of fentanyl diversion per standard dispensed unit were highest Ontario. In addition, for illicit opioids, as compared to other provinces, British Columbia had the highest case counts per quarterly population rate. Rates were consistently low in Quebec for both prescription and illicit drugs. Findings provide evidence that collecting information from law enforcement can provide valuable insight into drug markets.

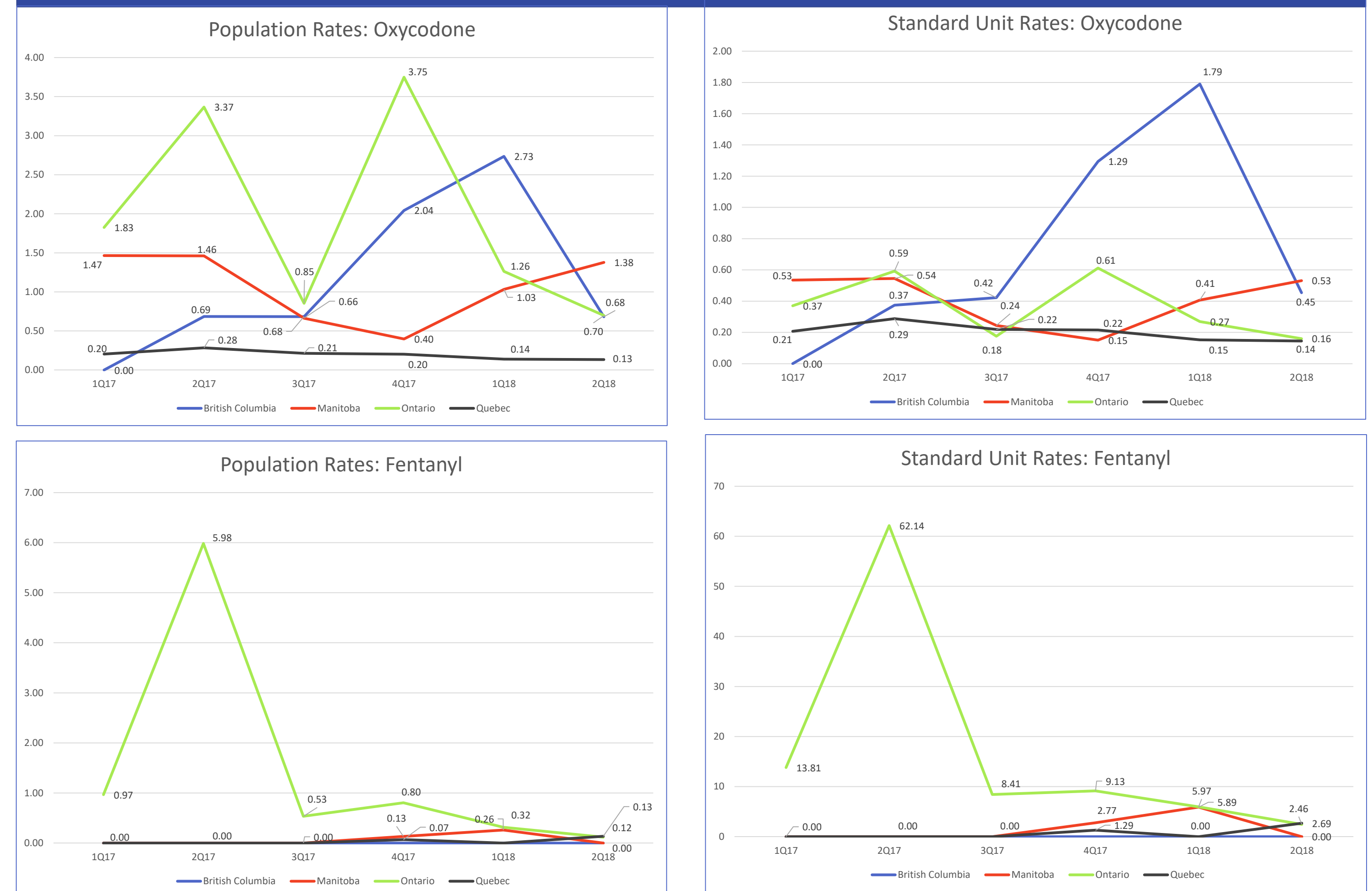
## Introduction

- Increased prescribing and use of prescription opioids in Canada have fueled the opioid epidemic over the past two decades; recent findings indicate that nearly 1/3 of those who misused a prescription opioid in Canada during the past year did not have a prescription. In addition, illicitly trafficked heroin and illicitly manufactured fentanyl are major contributors to the opioid problem in Canada.
- Despite a coordinated federal response, opioid related deaths continue to rise.
- Previous studies of drug users suggest that prescription opioid abuse is the dominant form of use in Central Canada, whereas Western Canada has been found to have higher rates of co-occurring heroin and prescription opioid and fentanyl abuse.
- Few studies have examined rates of opioid misuse in Canada from the perspective of law enforcement agencies.
- This study examines data from Canadian law enforcement agencies to assess regional differences in opioid use patterns between Central (Ontario, Quebec) and Western Canada (Manitoba, British Columbia). National rates of illicitly manufactured opioids from Canada and the U.S. (via law enforcement data) were also compared.

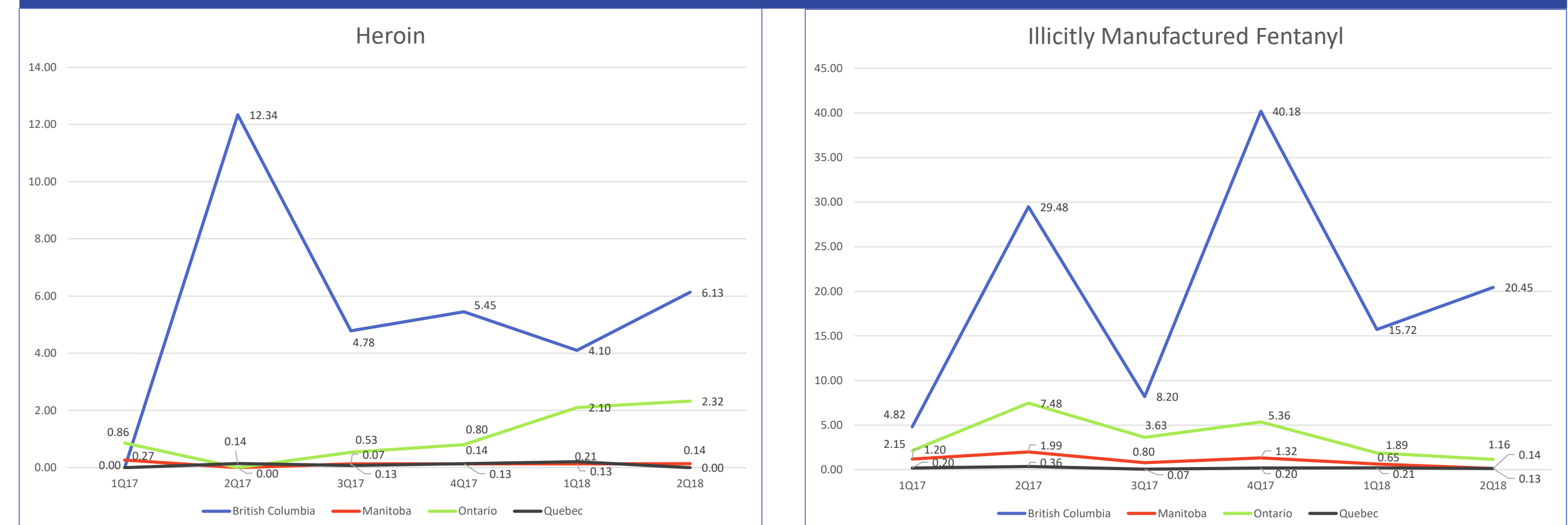
## Methods

- Data were drawn from the U.S. and Canadian Drug Diversion Programs; these programs provide systematic countrywide data on prescription drug diversion and illicit drug activity.
- Law enforcement agencies complete a quarterly survey documenting new diversion cases of prescription opioids and cases involving heroin and illicitly manufactured fentanyl.
- Case counts of diversion by quarterly population rate (per 100,000) and standard unit rates (units sold) were calculated for the selected provinces for the period of 1Q17 through 2Q18 for prescription fentanyl and oxycodone products; case counts by quarterly population rate were also calculated for heroin and illicitly manufactured fentanyl by province and by country (Canada and the U.S.).
- Case counts were summed across agencies and jurisdictions to yield a quarterly estimate of diversion for each drug class. Population and units dispensed were also summed across provinces to yield a quarterly estimate of either population or drug availability. Rates were calculated per drug class and scaled by 100,000 for each type (population and availability). Drug availability data are purchased from IQVIA® Solutions Canada Inc. The IQVIA data were calculated based on Geographic Prescription Monitor (GPM) for the opioid and pain management market. Drug availability rates for heroin and illicitly manufactured fentanyl were not calculated as the prescribing data are not applicable.

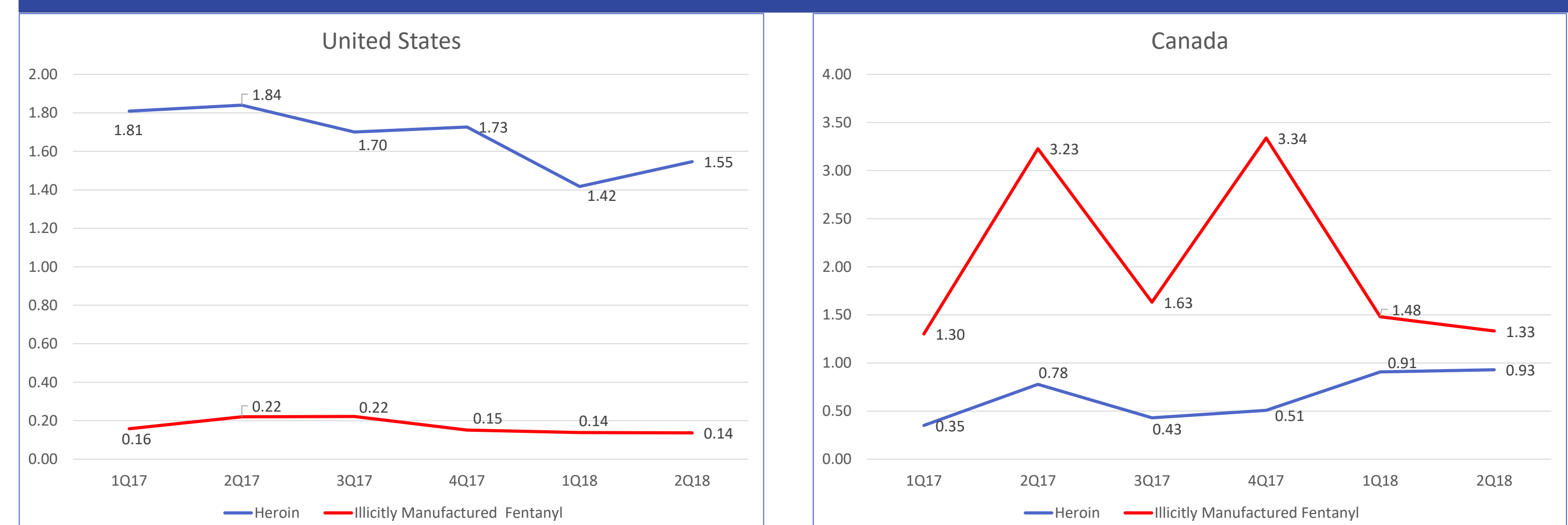
## Rates by Province: Prescription Opioids



## Rates by Province: Illicit Opioids



## Rates by Country: Illicit Opioids



## Discussion

- Ontario had significantly higher rates per 100,000 population of prescription oxycodone and fentanyl diversion compared to Manitoba and British Columbia; prescription fentanyl had the highest population and standard unit rates. However, oxycodone diversion rates were higher despite lower rates of standard dispensed units.
- Rates per 100,000 population for illicit opioids were higher in Western Canada; British Columbia had the highest counts of cases involving heroin and illicitly manufactured fentanyl as compared to all other provinces.
- Among illicit opioids in the United States and Canada, the U.S. had significantly higher counts of cases involving heroin, ranging from 1.81-1.55 between 1Q17 and 2Q18 versus 0.35 to 0.93 in Canada; illicitly manufactured fentanyl was more prevalent in Canada (1.30-1.33 between 1Q17 and 2Q18 versus 0.16 to 0.14 in the U.S.).

## Conclusion

- Diversion of prescription products was found to be most common in Ontario, while cases involving illicitly manufactured opioids were highest in British Columbia.
- In the U.S., rates of heroin cases were higher than illicitly manufactured fentanyl, whereas Canada trends showed higher rates for illicitly manufactured fentanyl.
- Results illustrate that the illicit drug trade adapts to prescription opioid misuse trends and control measures, reinforcing the continued need for prevention, intervention, and systematic monitoring and surveillance efforts.

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## Disclosure

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