Opioid Use, Related Harms, and Access to Treatment among First Nations in Ontario, 2013-2019

Chiefs of Ontario

ODPRN
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A report prepared by:

The Chiefs of Ontario

and

The Ontario Drug Policy Research Network

December 2021

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About the Research Partners

Chiefs of Ontario (COO)

Chiefs of Ontario supports all First Nations in Ontario as they assert their sovereignty, jurisdiction, and their chosen expression of nationhood.

Guided by the Chiefs in Assembly, we uphold self-determination efforts of the Anishinaabek, Mushkegowuk, Onkwehonwe, and Lenape Peoples in protecting and exercising their inherent and Treaty rights. Keeping in mind the wisdom of our Elders, and the future for our youth, we continue to create the path forward in building our Nations as strong, healthy Peoples respectful of ourselves, each other, and all creation. The activities of the Chiefs of Ontario are mandated through and guided by:

- Resolutions passed by the Chiefs in Assembly of the 133 First Nations in Ontario;
- The Leadership Council made up of the Grand Chiefs of Political Territorial Organizations (PTOs) and Independent First Nations;
- The elected Regional Chief for the Chiefs of Ontario.

For more information about COO, visit www.chiefs-of-ontario.org.

Ontario Drug Policy Research Network (ODPRN)

The Ontario Drug Policy Research Network is a province-wide network of researchers who provide timely, high quality, relevant drug policy research to decision makers and knowledge users across the province. The ODPRN houses the Ontario Opioid Drug Observatory (OODO) which is funded through a grant from the Canadian Institutes of Health Research (CIHR). This observatory aims to measure, assess and evaluate the use of prescription opioids, opioid-related poisonings, and opioid-related drug policy by leveraging large, population-level data sources. The ODPRN regularly uses data from ICES (formerly the Institute for Clinical Evaluative Sciences), an independent, non-profit research institute in Ontario, Canada to conduct this research.

For more information, visit www.odprn.ca.

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- Your local nursing station, health centre, local mental health program, or an Elder.

Acknowledgements

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The authors of this report would like to acknowledge the loss and trauma held by First Nations People in Ontario who have been impacted by the opioid crisis. The grief experienced by First Nations people who use opioids, as well as their families, friends, and communities, is vast and cannot be fully represented by quantitative data, nor can the struggle or triumph of seeking support and treatment for opioid use. For this reason, we have included two examples of First Nations-led community programs that use combinations of traditional and clinical healing practices to promote health and well-being in their communities. The strength and resiliency of First Nations people who use opioids is highlighted through personal testimonies of those who access these community programs. Community-based approaches such as these would not be possible without the hard work and dedication of First Nations peer support workers, harm reduction workers, Elders, traditional healers, and all health care professionals who are responding to the opioid crisis. We also acknowledge that there are many First Nations communities across Ontario that have experienced the profound impacts of the opioid crisis, and yet have had challenges securing the funding needed to implement the types of programs that we have highlighted here. It is our hope that the data provided in this report will provide the impetus for federal, provincial, and municipal support for the development of additional First Nations-led, culturally appropriate programs and services that enhance access to treatment and address the root causes of the opioid crisis in these communities.

Co-Principal Investigators for this report are Bernadette deGonzague (Chiefs of Ontario) and Tara Gomes (Ontario Drug Policy Research Network). The Chiefs of Ontario and the Ontario Drug Policy Research Network would like to thank the following individuals for their contribution to this report (alphabetical order):

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How to Cite This Report

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Key Terms

Opioids:

Opioids are a class of drugs that are primarily used to relieve pain. Common prescription opioid pain relievers include oxycodone, hydromorphone, fentanyl, morphine, codeine, and other combination products (e.g. *Tylenol® No. 2 and No. 3, Percocet®*). Certain opioids can also be used for the treatment of opioid use disorder, as well as for treating cough and diarrhea. Opioids can be classified as **immediate-release** or **long-acting**. Immediate-release opioids have relatively short pain-relieving effects in the body, whereas long-acting opioids have relatively long pain-relieving effects in the body. Because of this, immediate-release opioids are often used for short-term pain relief (e.g. after surgery), and long-acting opioids are often used for the treatment of chronic pain.

MME:

Milligram Morphine Equivalents (MME) are a standardized way of measuring the dose of opioid provided. MMEs allow us to compare doses between people using different types of opioids, and are calculated by converting an opioid dose into its equivalent dose in morphine. A daily dose is often reported as MME/day.

Opioid Use Disorder:

Opioid use disorder (OUD) is a medical condition associated with cravings for opioids that may lead to chronic use of opioids and behaviours that may interfere with the activities of daily life.[1] Opioid agonist therapy is often used first-line for the treatment of OUD.

Opioid Agonist Therapy:

Opioid agonist therapy (OAT) is the recommended treatment for people with OUD.[2] Two of the most common types of OAT, and the types that will be examined in this report, are methadone and the combination product buprenorphine/naloxone (commonly known by its brand name *Suboxone®*). Both medications are opioids that aid in the prevention of opioid withdrawal and cravings, and can block the euphoric effect of other opioids.

Opioid-Related Poisoning:

An opioid-related poisoning is a biological response that occurs when the body receives too much of an opioid, or when the body receives a mix of opioids and other substances, such as alcohol or benzodiazepines. An opioid-related poisoning causes a person's breathing to slow or stop, which results in loss of consciousness and can lead to death. Although often used interchangeably, the term opioid-related *poisoning* is preferred to opioid-related *overdose*, as the word "overdose" places the responsibility on the individual who is using the drug, and can therefore lead to stigma and blame. In contrast, using the term "poisoning" more accurately reflects the biological response of the body to the toxicity of the opioid. Naloxone is a drug that can be used to reverse the effects of opioids and opioid-related poisonings. Specifically, naloxone can restore normal breathing to someone whose breathing has slowed or stopped due to an opioid-related poisoning. Naloxone can also be used in combination with an opioid (e.g., in the case of the combination product buprenorphine/naloxone, which is commonly referred to by its brand name *Suboxone®*) to decrease the risk of opioid-related poisoning. It is important to note that the data in this report regarding opioid-related poisoning captures incidents arising from the use of opioids from any source (i.e., prescribed and non-prescribed).

Benzodiazepines:

Benzodiazepines are a class of sedative and anti-anxiety medications that are widely prescribed for the treatment of anxiety, sleep disorders, certain forms of epilepsy, and alcohol withdrawal. Currently, 14 different benzodiazepines are approved for use in Canada, with lorazepam (*Ativan*®), alprazolam (*Xanax*®) and diazepam (*Valium*®), being among the most frequently prescribed drugs within this class. Benzodiazepines that are not approved for medical use in Canada, such as etizolam, are also increasingly being found in the unregulated drug supply.

Rate:

The frequency with which an event or circumstance occurs per unit of time, population, or other standard of comparison. Example: Based on a rate of *1.5 deaths per 10,000 people*, we can expect approximately 15 deaths in a community of 100,000.

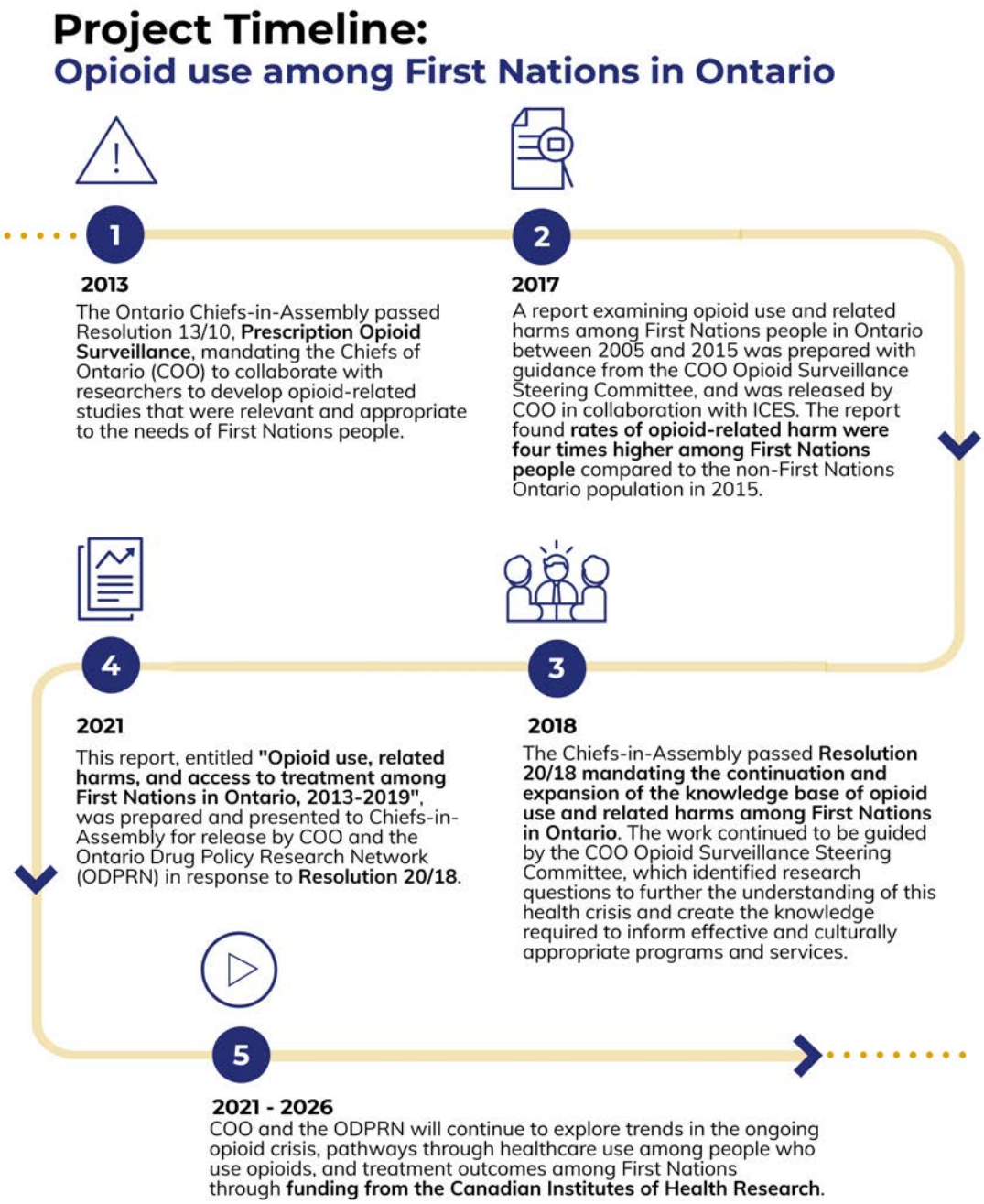
Stratification:

A stratification is the separation of data or measurements into distinct subgroups. This allows researchers to examine whether patterns or trends that are observed in the entire group overall are either the same or different when looking at certain subgroups. Example: When looking at rates of opioid use among First Nations people by age group, the stratification is the age group. Other stratifications that are commonly used in health research are sex, gender, race, ethnicity, region of residence, and socioeconomic status.

Background

Opioid-related harms are a leading public health issue in Canada.[3] While the opioid crisis impacts communities across the country, research suggests that First Nations communities are at a higher risk of experiencing opioid-related morbidity and mortality due to the intergenerational impacts of colonialism and residential schools, the historical erosion of First Nations culture, and the ongoing barriers to accessing health care services.[4,5] However, there is little published research examining prescription opioid use, access to treatment, and opioid-related harms among First Nations people at a provincial or national level. As a result, First Nations communities and policymakers in Ontario have not had access to the data needed to generate evidence-based and culturally informed responses to the opioid crisis.

Over the past several years, the Chiefs of Ontario (COO) and the Ontario Drug Policy Research Network (ODPRN) have been collaborating to study opioid prescribing and opioid-related harms among First Nations people in Ontario. In 2013, the Chiefs in Assembly passed a Prescription Opioid Surveillance Resolution 13/10 which mandated COO to begin this work and saw the establishment of the Opioid Surveillance Steering Committee, guided by an Elder and comprised of First Nations representatives from the Political Territorial Organizations, Independent First Nations, Six Nations of the Grand River, and the Ontario First Nations Young Peoples' Council. This Steering Committee continues to guide the research questions, approaches, and interpretations of the data, ensuring that the research meets the needs of the community and is culturally relevant. The timeline below outlines our progress, beginning in 2013 and continuing into the future.



In this report, we build on the findings presented in the 2017 report by COO, ICES, and the ODPRN,[6] using data up to the end of 2019 to examine trends and patterns in opioid prescribing and opioid-related poisoning among First Nations people in Ontario. Specifically, the **objective** of this report is to describe trends and patterns in the following indicators of opioid use and opioid-related harms among First Nations people in Ontario:

1. Prescription opioid use for pain, as well as high dose opioid prescribing and combined prescribing of opioids for pain and benzodiazepines
2. Use of opioid agonist therapy (OAT) to treat opioid use disorder
3. Emergency department visits and hospital admissions for opioid-related poisoning
4. Deaths due to opioid-related poisoning

Where appropriate, we also compare these indicators between First Nations and non-First Nations people in Ontario.

Methods

Overview and Data Sources

This study used several databases held at ICES, an independent, non-profit research institute in Ontario, to describe trends and patterns in opioid prescribing and opioid-related harms among First Nations people in Ontario. To identify First Nations people, we used the **Indian Registry System**, which captures information on all registered (Status) First Nations people in Canada. We linked people in the Indian Registry System to the **Registered Persons Database** in order to identify First Nations people residing in Ontario, and to determine their demographic characteristics, such as age and sex. We identified opioid and benzodiazepine prescriptions dispensed in Ontario using the **Narcotics Monitoring System**. The Canadian Institute for Health Information (CIHI) **National Ambulatory Care Reporting System** and **Discharge Abstract Database** were used to capture emergency department visits and hospitalizations for opioid-related poisoning, respectively. The **Drug and Drug/Alcohol Related Death Database**, which is sourced from the Office of the Chief Coroner/Ontario Forensic Pathology Services and contains data from completed investigations of confirmed opioid poisoning-related deaths, was used to identify people who died due to an opioid-related poisoning. These databases were linked using unique, encoded identifiers and analyzed at ICES using SAS Enterprise Guide Version 7.1.

We presented measures of opioid prescribing and opioid-related harm among First Nations people overall, and compared the measures between First Nations people residing within First Nations communities and those residing outside of First Nations communities. For each year of the study period, residence within and outside of First Nations communities was determined using address information provided during health care encounters (e.g., emergency department visits or hospitalizations). If a person did not have a healthcare encounter in the year of interest, then their postal code listed in the Registered Persons Database was used to define residence within or outside of First Nations communities (**Figure 1**).

Figure 1. Overview of methods used to identify First Nations people living within and outside of First Nations communities

We also compared measures of opioid prescribing and opioid-related harm between First Nations and non-First Nations people in Ontario. Non-First Nations people in Ontario were defined as people who were in the Registered Persons Database but not in the Indian Registry System.

In accordance with ICES' obligations under the Personal Health Information Protection Act, its commitments in data sharing agreements, and in order to minimize risk of re-identification, ICES prohibits the publication of small counts (counts less than 6) in any report. Accordingly, we have taken steps to avoid publishing small counts in this report by either not presenting the data, or by presenting the percentage or rate that reflects the midpoint of the small count.

Measures

We calculated several measures of opioid prescribing and opioid-related harm. We examined trends in these measures over time by fiscal year (defined as April 1 to March 31). We also examined the demographic characteristics of people who were prescribed opioids or experienced an opioid-related poisoning in calendar year 2019 (defined as January 1 to December 31), the most recent calendar year for which data were available. Detailed descriptions of each measure are provided below. **The key findings for each measure begin on page 12**.

Use of Prescription Opioids for the Treatment of Pain

Note: Opioids used for the treatment of pain were defined as any opioid that was not indicated as a cough suppressant, as an antidiarrheal medication, or for the treatment of opioid use disorder. These distinctions were made by assessing the drug/product identification number and name for each opioid approved for use in Ontario. Opioids that are used for pain include several drugs with different formulations and routes of administration.

Percent of people who used prescription opioids for pain (Figure 2-4)

- Numerator: Total number of people who received a prescription opioid used for the treatment of pain
- Denominator: Total population
- Percent was calculated as numerator / denominator x 100
- Time Frame:
  - Fiscal year 2013 to 2019
  - Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)
  - Age (0 to 14, 15 to 24, 25 to 44, 45 to 64, 65+)
  - Sex (female, male)

Percent of people who started a new course of prescription opioids used to treat pain (Figure 2)

- Numerator: Total number of people who started a new course of prescription opioids used for the treatment of pain. People starting a new course of prescription opioids used to treat pain was defined as those who received an opioid used for the treatment of pain in the year of interest and had no prescription opioid in the one year before.
- Denominator: Total population
- Percent was calculated as numerator / denominator x 100
- Time Frame: Fiscal year 2013 to 2019
- Stratification: First Nations people and non-First Nations people

Type of opioid used to treat pain (immediate-release opioids) (Figure 5)

- Numerator: Total number of people who received an immediate-release prescription opioid used to treat pain, by type of opioid (codeine, codeine combination, hydromorphone, morphine, oxycodone, oxycodone combination, tramadol, other [other includes immediate-release fentanyl and meperidine])
- Denominator: Total number of people who received any type of prescription opioid used to treat pain
- Percent was calculated as numerator / denominator x 100
- Time Frame: Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)

Type of opioid used to treat pain (long-acting opioids) (Figure 6)

- Numerator: Total number of people who received a long-acting prescription opioid used to treat pain, by type of opioid (codeine, fentanyl, hydromorphone, morphine, oxycodone, tramadol, other [other includes buprenorphine for pain and methadone for pain])
- Denominator: Total number of people who received any type of prescription opioid used to treat pain
- Percent was calculated as numerator / denominator x 100
- Time Frame: Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)

Percent of opioid recipients who were prescribed a high daily opioid dose (Figure 7)

- Numerator: Total number of people who received a prescription opioid used to treat pain with a daily dose of 90 MME or more
- Denominator: Total number of people who received any type of prescription opioid used to treat pain
- Percent was calculated as numerator / denominator x 100
- Time Frame: Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)
- Note: This indicator was restricted to opioids that had a valid MME conversion factor.

Percent of opioid recipients who were prescribed benzodiazepines at the same time (Figure 8)

- Numerator: Total number of people who received a benzodiazepine while being treated with a prescription opioid for pain. This was defined as people who were dispensed both medications with overlapping periods of use based on the days' supply listed on each of the prescription claims.
- Denominator: Total number of people who received any type of prescription opioid used to treat pain
- Percent was calculated as numerator / denominator x 100
- Time Frame: Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)

Use of Opioid Agonist Therapy (OAT) for the Treatment of Opioid Use Disorder

Note: Children aged 14 or younger were excluded from these measures due to privacy considerations because OAT use in this population is very rare.

Percent of people who used prescription OAT (Figure 9-11)

- Numerator: Total number of people who received a prescription opioid used for OAT
- Denominator: Total population aged >15
- Percent was calculated as numerator / denominator x 100
- Time Frame:
  - Fiscal year 2013 to 2019
  - Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)
  - Age (15 to 24, 25 to 44, 45 to 64, 65+)
  - Sex (female, male)

Percent of people who started a new course of prescription OAT (Figure 9)

- Numerator: Total number of people who started a new course of prescription OAT. People starting a new course of prescription OAT was defined as those who received OAT in the year of interest and had not received any prior OAT in the 30 days before.
- Denominator: Total population aged >15
- Percent was calculated as numerator / denominator x 100
- Time Frame: Fiscal year 2013 to 2019
- Stratification: First Nations people and non-First Nations people

Percent of people who used prescription OAT, by type of OAT (Figure 12-13)

- Numerator: Total number of people who received a prescription opioid used for OAT, by type of OAT (methadone, buprenorphine/naloxone – also known as Suboxone®)
- Denominator: Total population aged >15
- Percent was calculated as numerator / denominator x 100
- Time Frame:
  - Fiscal year 2013 to 2019
  - Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)

Number of prescribers of OAT (Figure 14)

- Numerator: Total number of prescribers who wrote prescriptions for OAT for First Nations people in Ontario, by type of OAT (methadone, buprenorphine/naloxone – also known as Suboxone®)
- Time Frame: Fiscal year 2013 to 2019
- Note: In Ontario, only physicians and nurse practitioners can prescribe OAT. Therefore, this measure was restricted to physicians and nurse practitioners.

Hospital Visits for Opioid-Related Poisoning

Rate of hospital visits for opioid-related poisoning (Figure 15-16)

- Numerator: Total number of emergency department visits and hospital admissions for an opioid-related poisoning
- Denominator: Total population
- Rate was calculated as numerator / denominator x 10,000
- Time Frame:
  - Fiscal year 2009 to 2019
  - Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)
  - Age (0 to 24, 25 to 44, 45 to 64, 65+)
  - Sex (female, male)
- Note: This data captures opioid poisonings treated during emergency department visits and hospital admissions, and does not capture data from poisonings that are treated outside of a hospital (e.g., in nursing stations, or by paramedics or bystanders). Poisoning-related incidents included in this measure could have arisen from any source of opioids (i.e., both prescribed and non-prescribed opioids).

People Who Died of an Opioid-Related Poisoning

Rate of deaths due to opioid-related poisoning (Figure 17-18)

- Numerator: Total number of people who died due to an opioid-related poisoning
- Denominator: Total population
- Rate was calculated as numerator / denominator x 10,000
- Time Frame:
  - Fiscal year 2009 to 2019
  - Calendar year 2019
- Stratifications:
  - First Nations people and non-First Nations people
  - Residence within or outside of First Nations communities (among First Nations people only)
  - Age (0 to 24, 25 to 44, 45+)
  - Sex (female, male)
- Note: Poisoning-related deaths included in this measure could have arisen from any source of opioids (i.e., both prescribed and non-prescribed opioids).

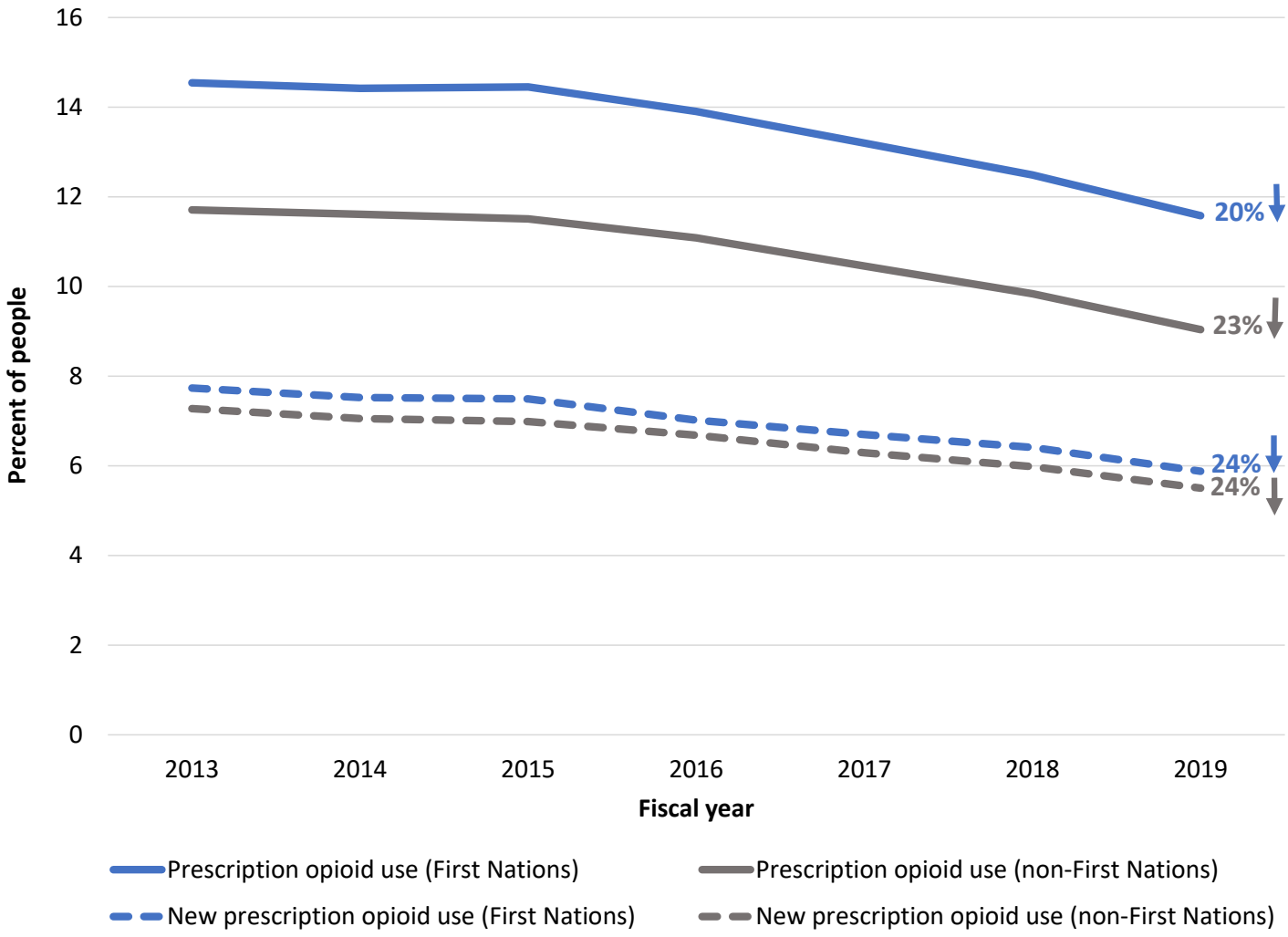
Percent of opioid-related deaths involving fentanyl, stimulants, benzodiazepines, or alcohol (Figure 19)

- Numerator: Total number of opioid-related deaths in which the substance of interest (i.e., fentanyl, stimulants, benzodiazepines, alcohol) was detected in post-mortem toxicology.
- Denominator: Total number of people who experienced an opioid-related death
- Percent was calculated as numerator / denominator x 100
- Time Frame: Calendar years 2013 and 2019
- Stratifications:First Nations people and non-First Nations people
- Note: Poisoning-related deaths included in this measure could have arisen from any source of opioids (i.e., both prescribed and non-prescribed opioids).

Key Findings

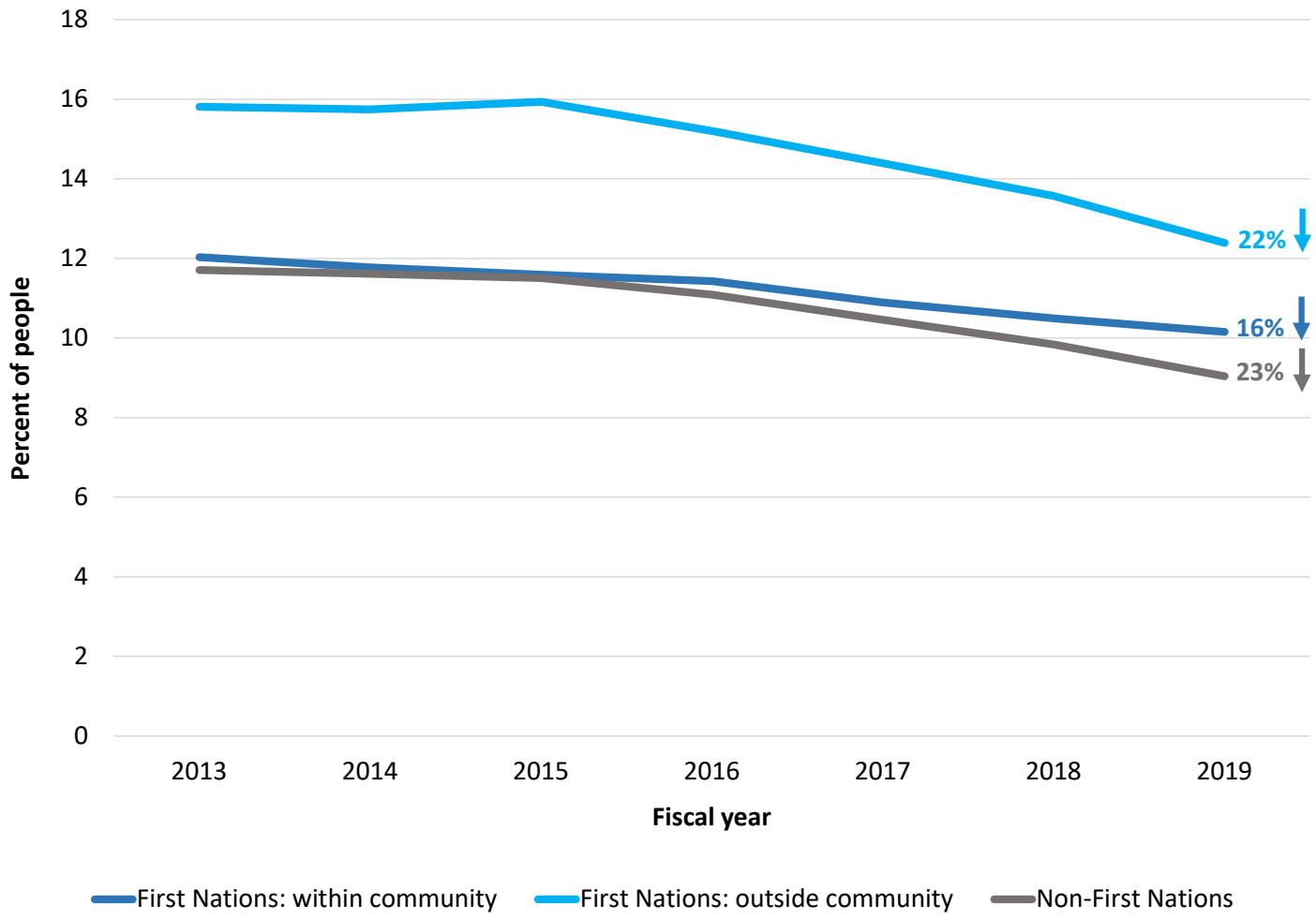
Use of Prescription Opioids for the Treatment of Pain

Figure 2: Percent of people who used prescription opioids for pain, from 2013 to 2019



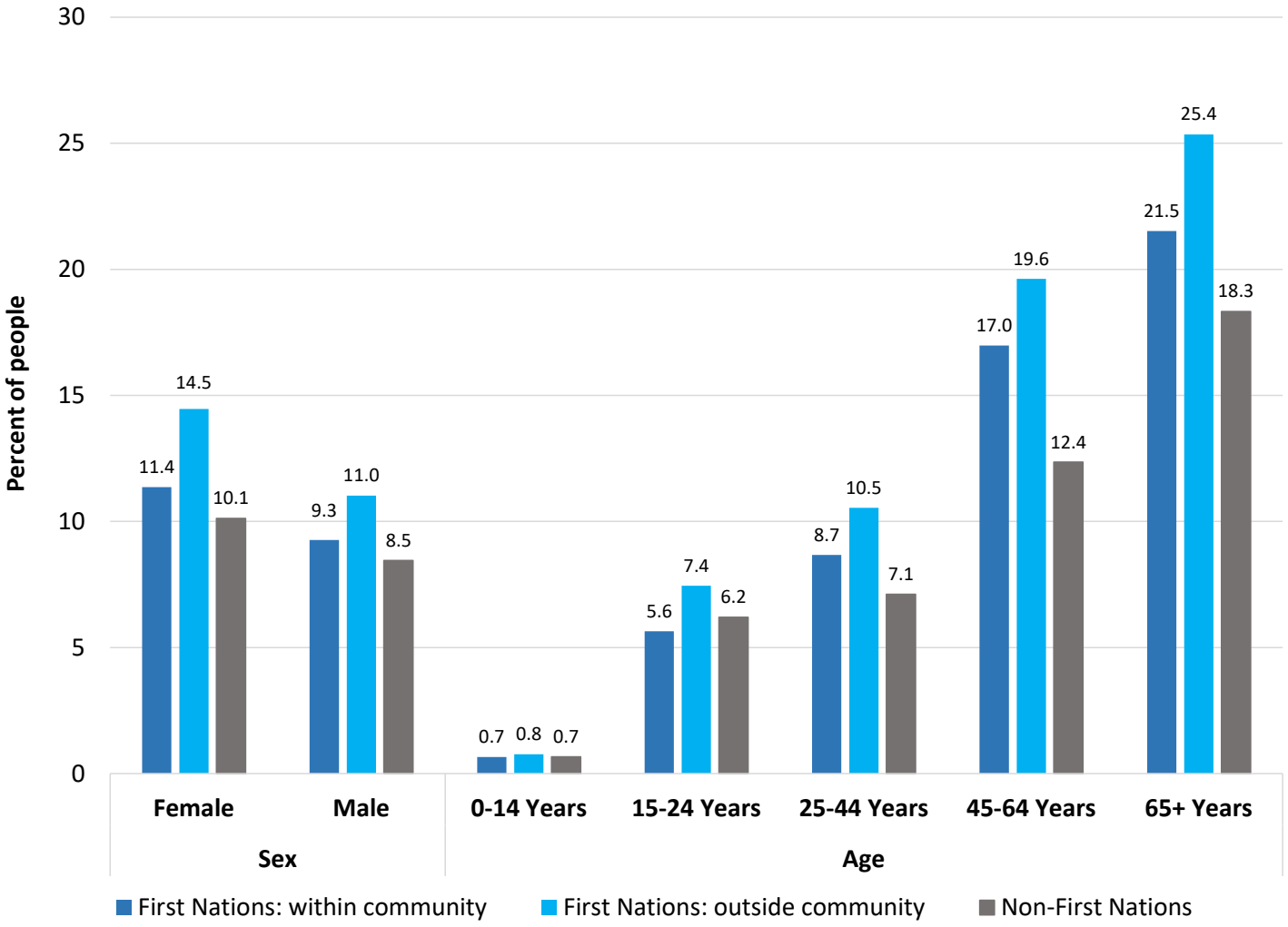
- In general, rates of opioid use for pain declined among both First Nations and non-First Nations people from 2013 to 2019, with the largest decreases starting in 2016.
- In 2019, 11.6% of First Nations people used opioids for the treatment of pain, compared to 9.0% of non-First Nations people. In the same year, 5.9% of First Nations people and 5.5% of non-First Nations people **started a new course** of prescription opioids used for the treatment of pain.

Figure 3: Percent of people who used prescription opioids for pain, by location, from 2013 to 2019



- Among First Nations people, those living outside of First Nations communities generally had a higher rate of opioid use for pain (12.4% in 2019) compared to those living within First Nations communities (10.1% in 2019).
- The rate of opioid use for pain was generally similar between First Nations people living within First Nations communities and non-First Nations people. However, trends began to diverge in 2017, with a faster decline in opioid use observed among non-First Nations people compared to First Nations people living within First Nations communities.

Figure 4: Percent of people who used prescription opioids for pain in 2019, by sex and age



- In general, opioid use for pain was higher among females compared to males.
- Opioid use for pain increased with age in all populations studied.
- Among First Nations people, opioid use was consistently higher among those living outside of First Nations communities within each demographic. For example, 1 in 4 (25.4%) First Nations people aged 65 or older residing outside of First Nations communities were prescribed an opioid in 2019, compared to 1 in 5 (21.5%) First Nations people aged 65 or older who lived within First Nations communities.
- Similar trends were also seen among people who were starting a **new** opioid prescription (data not shown).

Figure 5. Use of immediate-release opioids among all people who received an opioid for pain, by type of opioid, in 2019

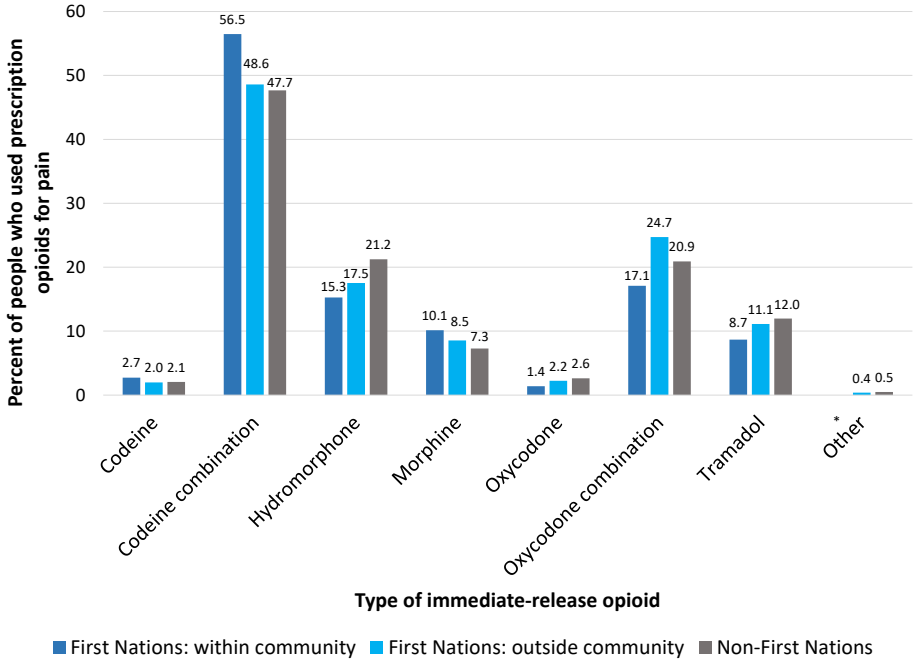
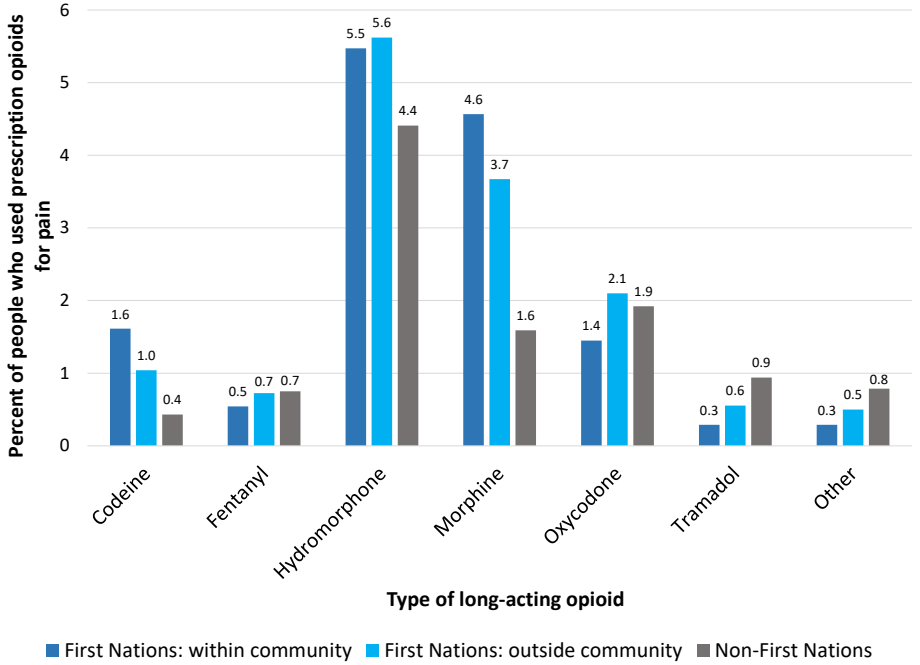


Figure 6. Use of long-acting opioids among all people who received an opioid for pain, by type of opioid, in 2019

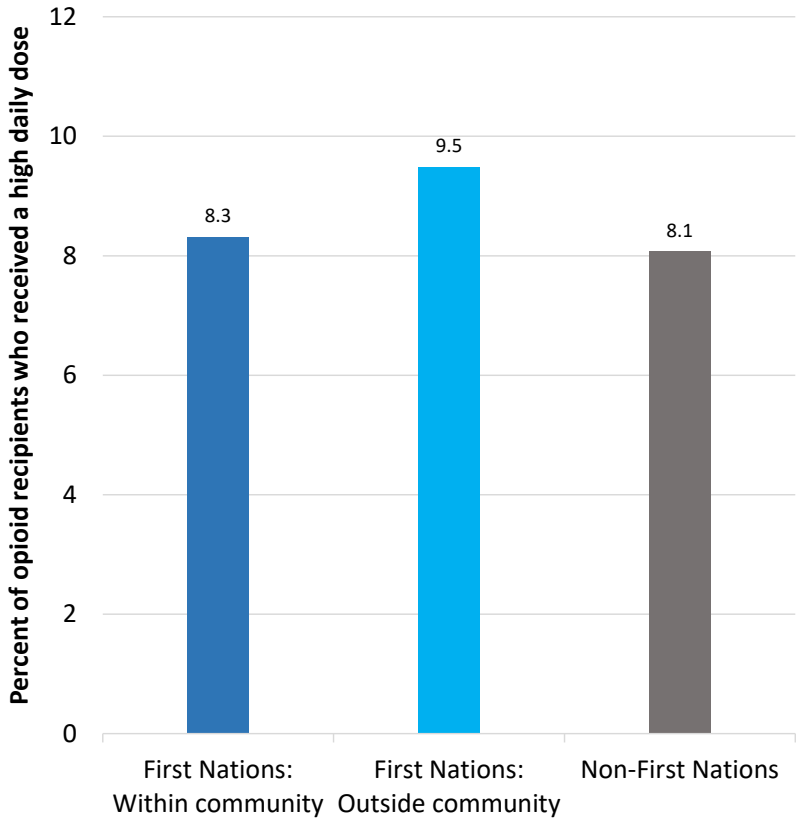


** Value suppressed due to having a count less than 6.*

Note: Immediate-release opioids are often used for short-term pain relief (e.g. after surgery), and long-acting opioids are more often used for the relief of chronic pain.

- Codeine combination products (e.g., Tylenol #3) were the most common type of immediate-release opioid used in 2019. Almost half of all First Nations and non-First Nations people prescribed an opioid in 2019 received a codeine combination product. This percentage was even higher among First Nations people residing within First Nations communities (56.5%).
- Although prescribed much less frequently, hydromorphone (e.g., Hydromorph Contin®) was the most commonly prescribed long-acting opioid across all populations, accounting for approximately 5% of all people who received an opioid prescription.
- Notably, long-acting morphine was more commonly prescribed among First Nations people, particularly among those living within First Nations communities, compared to non-First Nations people. While mainly used for the treatment of pain, long-acting morphine is also sometimes dispensed daily in small quantities for the treatment of opioid use disorder. However, based on the dispensing patterns of long-acting morphine that we observed among First Nations people in this study, use of this medication for the treatment of opioid use disorder does not seem to be common among First Nations people in Ontario (data not shown).

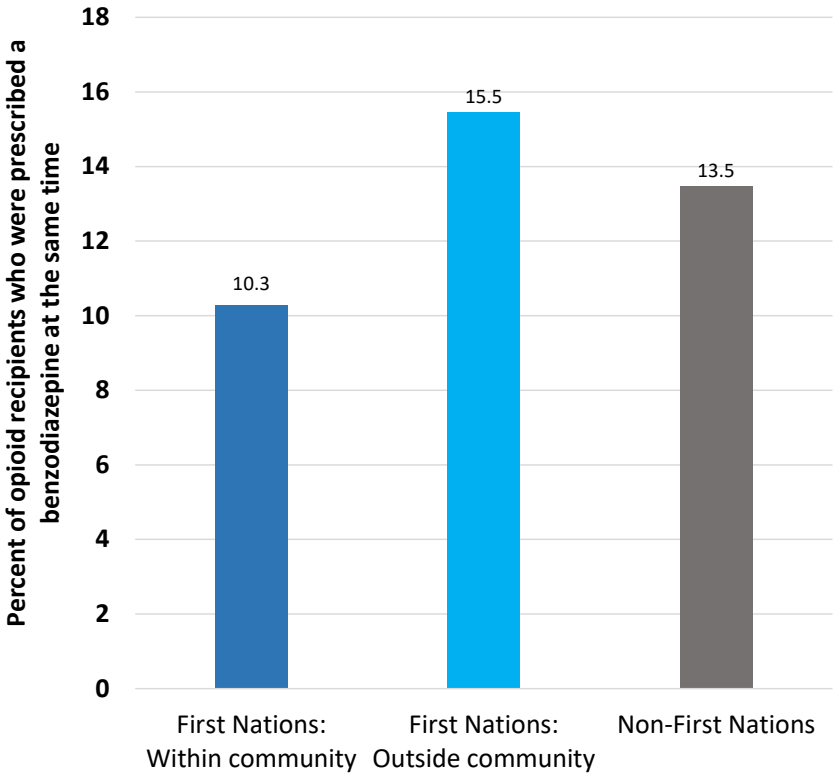
Figure 7: Percent of opioid recipients who were prescribed a high daily dose of opioids in 2019, by location



- Research suggests that as opioid dose increases, so can the risk of opioid-related harm (e.g. poisoning).[7-11] Therefore, recently published guidelines in Canada recommend avoiding doses above 90MME daily when possible.[12]
- In 2019, approximately 1 in 10 opioid recipients received a prescription with a high (90 MME or more) daily dose. High dose prescribing of opioids was similar between First Nations and non-First Nations people, although in general First Nations people residing outside of First Nations communities were slightly more likely to be prescribed high doses.

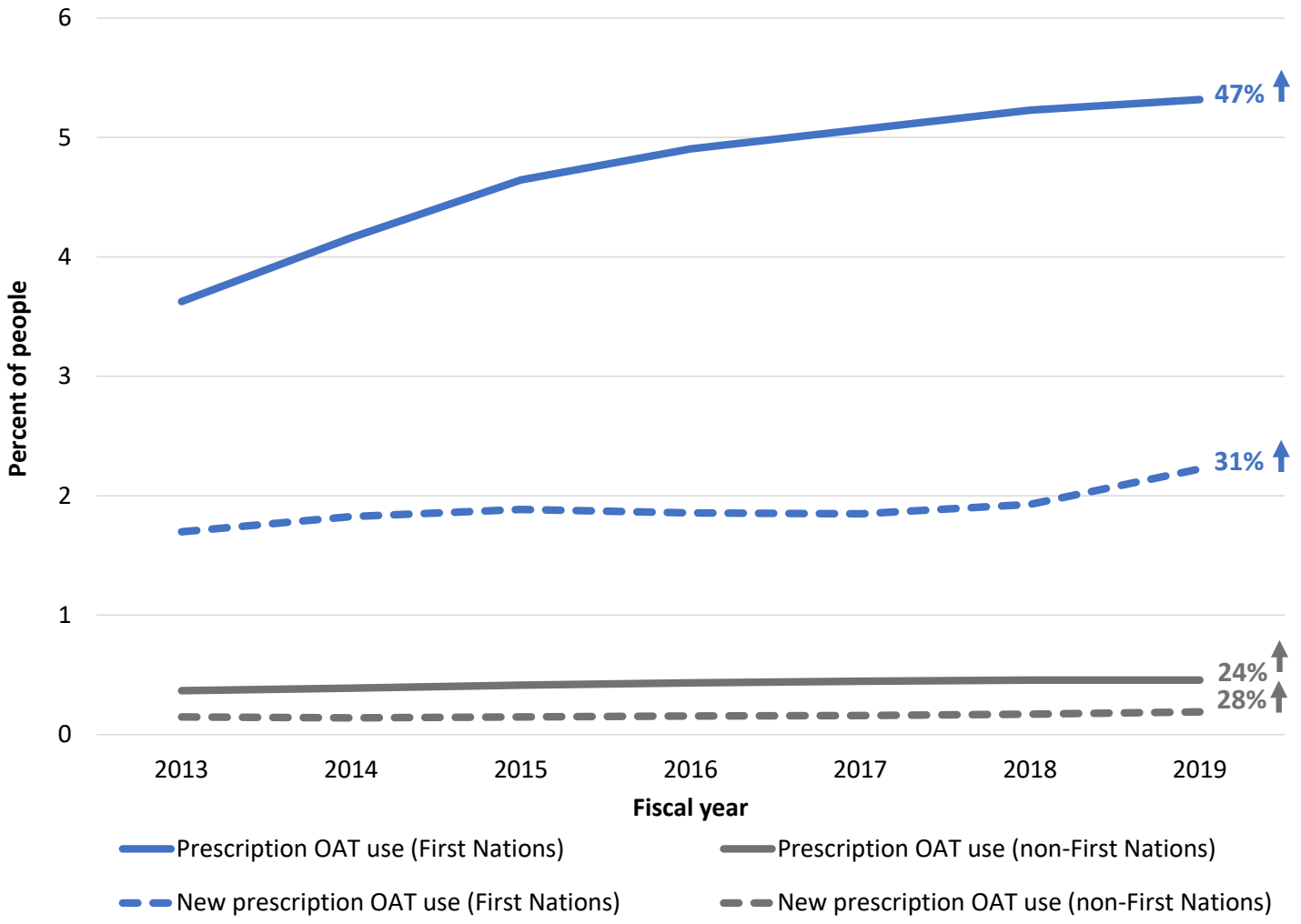
Figure 8: Percent of people who were prescribed benzodiazepines while being treated with opioids in 2019, by location

- Guidelines recommend avoiding combining opioids and benzodiazepines whenever possible, as taking these medications at the same time can increase the risk of poisoning.[11,13,14]
- Among opioid recipients, combined use of opioids and benzodiazepines was similar between First Nations (14.0%) and non-First Nations people (13.5%) in 2019. However, First Nations people living outside of First Nations communities were more commonly prescribed opioids and benzodiazepines together (15.5%) compared to those living within communities (10.3%).



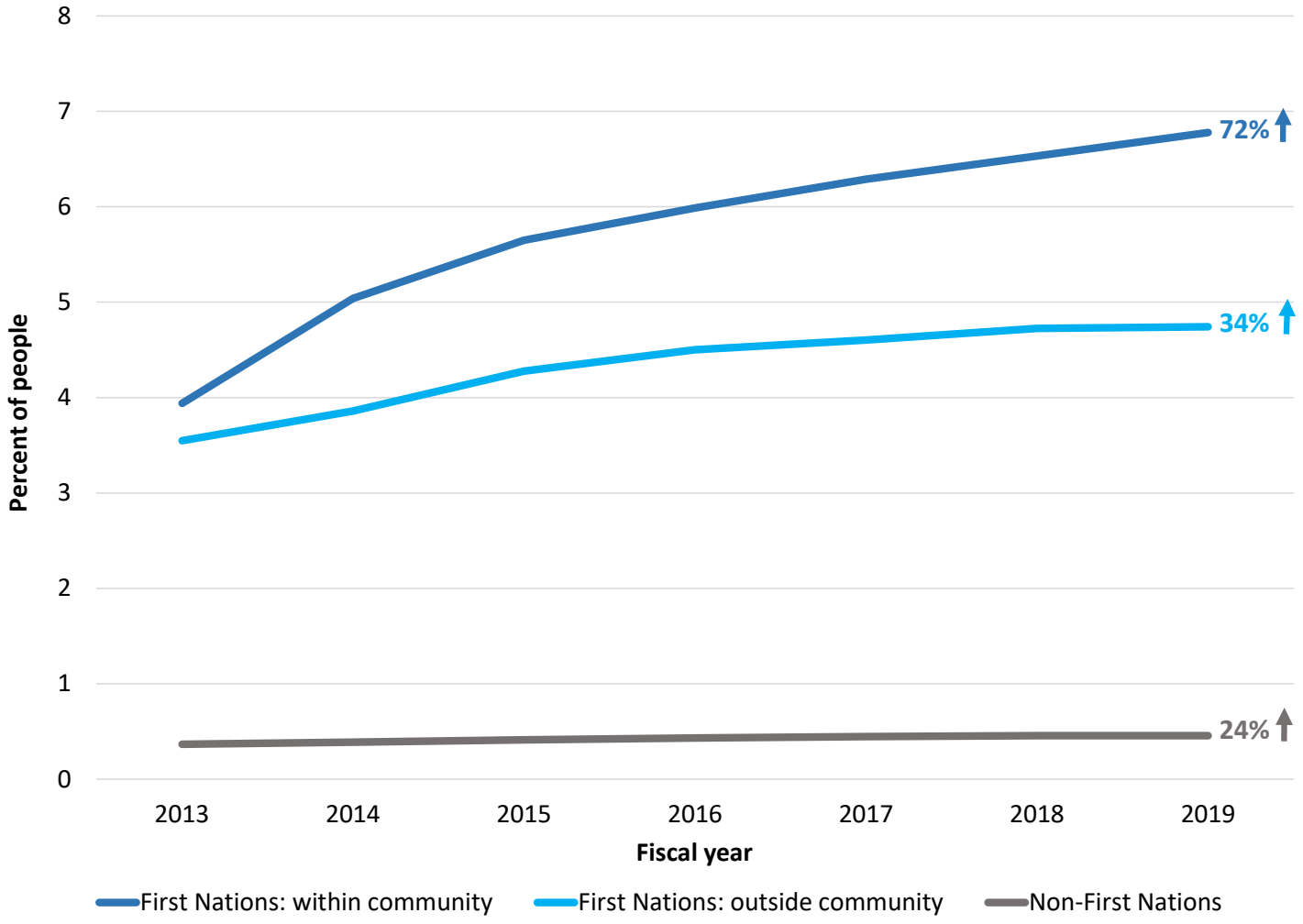
Use of Opioid Agonist Therapy (OAT) for the treatment of Opioid Use Disorder

Figure 9: Percent of people who used OAT to treat an opioid use disorder, from 2013 to 2019



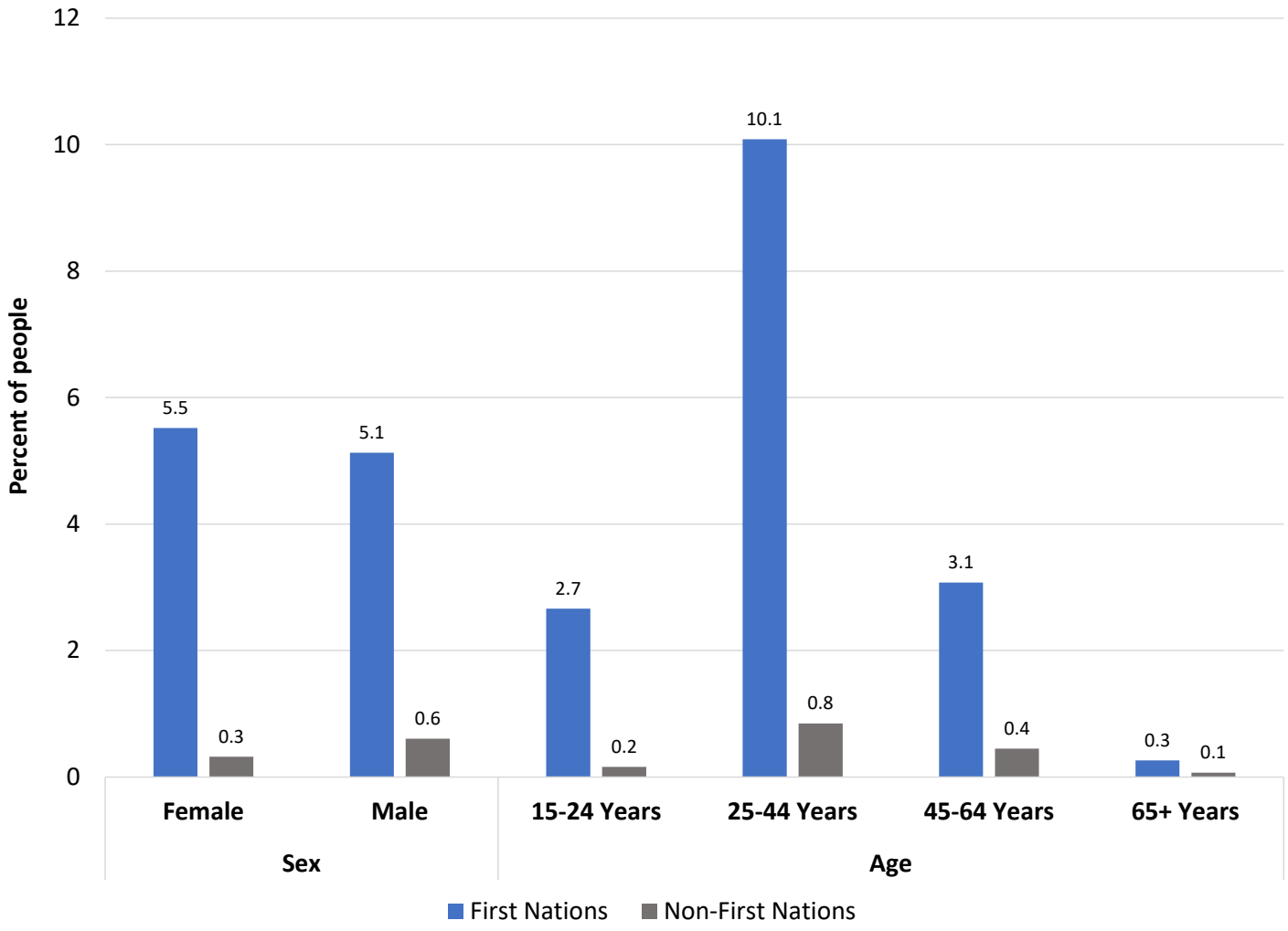
- The percent of people receiving OAT increased in Ontario between 2013 and 2019, but was much higher and rose more quickly among First Nations people (increased from 3.6% in 2013 to 5.3% in 2019) compared to non-First Nations people (increased from 0.4% in 2013 to 0.5% in 2019).
- Among First Nations people, **new** use of OAT began to rise quickly in 2018. In 2019, 2.2% of First Nations people **started a new course** of OAT to treat an opioid use disorder, compared to 0.2% of non-First Nations people.

Figure 10: Percent of people who used OAT, by location, from 2013 to 2019



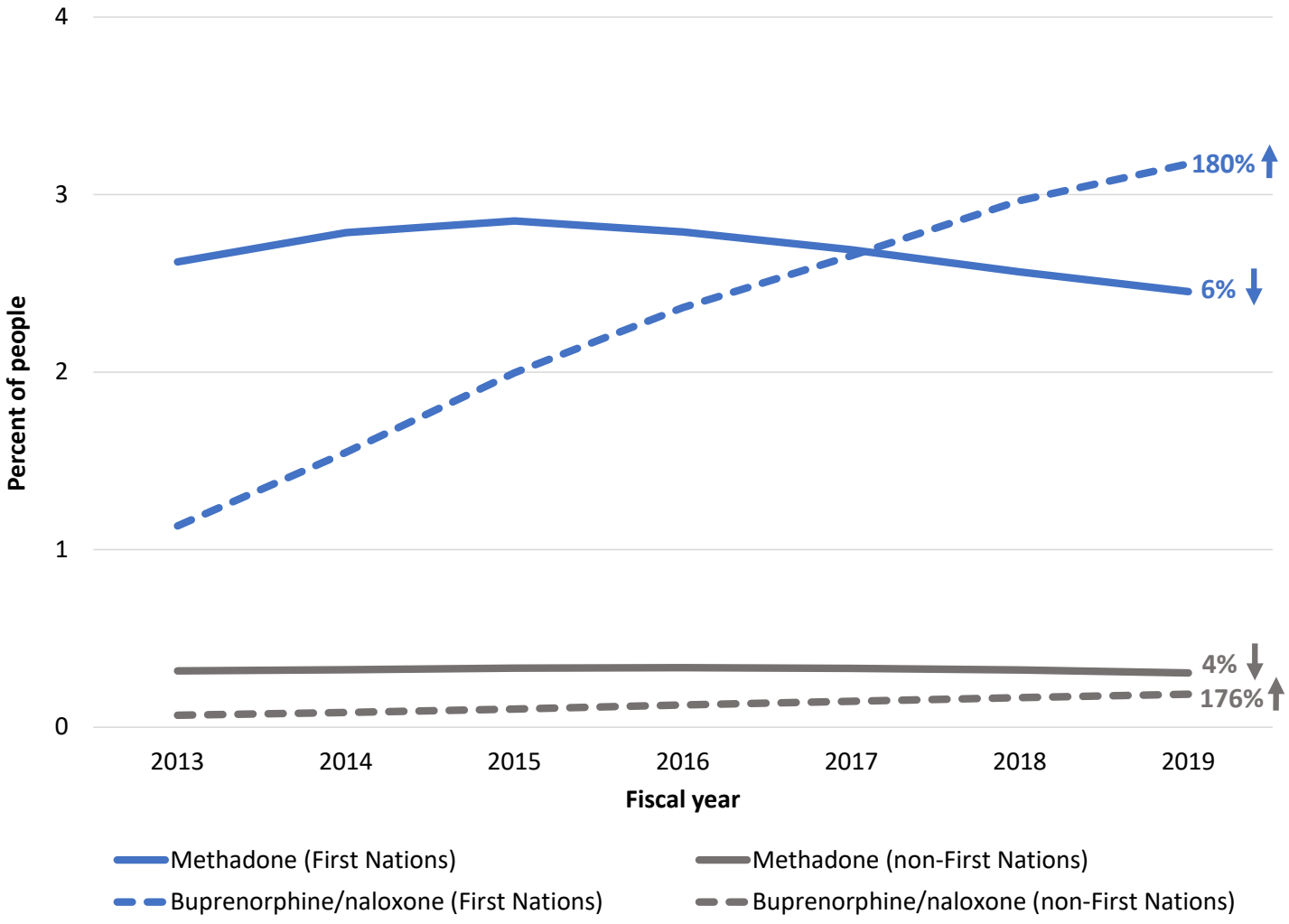
- In 2013, OAT use was similar between First Nations people living within (3.9%) and outside (3.6%) of First Nations communities. Since this time, OAT use by First Nations people living within communities increased by 72%, which is more than twice the increase among those living outside of communities (34%). In 2019, 6.8% of First Nations people living within First Nations communities were prescribed OAT, compared to 4.7% of First Nations people living outside of First Nations communities, and 0.5% of non-First Nations people.

Figure 11. Percent of people who used OAT, by age and sex, in 2019



- Among First Nations people, a slightly higher percentage of females (5.5%) were prescribed OAT in 2019 compared to males (5.1%). In contrast, among non-First Nations people, the rate of OAT use was approximately two times higher among males (0.6%) compared to females (0.3%).
- Among both First Nations and non-First Nations people, OAT use was highest among people aged 25 to 44, although this was more pronounced among First Nations people. In 2019, 10.1% of First Nations people aged 25 to 44 were receiving treatment with OAT, compared to 0.8% of non-First Nations people in this age group.

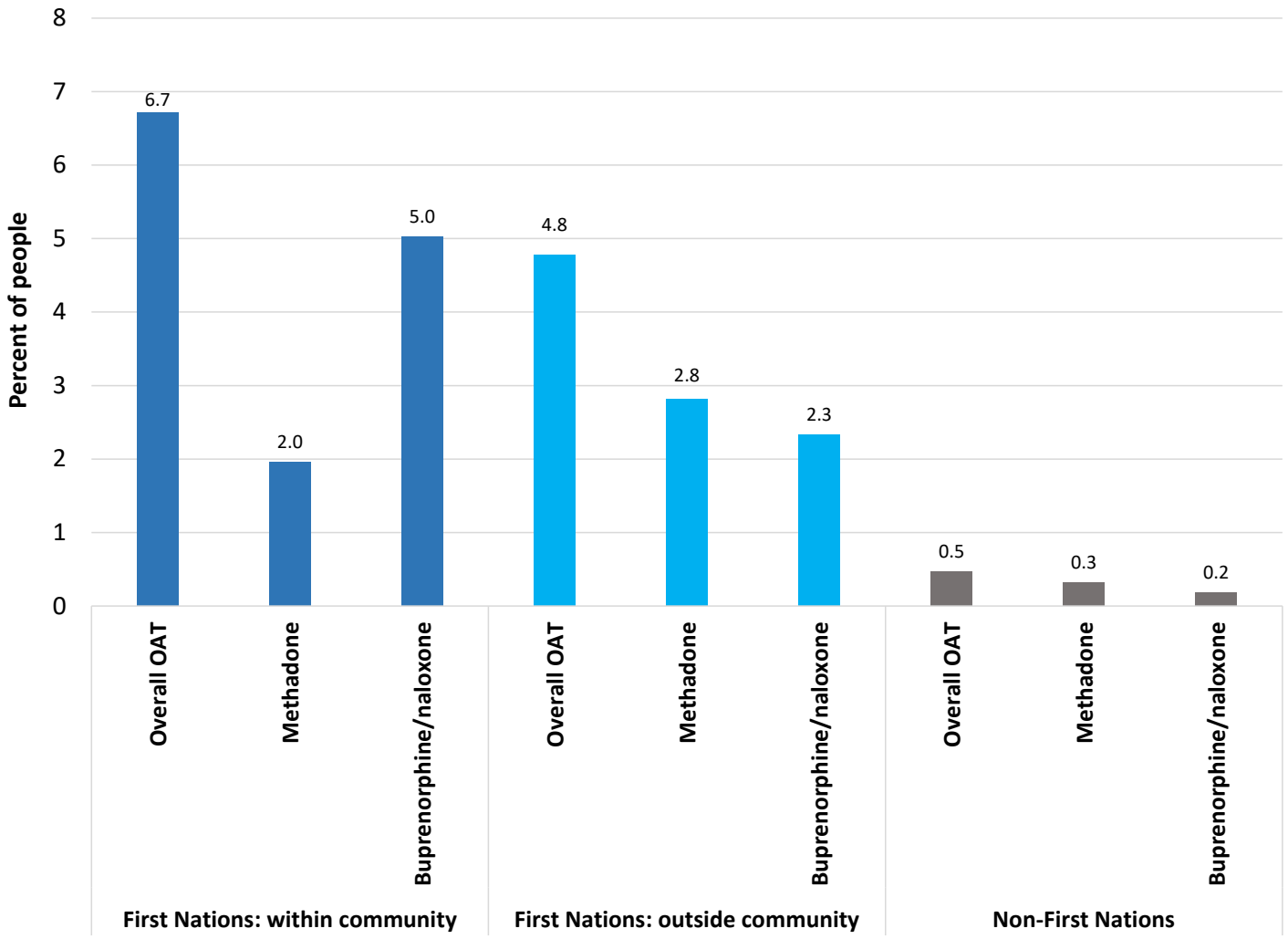
Figure 12: Percent of people who used OAT, by type of OAT, from 2013 to 2019



Note: Buprenorphine/naloxone is also commonly known by its brand name Suboxone®

- Among First Nations people, the use of methadone declined slightly (2.6% to 2.4%) between 2013 and 2019, while the use of buprenorphine/naloxone nearly tripled (from 1.1% to 3.2%). These patterns were similar among non-First Nations people, for whom methadone use remained relatively stable (0.32% in 2013 vs. 0.30% in 2019), while buprenorphine/naloxone use almost tripled (from 0.07% to 0.19% between 2013 and 2019).

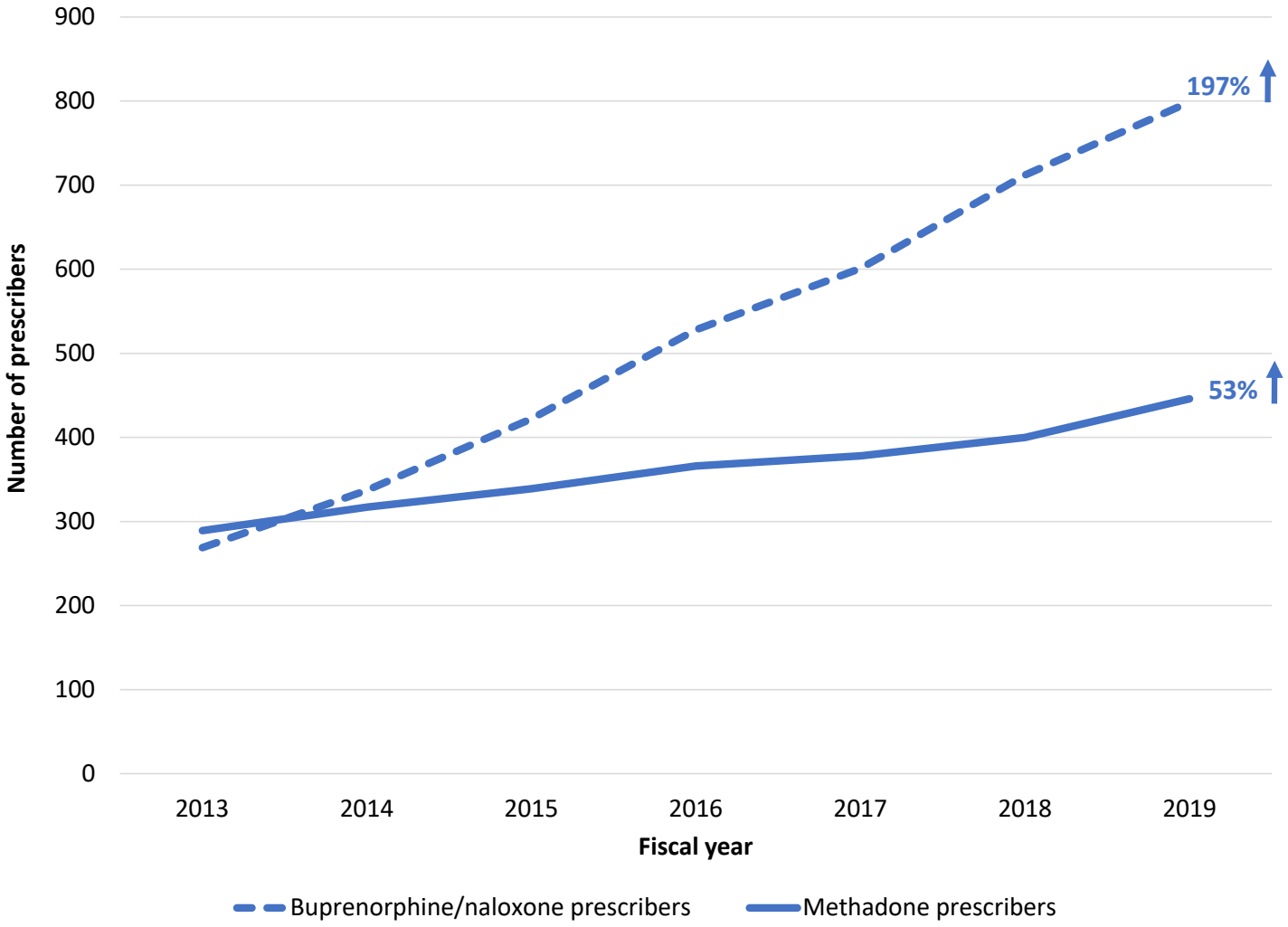
Figure 13: Percent of people prescribed OAT in 2019, by location and type of OAT



Note: Buprenorphine/naloxone is also commonly known by its brand name Suboxone®

- In 2019, the most commonly used type of OAT differed between First Nations people living within First Nations communities and those living outside of First Nations communities. Specifically, the most frequently prescribed type of OAT among First Nations people living outside of First Nations communities was methadone (a trend also seen among non-First Nations people), while buprenorphine/naloxone was the most frequently prescribed type of OAT among First Nations people living within First Nations communities. The higher use of buprenorphine/naloxone compared to methadone among First Nations people living within First Nations communities may be because take-home doses of buprenorphine/naloxone are usually more easily accessed relative to methadone. Take-home doses reduce the frequency with which people taking OAT need to go to the pharmacy, which is especially important for people residing in areas where there are barriers to regularly accessing a pharmacy.

Figure 14: Number of OAT prescribers among First Nations OAT recipients, by type of OAT, from 2013 to 2019

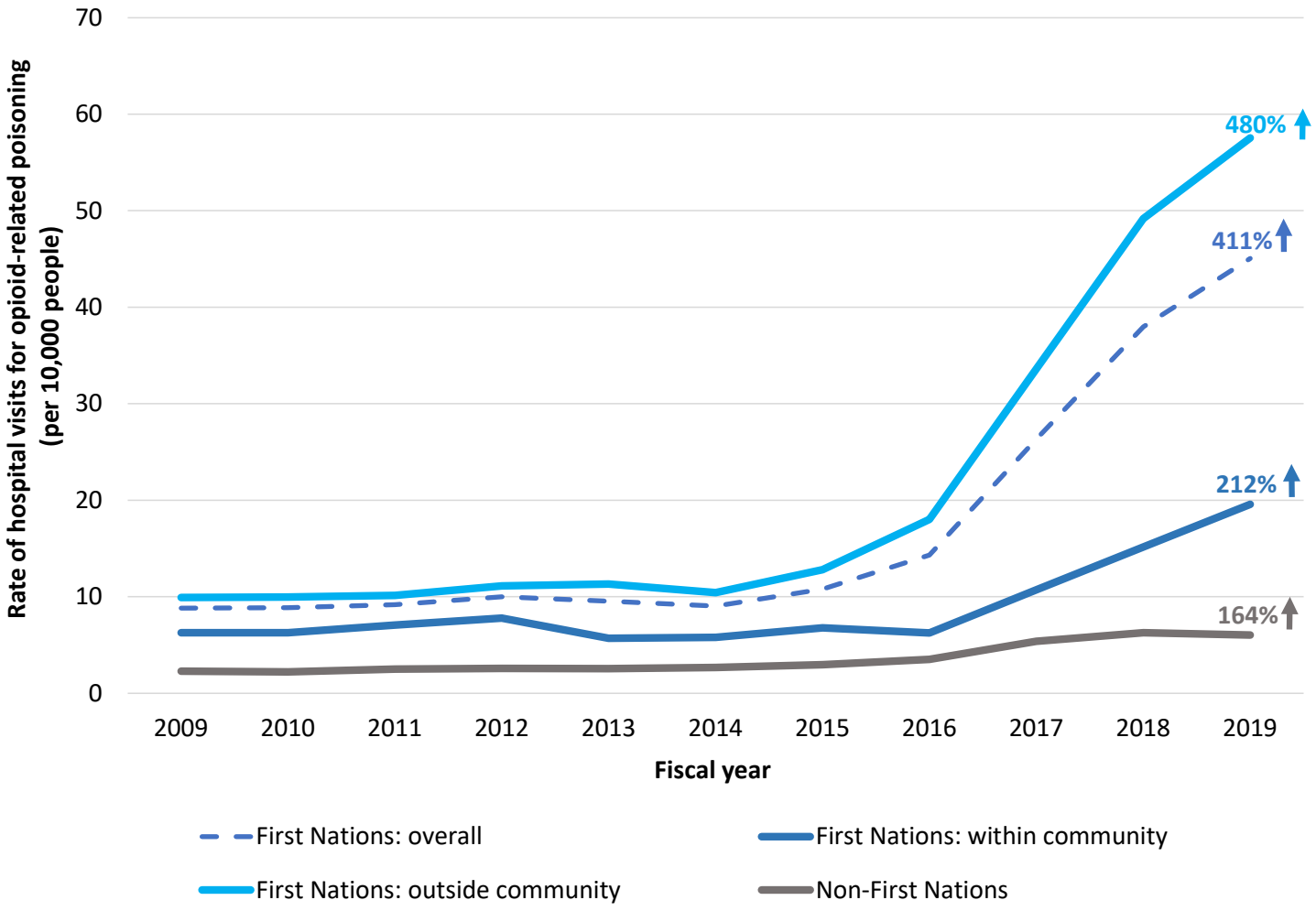


Note: Buprenorphine/naloxone is also commonly known by its brand name Suboxone®

- Between 2013 and 2019, the number of prescribers of buprenorphine/naloxone to First Nations people nearly tripled, rising from 269 prescribers in 2013 to 799 prescribers in 2019.
- The number of prescribers of methadone to First Nations people showed a slower rise, increasing from 289 prescribers in 2013 to 446 prescribers in 2019.
- This matches trends observed provincially in Ontario overall.[15]

Hospital Visits for Opioid-Related Poisoning

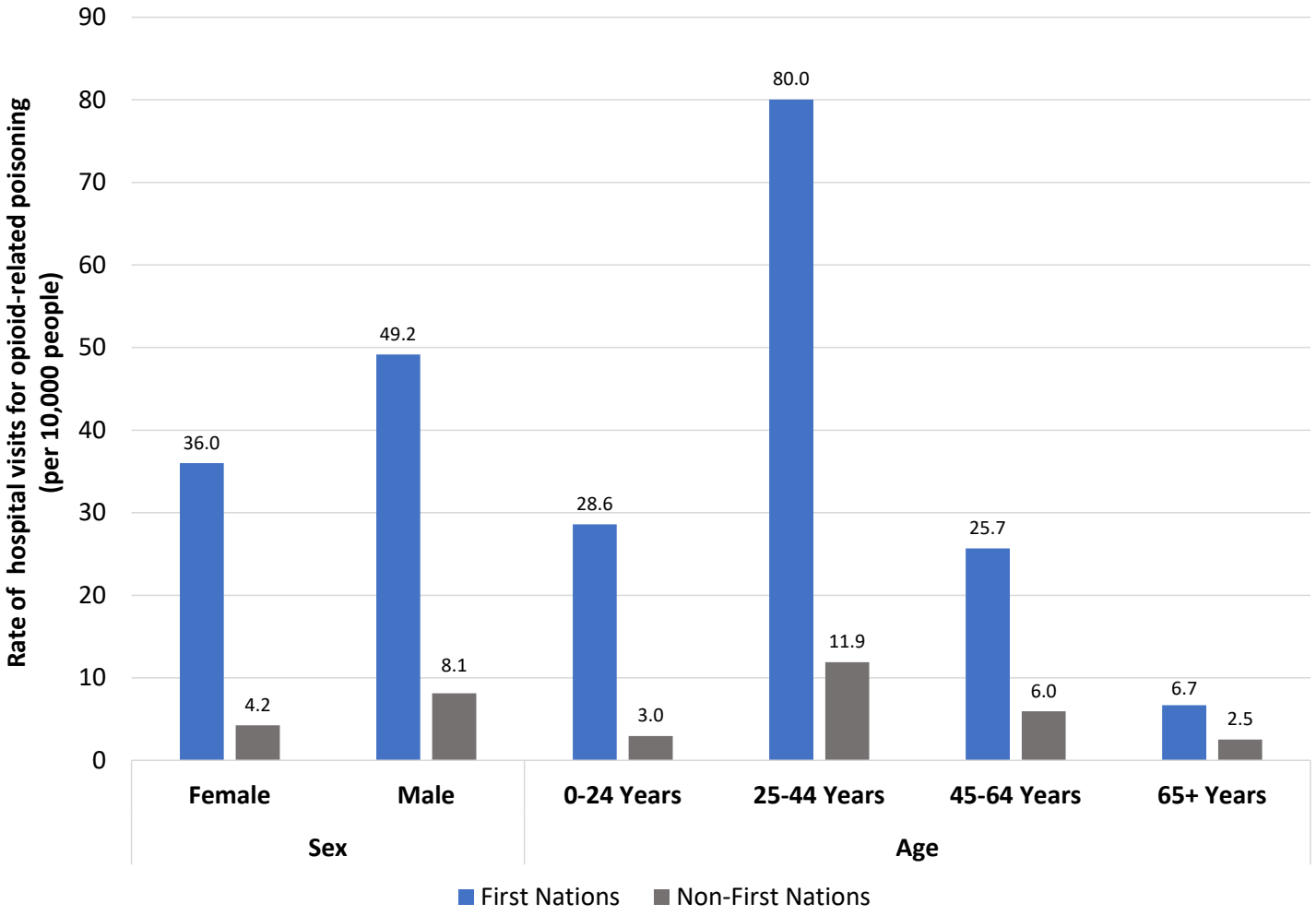
Figure 15: Rate of hospital visits for opioid-related poisoning, from 2009 to 2019



Note: This data captures opioid poisonings treated during emergency department visits and inpatient hospital admissions, but does not capture data from poisonings that are treated outside of a hospital (e.g., in nursing stations, or by paramedics or bystanders).

- The rate of hospital visits for opioid-related poisoning remained relatively stable among all populations between 2009 and 2014. Starting in 2015, the rate of hospital visits for opioid-related poisoning increased among all populations. The increase was most rapid among First Nations people living outside of First Nations communities.
- In 2019, the rate of hospital visits for opioid-related poisoning among First Nations people overall reached 45.1 per 10,000 First Nations people (764 visits among 169,553 people). First Nations people living outside of First Nations communities experienced the highest rate of hospital visits for opioid-related poisoning at 57.5 per 10,000 people (658 visits among 114,383 people). The rate of hospital visits for opioid-related poisoning among First Nations people living within First Nations communities was 19.6 per 10,000 people in 2019 (105 visits among 53,660 people), and the rate among non-First Nations people was 6.0 hospital visits per 10,000 people (9,222 visits among 15.3 million people).

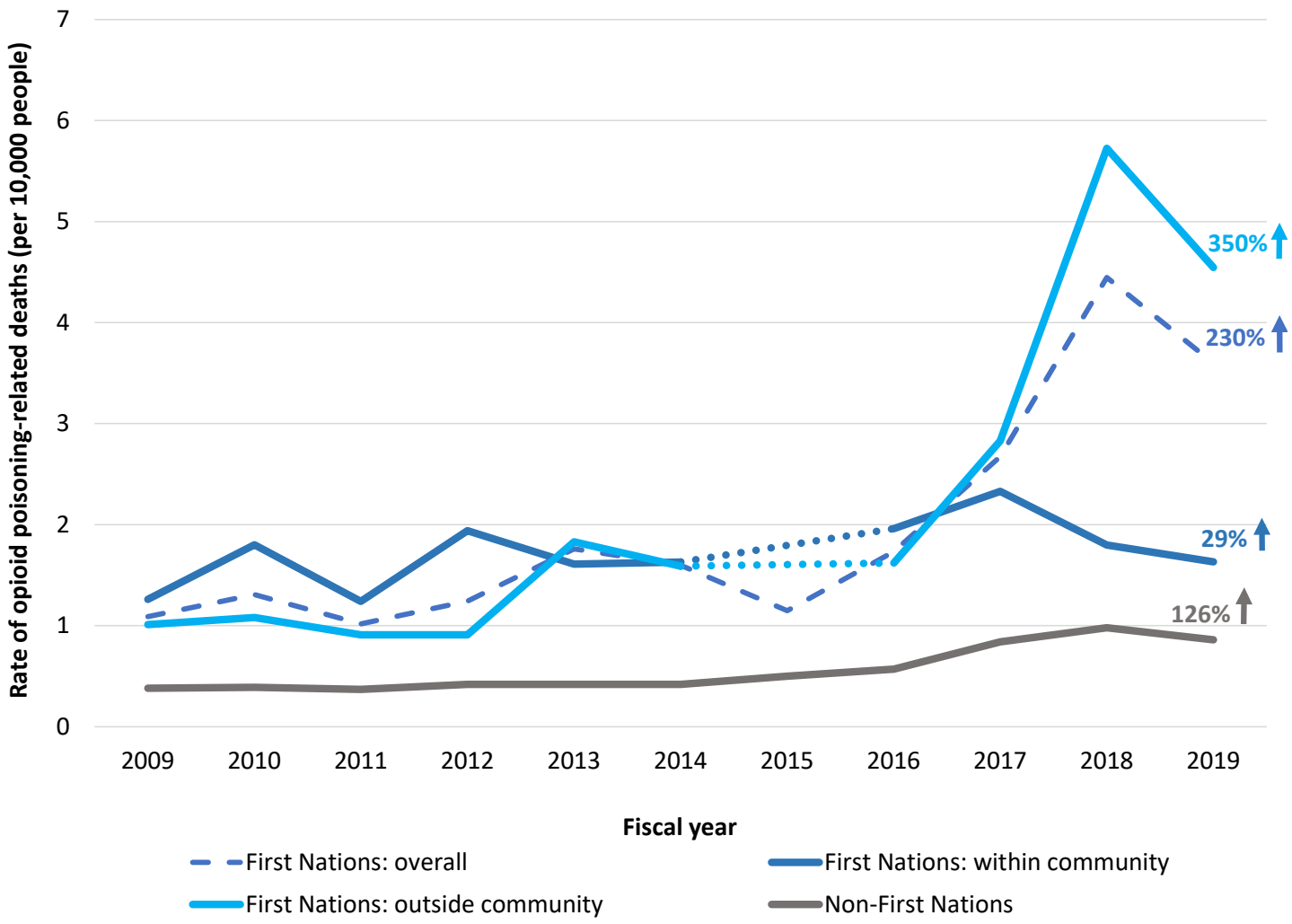
Figure 16: Rate of hospital visits for opioid-related poisoning in 2019, by sex and age



- In general, among both First Nations and non-First Nations people, males experienced a higher rate of hospital visits for opioid-related poisoning compared to females, although this difference was less pronounced among First Nations people.
- In both populations, people between the ages of 25 and 44 experienced much higher rates of hospital visits for opioid-related poisoning compared to other age groups, and this difference was more pronounced among First Nations people.
- Among First Nations people, the second highest rate of opioid-related poisoning was among those aged 24 years and younger, which differed from non-First Nations people (second highest rate was among those aged 45 to 64 years). This may reflect differences in the age distribution between First Nations and non-First Nations populations in Ontario, and illustrates the need for youth-focused harm reduction and treatment approaches among First Nations people.

People Who Died of an Opioid-Related Poisoning

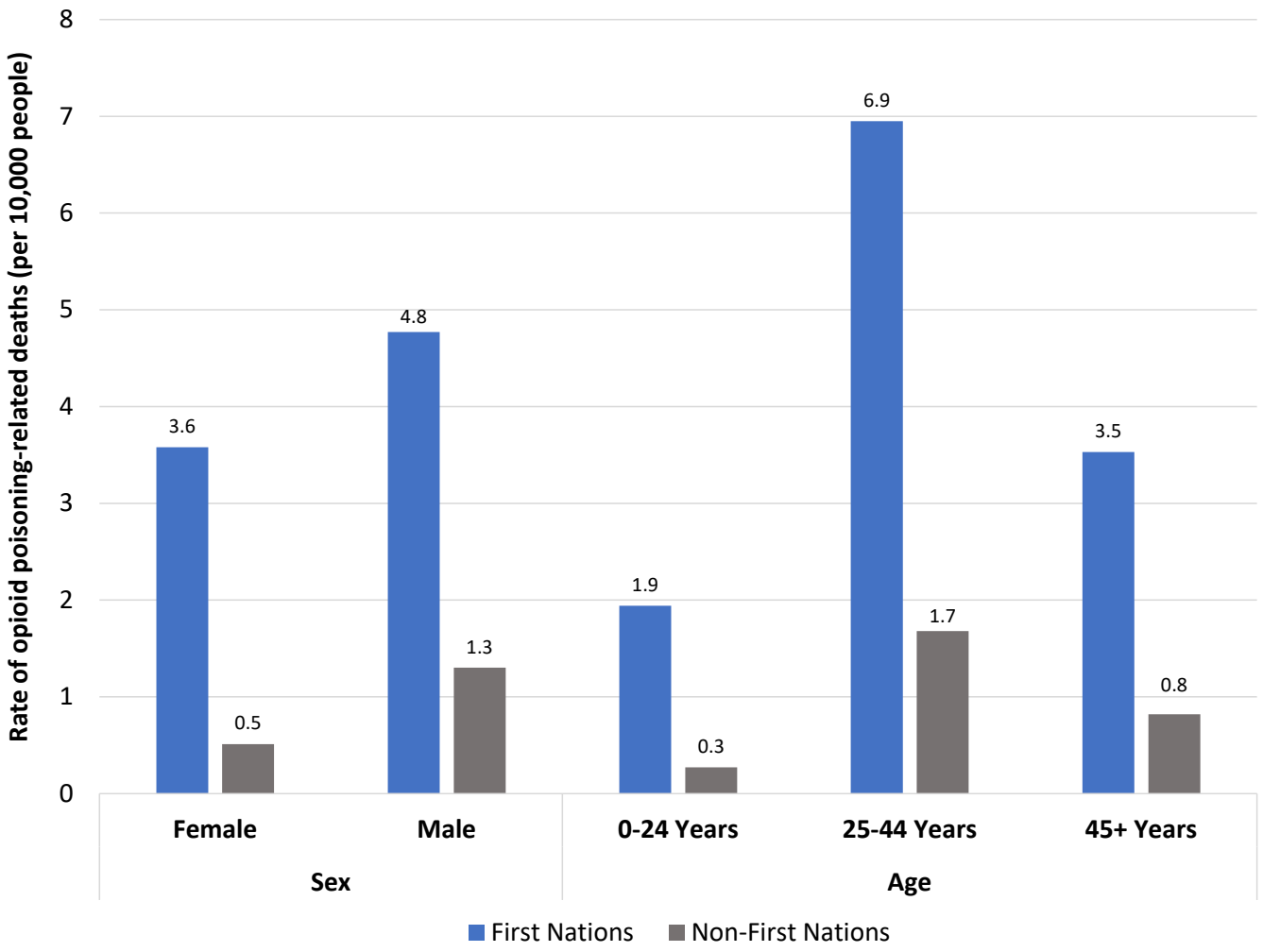
Figure 17: Rate of opioid poisoning-related deaths, from 2009 to 2019



Note: Dotted lines represent values that were suppressed due to having a count less than 6.

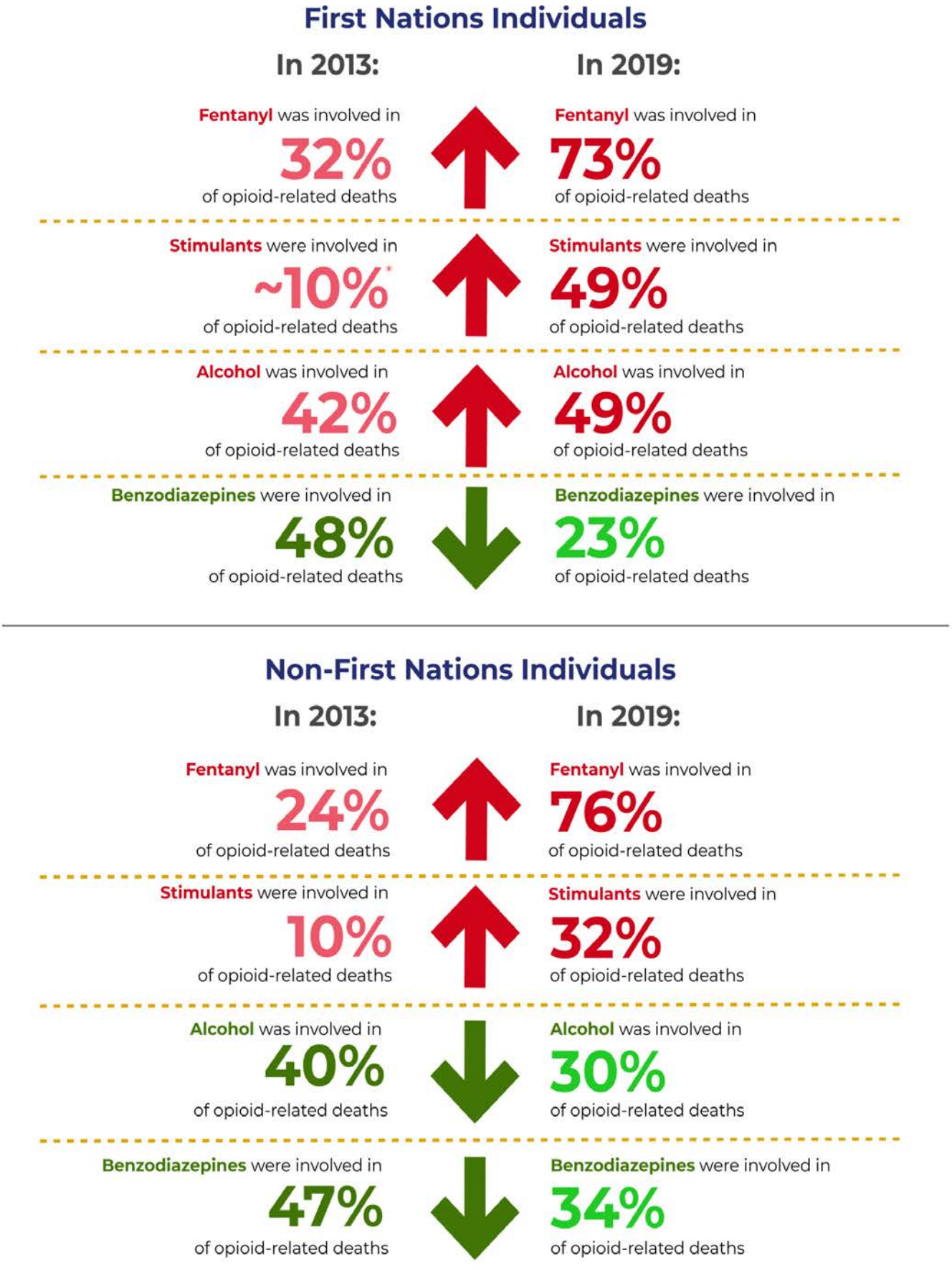
- In 2009, the rate of opioid-related deaths was approximately 3 times higher among First Nations people overall (1.09 deaths per 10,000 people) compared to non-First Nations people (0.38 deaths per 10,000 people). Rates of opioid-related deaths were also similar between First Nations people living within and outside of First Nations communities between 2009 and 2016.
- Beginning in 2019, rates of opioid-related death increased in all populations, reaching a rate of 3.6 per 10,000 population (61 opioid-related deaths) among First Nations people in 2019. This increase was most rapid among First Nations people living outside of First Nations communities, where the rate reached 4.6 deaths per 10,000 people (52 opioid-related deaths) in 2019, compared to 1.6 deaths per 10,000 people (9 opioid-related deaths) among First Nations people living within First Nations communities, and 0.9 deaths per 10,000 people (1,325 opioid-related deaths) among non-First Nations people.

Figure 18: Rate of opioid poisoning-related deaths in 2019, by sex and age



- In 2019, the rate of opioid-related deaths was higher among males and people aged 25 to 44 in both First Nations and non-First Nations populations. However, the difference in opioid-related death rate between males and females was smaller among First Nations people compared to non-First Nations people.

Figure 19: Percent of opioid poisoning-related deaths involving fentanyl and non-opioid substances in 2013 and 2019



* Value had a count less than 6, and therefore the percentage reflects that of the mid-point of the small count.

- Between 2013 and 2019, there was a large increase in the involvement of fentanyl in opioid-related deaths among both First Nations and non-First Nations people. By 2019, three-quarters of opioid-related deaths in both populations involved fentanyl.
- Similarly, the involvement of stimulants (both prescription stimulants, as well as cocaine and methamphetamines) in opioid-related deaths rose over this period in both populations, although to a greater extent among First Nations people. In 2019, stimulants were involved in approximately half of opioid-related deaths among First Nations people, and approximately one-third of opioid-related deaths among non-First Nations people.
- In contrast, the involvement of benzodiazepines in opioid-related deaths declined considerably over this time in both populations; however, it should be noted that since 2019, the emergence of non-prescription benzodiazepines in the unregulated drug supply has likely reversed these trends.
- There was little change in the involvement of alcohol in opioid-related deaths among First Nations people over time. In 2019, approximately half of opioid-related deaths among First Nations people also involved alcohol.

Summary

Overall, while rates of prescription opioid use for the treatment of pain declined among First Nations people and non-First Nations people in Ontario between 2013 and 2019, rates of opioid use remained higher among First Nations people compared to non-First Nations people in 2019. Furthermore, it was observed that rates of opioid use were higher among First Nations people living outside of First Nations communities relative to those living within First Nations communities. However, First Nations people living outside of communities experienced the largest reduction in opioid prescribing over time.

Low-barrier access to OAT is extremely important in order to help reduce the risk of death among people with opioid use disorder.[16] Between 2013 and 2019, rates of OAT use increased among First Nations and non-First Nations people in Ontario, although the increase was highest among First Nations people, particularly those living within First Nations communities. While we were unable to measure the total number of First Nations and non-First Nations people with opioid use disorder, the higher rates of OAT use among First Nations people compared to non-First Nations people may reflect increased advocacy and awareness of the need for improved access to treatment within First Nations communities, as demonstrated by the community-based approaches we have highlighted in this report, in response to the higher prevalence of opioid use disorder among First Nations in Ontario. Efforts to continue to facilitate access to OAT for First Nations people with opioid use disorder must remain a key strategy for addressing the opioid crisis in First Nations communities in Ontario.

Trends in the use of OAT also differed by the type of treatment. In particular, the use of buprenorphine/naloxone (commonly known by its brand name Suboxone®) rose considerably between 2013 and 2019, becoming the most common type of OAT used among First Nations people living within First Nations communities in 2019. The increasing use of buprenorphine/naloxone, particularly among First Nations people residing within First Nations communities, could reflect advocacy by First Nations leadership to increase access to OAT within First Nations communities, and could also be a result of the addition of buprenorphine/naloxone to drug fomularies for coverage under the Non-Insured Health Benefits and the Ontario Drug Benefit programs. In addition, take-home

doses, which can be consumed at home without direct supervision from a healthcare provider, can be more readily accessed for buprenorphine/naloxone, compared to methadone. This makes buprenorphine/naloxone the preferred type of OAT for residents of rural or remote communities, where there may be barriers to frequently accessing a healthcare provider or pharmacy.

Rates of opioid-related poisoning have increased among First Nations people and non-First Nations people in Ontario since 2016, largely due to the growing presence of fentanyl in the unregulated drug supply. However, the rate of opioid-related deaths among First Nations people in 2019 was approximately 4 times higher than that for non-First Nations people. Furthermore, First Nations people living outside of First Nations communities and those aged 44 years and younger are even more impacted by rising rates of opioid poisoning, suggesting that additional supports and access to harm reduction services are required in these populations. Furthermore, differences in rates of OAT use and opioid-related poisoning between males and females are far smaller among First Nations people compared to non-First Nations people, for whom opioid use disorder and opioid-related harm occur predominantly among males. This further reinforces the need for removing barriers to accessing services focused on supporting First Nation females with opioid use disorder.

Future Directions

Over the coming years, COO and the ODPRN will continue monitoring and reporting on these trends in order to help support opioid-specific programs and services for First Nations people. Planned work includes describing the medical conditions associated with starting an opioid prescription and long-term use of opioids, examining the factors and circumstances associated with opioid poisoning deaths, and investigating treatment pathways and health outcomes among First Nations people with opioid use disorder who are beginning OAT. All work will be First Nations-led, guided by the principles of OCAP®, and supported by a steering committee including First Nations community members. It is our hope that the data in this report, and from the research to come, will provide evidence to support investment in, and implementation of, First-Nations led programs and services designed to specifically support the health and wellbeing of First Nations people across the province.

Strengths and Limitations

A core strength of this study is that it is the first to comprehensively characterize trends and patterns in opioid use, access to treatment, and opioid-related harms among First Nations people in Ontario. Importantly, our work is First Nations-led, and has been guided by a Steering Committee made up of First Nations community members, healthcare workers, and researchers, whose insights have helped to inform and shape this report, and will continue to inform our future work. In addition, our use of the Narcotics Monitoring System, which includes all prescription opioids dispensed to people residing in Ontario, allowed for a comprehensive analysis of opioid use for pain and for OAT, and linkage to other administrative databases enabled us to examine how trends and patterns differ by various demographics, including age, sex, and residence within and outside of First Nations communities. Finally, this study used the detailed records available from the coroner's office to gain an in-depth understanding of circumstances surrounding opioid-related deaths among First Nations and non-First Nations people.

There are also several limitations to this report. First, we identified First Nations people using the Indian Registry System database, which includes people who are eligible for 'Indian Status' under the 'Indian Act'. Therefore, this report does not include anyone who is not a registered First Nations person as identified in the Indian Registry System but who may be eligible to be registered. Second, complete prescription records were only

captured in Ontario beginning in July 2012, and therefore we were unable to assess opioid use prior to this time. Third, our data identified dispensed prescriptions, but we were not able to measure the degree to which dispensed medications were used by patients. Fourth, our databases do not include information on gender. We therefore cannot study the impact of gender on opioid prescribing, access to treatment, or opioid-related harm. Fifth, the indicator for hospital visits for opioid-related poisoning is based on emergency department visits and hospital admissions, but does not capture opioid-related poisonings that are treated outside of hospitals (e.g., by paramedics, by bystanders, or in nursing stations). Thus, we may have underestimated the true number of opioid-related poisonings among First Nations people living in areas with limited access to emergency health services or those who don't seek medical services after treatment outside of hospitals. Sixth, we were not able to measure access to, or use of, naloxone for reversing opioid-related poisonings, and therefore, we were not able to explore whether there are disparities in naloxone access between First Nations and non-First Nations populations. In addition, we did not have access to data on the **use** of opioids from the unregulated drug supply, and therefore cannot comment on trends and patterns in the use of non-prescribed opioids. However, it is important to note that the measures for hospital visits and deaths due to opioid-related poisoning captures incidents arising from the use of prescribed and non-prescribed opioids. Finally, the data on deaths due to opioid-related poisoning only reflect deaths that are directly caused by an opioid-related poisoning. We were not able to capture information on deaths caused by accidents (e.g., drowning, automobile accidents) or medical emergencies (e.g., cardiac arrest) that occurred while an individual was under the effects of an opioid but were not directly due to opioid-related poisoning.

Community-Based Approaches

It is imperative that the important work happening in First Nations communities to respond to the opioid crisis and enhance mental wellbeing is recognized. We have highlighted two First Nations programs within this report that are currently making a positive impact on the people who access their services. We also recognize that many communities face challenges in accessing the sustained financial and human resources that are required to implement, support, and maintain these types of programs. There is a need for comprehensive, long-term funding that can support culturally appropriate treatment programs that incorporate First Nations healing and wellness, and address the root causes of substance use disorders, including issues related to the historical trauma experienced by First Nations people. This funding must include sufficient support for staffing, including mental wellness supports. In addition, there are many other community initiatives across Ontario whose work we hope to highlight in future reports. We hope that the data within this report can assist community-based programs like these in their advocacy and implementation of the services that are needed within and outside of First Nations communities in Ontario.

Community-Based Approaches:

NAN HOPE

Nishnawbe Aski Mental Health and Addictions Support Access Program

1-844-NAN-HOPE
www.nanhope.ca

The Nishnawbe Aski Mental Health Wellness Support Access Program (NAN Hope) was developed and implemented in response to the **COVID-19 pandemic** and its **effects on the mental health** of **Nishnawbe Aski Nation (NAN) community members**. Individuals can access the services on their own or based on identified need from a family, friend, or community-based service provider.

The NAN Hope program provides **community-driven, culturally appropriate and timely mental health and addictions support** to members of the 49 First Nations communities in the Nishnawbe Aski Nation Territory.

This **First Nation-led program** is in response to the specific mental health needs of community members in northern Ontario, offering a **central access point to mental health and addictions support**.

The **mission** of the NAN Hope program is to provide **rapid-access** and a **holistic approach** to mental health and addictions services to **foster hope and healing** for the people of Nishnawbe Aski Nation. The wellness Navigation Team provides **wrap-around care** with **ongoing follow-up** for as long as the individual requires.

To achieve this mission, the NAN Hope program features:

- Continuous access to immediate, confidential, & culturally safe support
- Support for existing programs; hospital & program discharges & transfers back to community/home, & mental health medivacs
- Rapid access to mental health clinicians & Traditional Counsellors. Counselling in English, Cree, Oji-Cree, & Ojibwe
- Active engagement with community-based organizations to ensure continuity of care
- Phones & other technologies are provided to communities to increase service availability & accessibility

Approximately **1 in 5** individuals who reach out to NAN Hope struggle with substance use

"I can't value NAN Hope enough for the last two months, which have been very difficult. I think the thing I value most about NAN Hope is their accessibility. ... I spoke with a Wellness Navigator twice when things became too much for me to handle and I really needed someone I could openly speak with about what I was feeling and experiencing. I can't stress how important it has been to my healing to be heard and to be acknowledged ... Your service has shown me there is light when things were very heavy, sad, and dark."

Community-Based Approaches:

The Naandwe Miikaan Program

Naandwe Miikaan, translated as **The Healing Path**, is an **Opioid Agonist Therapy (OAT) program** that **blends clinical and Indigenous healing concepts** in an Indigenous community-based setting. The Naandwe Miikaan clinic is a new and growing service that began assisting families and individuals struggling with opioid use in 2014. Along with OAT pharmacological treatment, clients work with **Indigenous counsellors** that **integrate culture** such as land-based activities to help them reconnect to Indigenous teachings and harvesting.

The **vision**: Naandwechige is the road of our overall health. To achieve Mino Bimaadiziwin and reach that healthy road and good life, we start on the healing path, Naandwe Miikaan, to get back where we started.

Naandwe Miikaan program highlights and services

- Staff work to reduce stigma & collaborate with a range of community partners and organizations
- Counselling & traditional support services offered are community driven & culturally centred
- Integration into the community is a priority; e.g., volunteering, job/education, & attending workshops
- Clients are stabilized on an appropriate dose of the recommended therapies. Urine drug screens & medical care are provided
- Traditional teachings, cultural supports & land-based activities, such as deer hunts & fishing are imperative

> I need my culture. I didn't think so but I do. The smell of the medicines. The feeling of being - even near somebody at the moment. The energy. I can't explain how it makes me feel but it makes me feel like he probably knows what I've been through. He can probably draw a picture of my life. Whereas maybe the doctor cannot. He can't understand.

We would like to recognize Deputy Chief Tim Ominika who has been a champion in the community. He was the first manager of the clinic and was instrumental in advocating for the research support for the Naandwe Miikaan program. For more information, please contact Tim Ominika at tominika@live.com

Shkagamik Kwe G'nandwegonah

Mother Earth is Healing Us www.seven-grandfathers.ca

Logo for research created by Randy Msheekehn Trudeau

Wiikwemkoong community leadership have partnered with Drs. Marion Maar and Darrel Manitowabi at the Northern Ontario School of Medicine to research the client journey and evaluate treatment outcomes of the culturally-based OAT services at Naandwe Miikaan. The emphasis is on understanding how Mino Bimaadziwin - living good life - can be supported by OAT in combination with land based and cultural activities. The work involves tracking clinical indicators, as well as gaining an understanding of holistic healing and wellness goals from an Anishinabe perspective.

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