

2024 Opioid Surveillance Update

To: Chair and Members of the Board of Health

Meeting Date: September 3, 2025

Report No. **BH.01.SEP0325.R24** Pages: 19

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Recommendations

It is recommended that the Board of Health receive this report for information.

Key Points

- In 2024, opioid-related emergency department (ED) visit rates decreased in both Ontario and WDG; WDG's rate remains below the provincial average overall.
- The City of Guelph continues to report the highest opioid-related ED visit rates in the region
- Dufferin County experienced a year-over-year decline in opioid-related ED visit dates
- Wellington County continues to report the lowest opioid-related ED visit rates in the region
- Opioid-related mortality rates in WDG dropped by 37% from 2023 to 2024, reaching their lowest level since 2017; this local trend mirrors the provincial average.
- The City of Guelph accounts for most opioid-related deaths in the region, with 19 deaths reported in 2024 – down from 31 in the previous year.
- Fentanyl remains the leading contributor to opioid-related deaths in WDG, involved in over 80% of deaths in 2024, which is now slightly above the provincial average.
- Benzodiazepine involvement in opioid-related deaths increased sharply in 2024, and new evidence suggests that veterinary tranquilizers (e.g., xylazine and medetomidine) are also appearing in the unregulated drug supply, highlighting the need for ongoing toxicology monitoring and community alerts.

- Private residences remain the most common setting for opioid-related deaths in the region.
- Approximately 1 in 5 opioid toxicity deaths in Ontario since 2021 have occurred among people experiencing homelessness, challenging the misconception that opioid-related deaths only affected those without housing.
- Prescribed opioids for pain remain highest among older adults in WDG, with women more likely than men to be dispensed opioids across most age groups.
- The FAST Surveillance System continues to strengthen local monitoring capacity through collaboration with Emergency Medical Services (EMS), policy services, and other community partners.

Background

The opioid crisis remains a tenacious public health concern across Ontario, including in Wellington County, Dufferin County, and the City of Guelph (WDG).¹ Wellington-Dufferin-Guelph Public Health (WDGPH) continues to prioritize opioid surveillance as part of its commitment to protect community health and promote well-being. This report provides an updated analysis of opioid-related trends within the WDG region for the full 2024 calendar year, building on the previous update delivered to the Board of Health in September 2024 (BH.01.SEP0424.R28).² Utilizing data from multiple sources, the report presents current information on opioid-related emergency department visits, hospitalizations, and fatalities, and situates these local findings within the wider provincial landscape. Regional data insights are essential for identifying differences in risk and impact, supporting equitable health outcomes, and guiding resource planning and communications. This surveillance work directly supports the priorities of WDGPH's 2024–2028 Strategic Plan, particularly in improving health outcomes, reducing health inequities, and fostering strong community partnerships. The report also acknowledges the important role of local partners, whose ongoing collaboration strengthens the region's collective capacity to respond to the complexities of the opioid crisis.

Discussion

Surveillance

WDGPH uses a range of trusted surveillance systems to monitor opioid-related trends across the region. These sources include hospital and emergency department records, mortality data from the Office of the Chief Coroner for Ontario, real-time paramedic service data, and local insights from community partners.

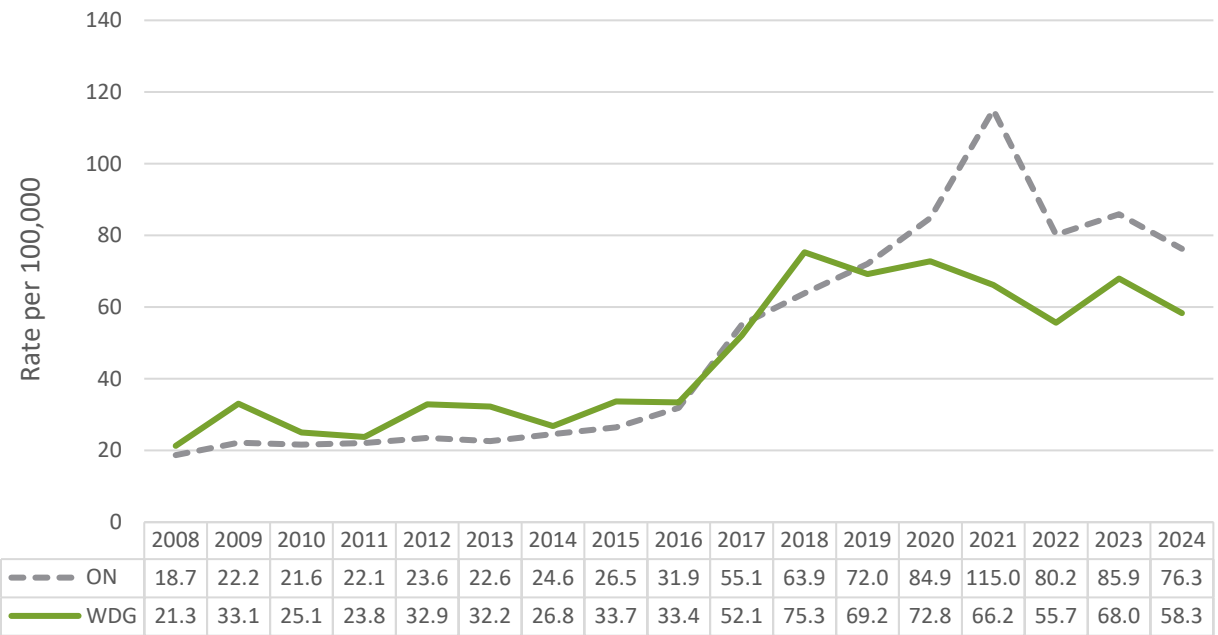
This multi-source approach allows WDGPB to detect shifts in the unregulated drug supply, identify emerging risks, and respond quickly with partners. More details on data sources can be found in *Appendix A*.

For this report, WDGPB had access to complete and finalized 2024 data for all opioid-related indicators, ensuring that no interim estimates were required. The only modeled data used pertain to population size, which were developed by Statistics Canada and accessed through the Community Data Program.³

Opioid-Related Emergency Department (ED) Visits

In 2024, opioid-related emergency department (ED) visit rates declined in both Wellington-Dufferin-Guelph (WDG) and Ontario, continuing a gradual downward trend following pandemic peaks. As illustrated in Figure 1, WDG’s rate fell by 14% to 58.3 per 100,000 residents, remaining below the provincial average for the sixth consecutive year.

Figure 1 – Rate per 100,000 Residents of Opioid-Related Emergency Department (ED) Visits in WDG and Ontario, 2008-2024.

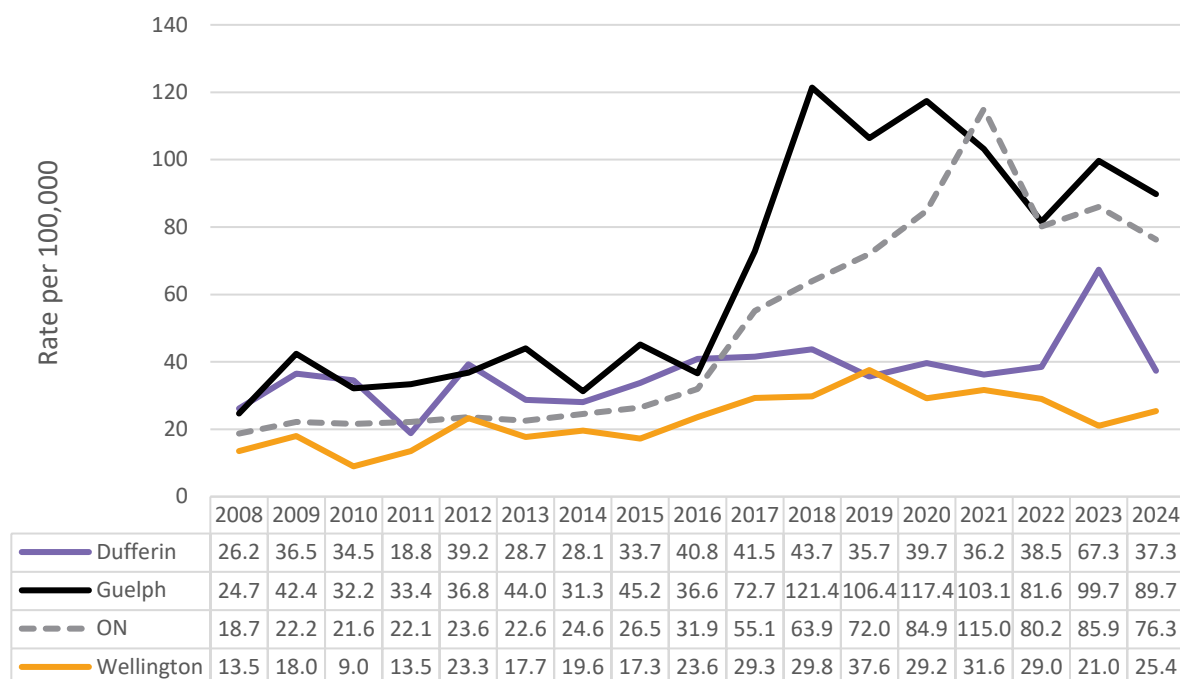


Data Source – National Ambulatory Care Reporting System (NACRS). 2008-2024. Ontario Ministry of Health and Long-Term Care, IntelliHEALTH Ontario.

As shown in **Figure 2**, the City of Guelph continues to report the highest sub-regional rate at 89.7 per 100,000 residents, which is approximately 18% above the provincial average. Dufferin County saw a notable 45% decrease, bringing its rate closer to historical levels. Wellington

County remains the lowest in the region, but experienced a slight increase that warrants continued observation.

Figure 2 – Rate per 100,000 Residents of Opioid-Related Emergency Department (ED) Visits in Wellington County, Dufferin County, the City of Guelph, and Ontario, 2008-2024.



Data Source – National Ambulatory Care Reporting System (NACRS). 2008-2024. Ontario Ministry of Health and Long-Term Care, IntelliHEALTH Ontario.

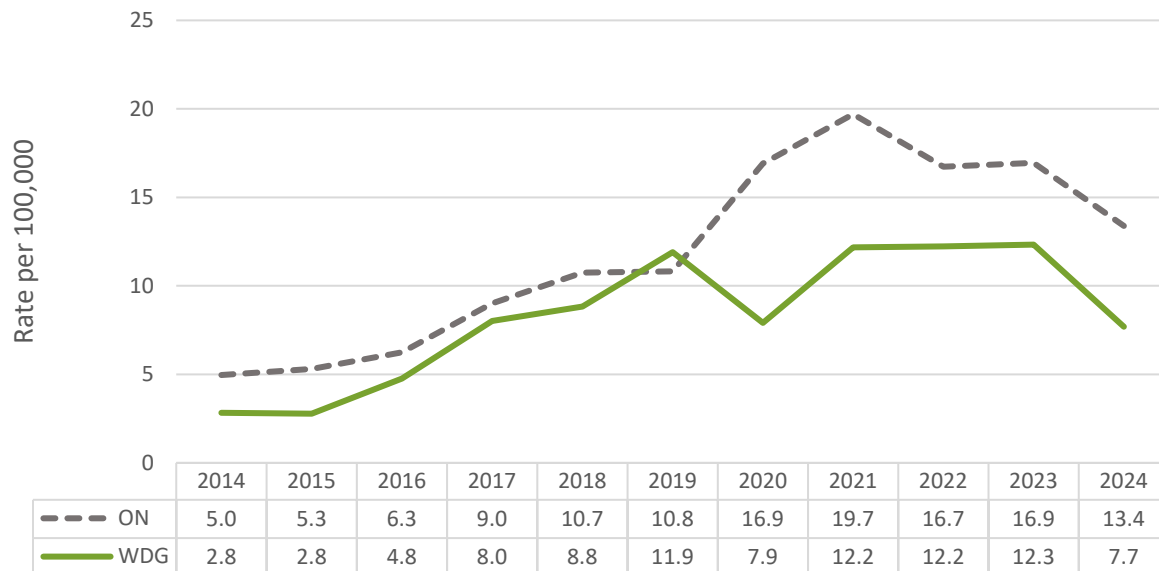
While these declines are encouraging and may reflect positive shifts in service access and community interventions, they must be interpreted with caution. The persistent gap between Guelph’s rates and the provincial average underscores ongoing local risk and highlights the need for tailored outreach and prevention strategies. The reasons behind Dufferin County’s spike in 2023 remain unclear, but the sharp drop in 2024 brings rates closer to historical levels, suggesting that local patterns can shift quickly and warrant continued attention.

Opioid-related ED visits remain a key indicator of acute harms in the community and can serve as an early warning of changes in the unregulated drug supply. Maintaining robust monitoring and sharing timely alerts with community partners will help WDGPH respond quickly to unexpected surges. Continued investment in local partnerships and targeted outreach, particularly in areas like Guelph where rates remain elevated, will support more equitable health outcomes across the region.

Opioid-Related Mortality

As shown in Figure 3, opioid-related mortality rates declined in 2024 both provincially and within WDG, marking a change from three years of relative stability. WDG's mortality rate dropped by 37%, from 12.3 to 7.7 per 100,000 residents, which is the lowest level since 2017. Provincially, a similar trend was also observed, with the rate falling by 21% to 13.4 per 100,000.

Figure 3 – Rate per 100,000 Residents of Opioid-Related Mortality in WDG and Ontario, 2014-2024.



Data Source – Ontario Opioid-Related Death Database, 2014-2024. Office of the Chief Coroner for Ontario; accessed through the Interactive Opioid Tool.

The City of Guelph continues to account for most opioid-related deaths in the region, though the number decreased notably from 31 deaths in 2023 to 19 in 2024. Dufferin County remained stable at five deaths, while Wellington County recorded three deaths, down slightly from four the previous year. Private residences remain the most common setting for opioid-related deaths, and fentanyl continues to be the leading contributor, involved in over 80% of deaths locally. Notably, recent data from the Ontario Drug Policy Research Network indicates that since 2021, about one in five opioid toxicity deaths have occurred among people experiencing homelessness, underscoring that these harms affect individuals across a range of living situations, not just in outdoor or public spaces.⁴ Additional details on local mortality counts, location types, and fentanyl-related deaths can be found in *Appendices B, C, and D*, respectively.

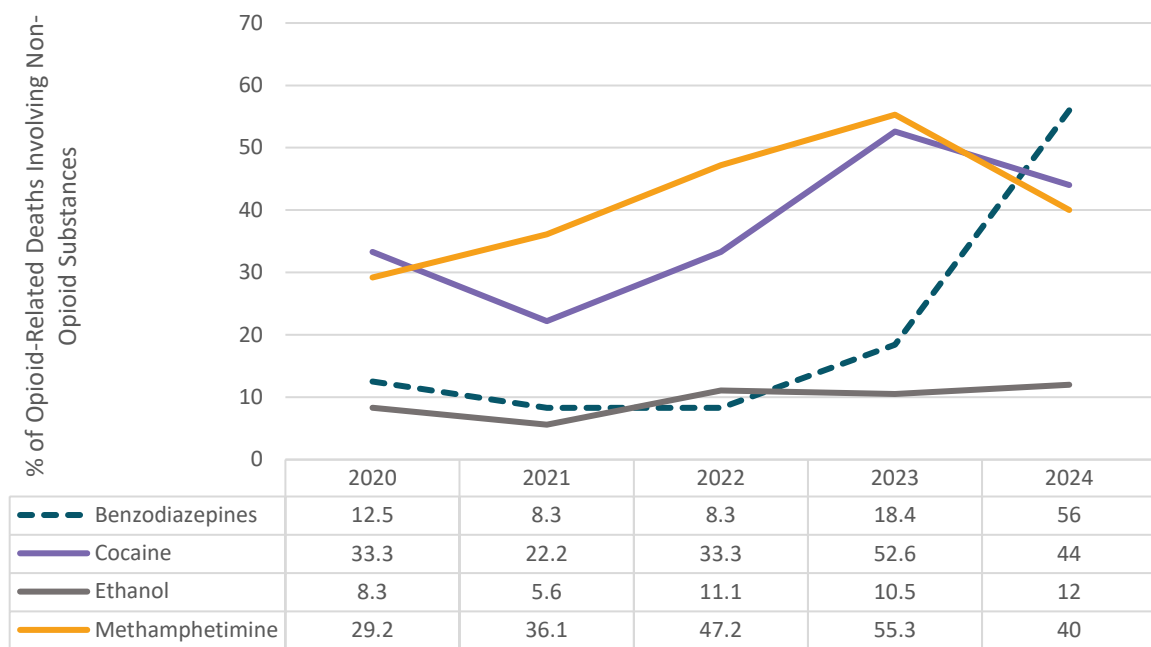
Although the decline in local mortality is promising, these rates can shift quickly due to changes in the unregulated drug supply and barriers to accessing care. Guelph’s consistently higher mortality count highlights the need for tailored supports in urban areas, while the concentration of deaths in private residences shows the risk for people using alone. The fact that about one in five deaths occur among people experiencing homelessness highlights the need for accessible, low-barrier services that reach people where they are.

WDGPH will continue to monitor mortality trends closely and share timely insights with community partners. Ongoing collaboration with local drug strategies will focus on strengthening outreach to high-risk groups, supporting harm reduction training, and ensuring local responses remain flexible as conditions change.

Emerging Risks: Sedatives and Tranquilizers

Figure 4 highlights a key shift in the profile of non-opioid substances contributing to opioid-related deaths in WDG. In 2024, benzodiazepines were involved in 56% of deaths – more than any other non-opioid substance – representing a threefold increase compared to 2022. Meanwhile, the involvement of stimulants like methamphetamine declined from 55.3% in 2023 to 40% in 2024, and cocaine fell from 52.6% to 44%, with ethanol remaining stable at around 12%.

Figure 4 – Percentage of Opioid-Related Deaths Involving Non-Opioid Substances in WDG, 2020-2024.



Data Source – Ontario Opioid-Related Death Database, 2017-2023, Office of the Chief Coroner for Ontario; accessed through Public Health Ontario (PHO) Quarterly Public Health Unit Opioid-Related Death Report (Last Updated: 05/2024).

Recent findings from Toronto's Drug Checking Service illustrate how this trend may still be evolving. Over the past several years, benzodiazepines have been consistently detected in fentanyl samples tested at the service. More recently, their June 2025 report identified that 68% of expected fentanyl samples contained veterinary tranquilizers such as xylazine and medetomidine.⁵ Locally, xylazine was co-involved in three opioid-related deaths in WDG in 2024. These tranquilizers, sometimes referred to with fentanyl as "tranq-dope," depress the central nervous and respiratory systems and pose new challenges for overdose response.^{6,7}

This shifting substance profile suggests that the unregulated drug supply remains unpredictable, posing a risk to those who use substances. The rising presence of sedatives and tranquilizers increases the risk of suppressed breathing, blood pressure, and heart rate. Naloxone only reverses the effects of opioids, making overdoses more difficult to reverse when sedatives or tranquilizers are also present. Consistent trends in Toronto highlight that this is not a local anomaly, but part of a broader pattern, reinforcing the need for real-time toxicology monitoring, risk communication, and tailored harm reduction efforts.

WDGPH will continue to work closely with community and harm reduction agencies to track these emerging risks, adapt overdose response training and outreach, and ensure accurate information about the evolving drug supply reaches those most at risk. This approach will help the local response stay proactive and equitable, supporting WDGPH's goals to reduce harm and save lives.

Opioid Prescription and Dispensing

In 2024, opioid dispensing patterns in WDG remained consistent with previous years. Older adults continued to have the highest rates of opioid dispensed for pain management, specifically individuals aged 65 and older. Within this age group, 188.5 per 1,000 females, and 174 per 1,000 males were dispensed an opioid to treat pain in the WDG region. Adults aged 45 to 64 also had higher dispensing rates compared to younger age groups, and across all age categories, females were more likely than males to be dispensed opioids. These local patterns are consistent with provincial trends, which also show higher dispensing rates among older adults and women. Ongoing monitoring of this data is important, as research shows that older adults are more likely to experience chronic pain due to age-related physiological changes, which likely contributes to higher dispensing rates in this population.^{8,9} Additional details on local dispensing patterns can be found in *Appendix E*.

Appendix F shows that overall opioid dispensing rates have declined in both WDG and Ontario since 2014. In 2024, about 85 per 1,000 Ontarians and 88 per 1,000 WDG residents were dispensed opioids for pain management. This reflects a reduction in dispensing rates, with a 30.1% decrease provincially and a 28.7% decrease in WDG since 2014.

Appendix G provides additional insight by examining the total volume of opioids dispensed for pain management over time. Similar to overall dispensing rates, dispensing volumes have declined in both Ontario and WDG since 2014. Throughout this period, WDG has reported slightly higher dispensing volumes than, but remain close to the provincial average.

FAST Surveillance System

As highlighted in previous reports, WDGPB owns and operates a local, community-driven surveillance tool known as the FAST Surveillance System. This system plays an essential role in providing timely insights into the impact of the unregulated drug supply within our region.

FAST works by partnering with a network of local agencies and service providers who work directly with individuals affected by substance use. When these partners witness, respond to, or learn about suspected drug poisonings (“overdoses”), they submit anonymized incident data into the system. This collaborative approach allows WDGPB to gather up-to-date, local information that may not always be captured through traditional surveillance sources alone. Additional details on the FAST Surveillance System can be found in *Appendix H*.

A wide range of partners, including EMS, police services, community health centres, and harm reduction agencies, contribute to FAST, helping WDGPB monitor trends, detect emerging risks, and issue timely health alerts in collaboration with the Wellington Guelph Drug Strategy (WGDS) and Dufferin-Caledon Drug Strategy (DCDS).

While many partners support this work, EMS (Guelph-Wellington Paramedic Services and Dufferin County Paramedic Services) and Guelph Police Services continue to be instrumental to FAST system’s success, currently providing more than 50% of all reported incident data. WDGPB remains committed to expanding this network and welcomes new agencies who are willing to share anonymous incident data. By working together, the FAST system supports a more accurate, real-time understanding of the impact of the unregulated drug supply on our communities.

Supporting Local Drug Strategies

In addition to operating the FAST Surveillance System, WDGPB continues to play an active role in two local drug strategies that lead a coordinated community response to the opioid crisis. This includes ongoing work with the WGDS and the DCDS.

One current priority is supporting the WGDS in evaluating the recent closure of the local Consumption and Treatment Services (CTS) site.

This evaluation uses a mixed-methods approach, combining quantitative and qualitative analyses to better understand local impacts. WDGPB's contributions include:

- Providing the WGDS with relevant incident data from the FAST Surveillance System; and
- Supporting the analysis and interpretation of this data including outlining any analytical limitations.

This evaluation also includes qualitative data gathered through interviews conducted by the WGDS to provide supplementary insights about what has been faced as a result of the CTS closure. It is anticipated that the final evaluation report will be ready this fall and available to access through the WGDS.

WDGPB continues to co-chair the DCDS in partnership with Family Transition Place. Through this work, WDGPB supports community-led initiatives such as a social media campaign about harm reduction and local activities to mark International Overdose Awareness Day that help raise awareness about the impacts of the opioid crisis across Dufferin and Caledon.

Conclusion

Opioid-related harms continue to present significant challenges in Wellington County, Dufferin County, and the City of Guelph, reflecting broader trends seen across Ontario. While recent surveillance data indicate encouraging declines in opioid-related emergency department visits and mortality rates, the ongoing presence of fentanyl, the rise in benzodiazepine co-involvement, and differences across sub-regions underscore the importance of maintaining robust local monitoring and community partnerships.

Despite some positive shifts in these trends, year-over-year variability highlights how quickly conditions can change, reinforcing the need for sustained and responsive surveillance. Through timely surveillance systems like FAST, strong collaborations with local drug strategies, and sustained data sharing, WDGPB is better positioned to identify emerging trends, share timely information, and support community-led responses. These efforts directly contribute to WDGPB's 2024-2028 Strategic Plan by supporting our commitment to improve health outcomes, reduce health inequities, and build strong, trusted partnerships with community stakeholders.

Continued investment in evidence-informed monitoring and collaborative action will remain essential in ensuring that public health efforts to address the opioid crisis are responsive, equitable, and rooted in the needs and realities of our communities.

WDGPB will report back to the Board in 2026 with updated trends, including any further changes in the local drug supply, particularly related to sedatives and tranquilizers.

Ontario Public Health Standards

Foundational Standards

- ☒ Population Health Assessment
- ☒ Health Equity
- ☒ Effective Public Health Practice
- ☐ Emergency Management

Program Standards

- ☐ Chronic Disease Prevention and Well-Being
- ☐ Food Safety
- ☐ Healthy Environments
- ☐ Healthy Growth and Development
- ☐ Immunization
- ☐ Infectious and Communicable Diseases Prevention and Control
- ☐ Safe Water
- ☐ School Health
- ☒ Substance Use and Injury Prevention

2024-2028 WDGPH Strategic Goals

More details about these strategic goals can be found in [WDGPH's 2024-2028 Strategic Plan](#).

- ☒ Improve health outcomes
- ☐ Focus on children's health
- ☒ Build strong partnerships
- ☒ Innovate our programs and services
- ☐ Lead the way toward a sustainable Public Health system

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9. Canadian Coalition for Seniors' Mental Health. Canadian Guidelines on Opioid Use Disorder Among Older Adults. [Internet]. 2019 [cited 2025 June 30]. Available from: https://www.substanceuse.ca/sites/default/files/2021-03/Canadian_Guidelines_Opioid_Use_Disorder_ENG.pdf

Appendices

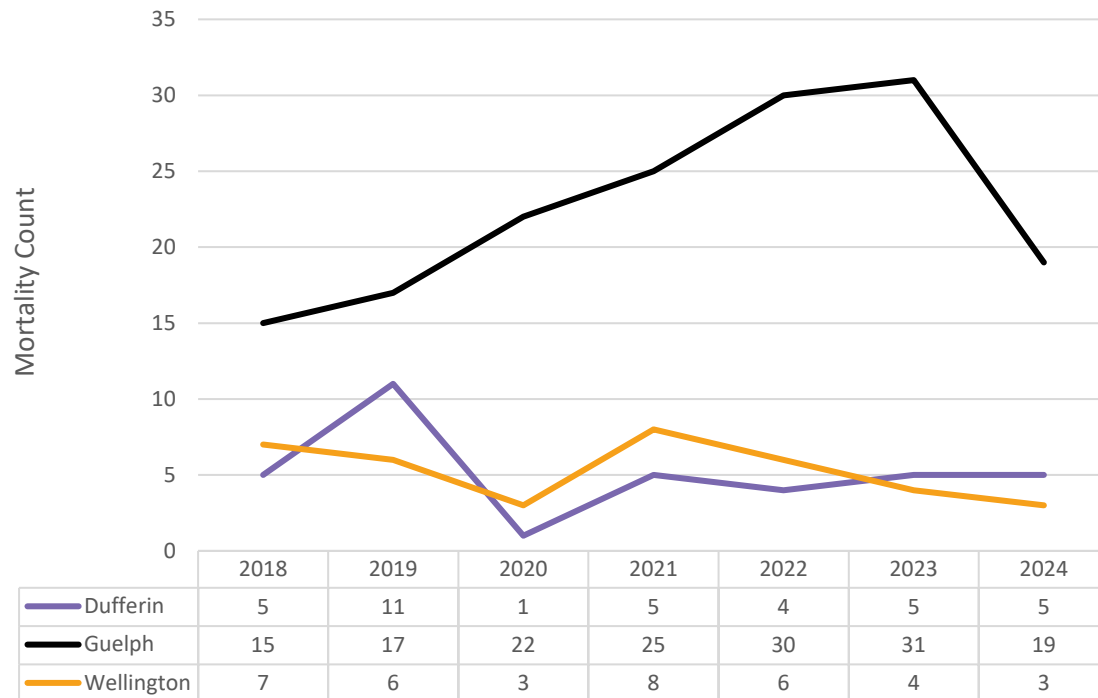
Appendix A

Table A – Surveillance Data Sources Used by WDGPH for Opioid Monitoring

| Data Source | Description |
|---|--|
| Discharge Abstract Database (DAD) | Hospitalization records; high data quality with detailed geographic granularity. |
| Emergency Medical Services (EMS) | Incident-level data from emergency responders, capturing real-time overdose events. |
| Office of the Chief Coroner of Ontario (OCCO) | Official mortality data related to confirmed opioid-related deaths. |
| National Ambulatory Care Reporting System (NACRS) | Confirmed emergency department visit data, used for longitudinal tracking. |
| NACRS Plus | Preliminary ED visit data; offers more timely but less validated reporting. |
| Ontario Drug Policy Research Network (ODPRN) | Provides supplementary data on drug use, including select public health indicators (e.g., opioid dispensing) |
| FAST Surveillance System | Real-time local data on opioid incidents, supporting immediate situational awareness. |

Appendix B

Figure B – Count of Opioid-Related Mortality in the WDG Sub-Regions, 2018-2024.



Data Source – Ontario Opioid-Related Death Database (Deaths by CSD), 2018-2024. Office of the Chief Coroner for Ontario.

Appendix C

Table C – Percentage of Opioid-Related Deaths Occurring by Location Type in Ontario and WDG, 2017-2024 Inclusive.

| Location | % of Opioid-Related Deaths (ON) | % of Opioid-Related Deaths (WDG) |
|-----------------------|---------------------------------|----------------------------------|
| Congregate living | 6.1 | 3.8 |
| Correctional facility | 0.7 | 1.0 |
| Hospital/clinic | 1.5 | 0 |
| Hotel/motel | 4.9 | 6.7 |
| Vehicle | 1.0 | 0.5 |
| Industrial setting | 0.2 | 0.5 |
| Other | 0.8 | 0 |
| Outdoors | 8.4 | 5.8 |
| Private residence | 69.7 | 75.0 |
| Public building | 2.7 | 2.9 |
| Shelter | 3.2 | 3.4 |
| Unknown | 0.9 | 0.5 |

Data Source – Ontario Opioid-Related Death Database, 2017-2024. Office of the Chief Coroner for Ontario; accessed through Public Health Ontario (PHO) Quarterly Public Health Unit Opioid-Related Death Report (Last Updated: 06/2025).

Appendix D

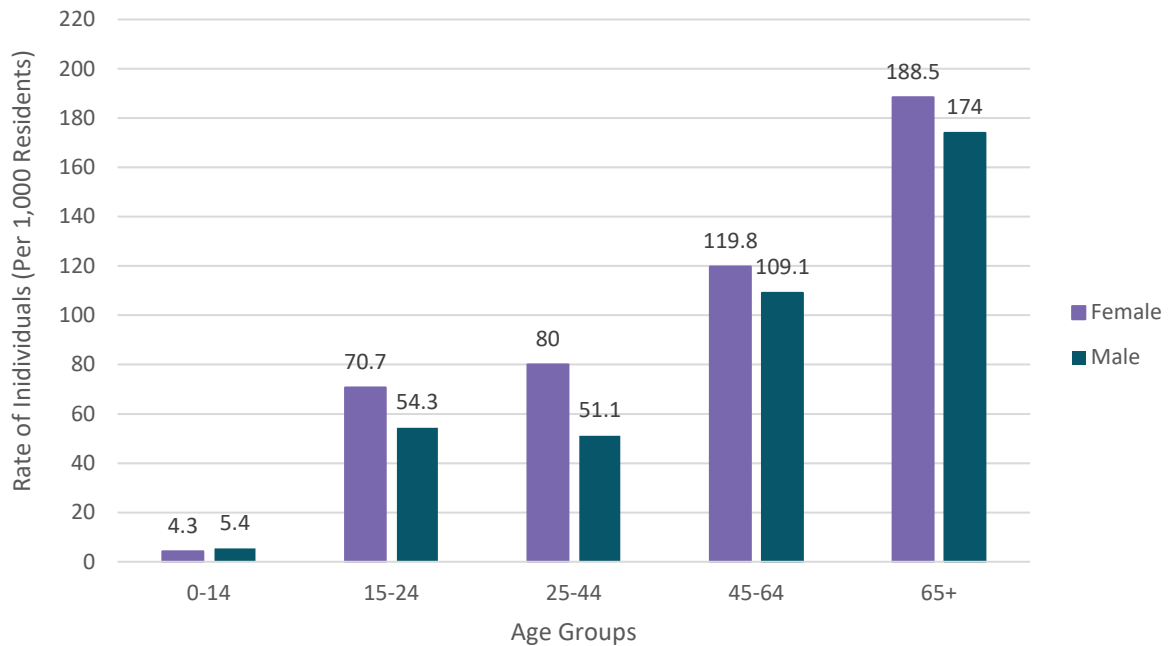
Figure D – Percent of Opioid-Related Deaths by Fentanyl and its Analogues in WDG and Ontario, 2014-2024.



Data Source – Ontario Opioid-Related Death Database, 2014-2024. Office of the Chief Coroner for Ontario; accessed through the PHO Interactive Opioid Tool.

Appendix E

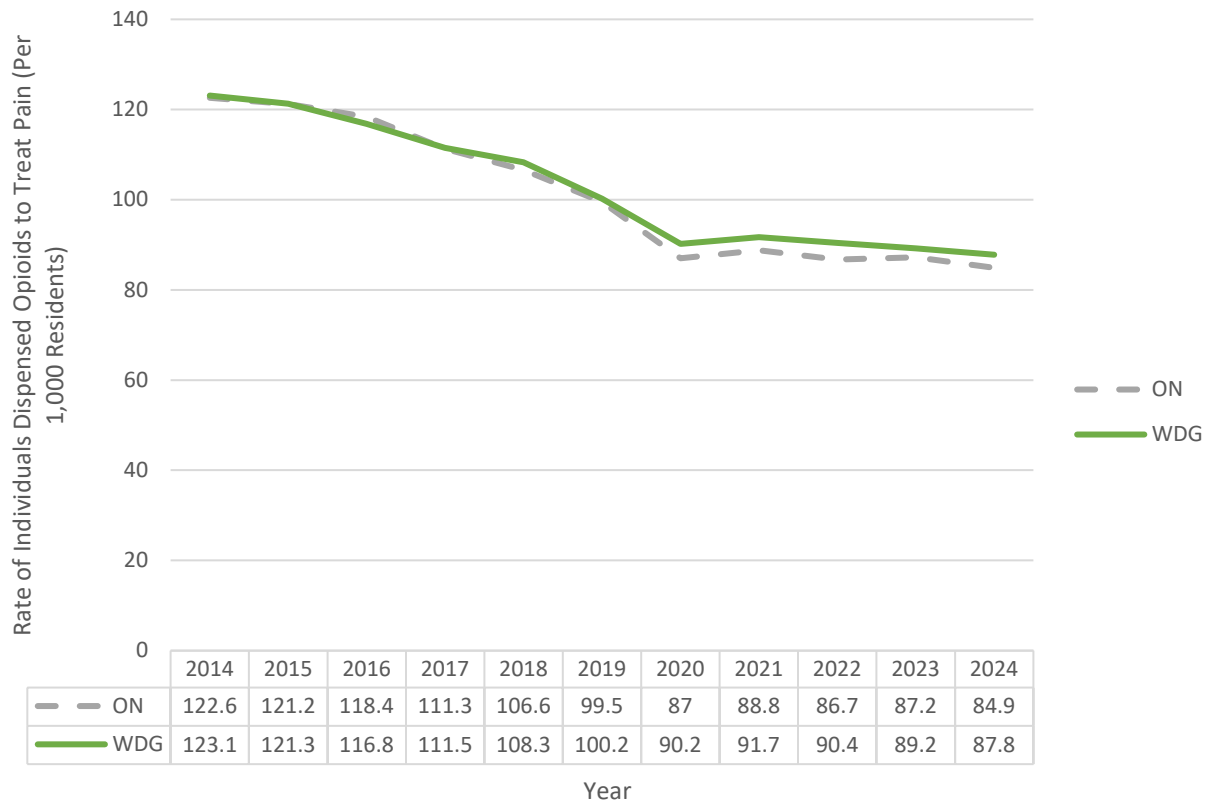
Figure E – Rate of Individuals per 1,000 Residents Dispensed Opioids to Treat Pain in WDG, by Age Group, 2024.



Data Source – Ontario Drug Policy Research Network (ODPRN). Ontario Opioid Indicator Tool.

Appendix F

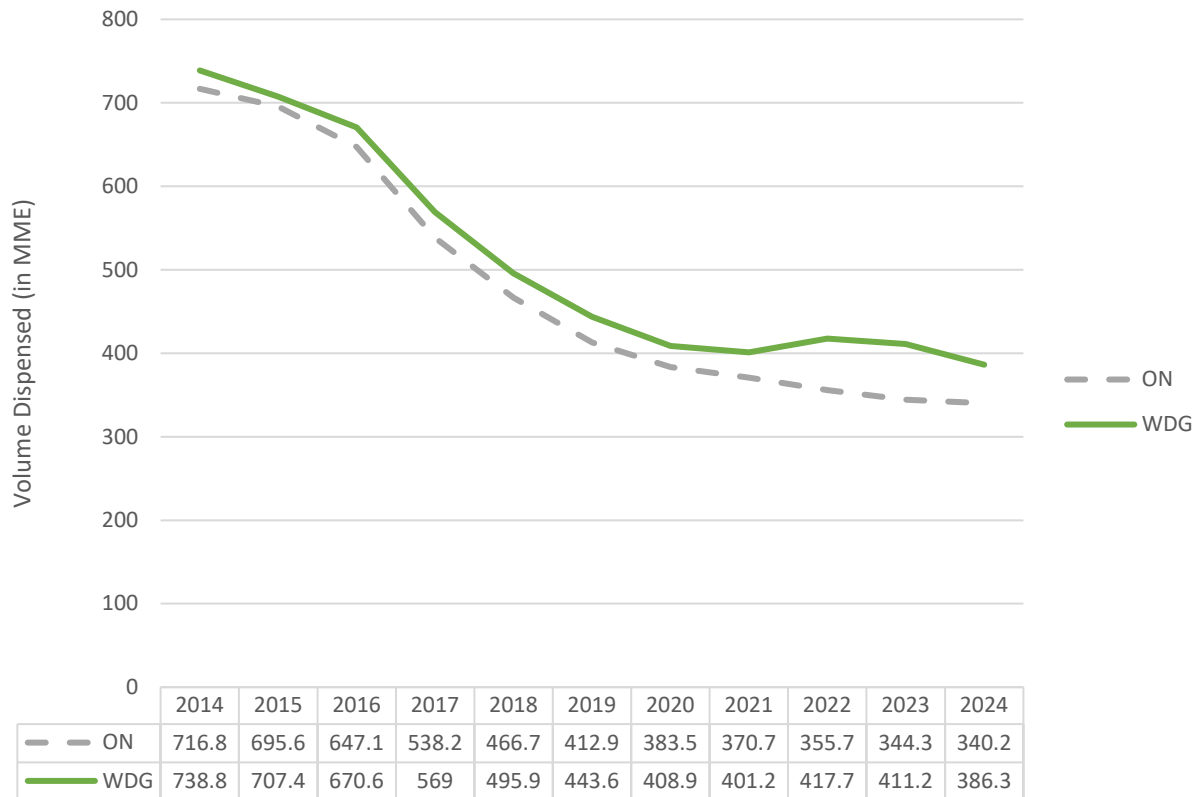
Figure F – Yearly Rate of Individuals Being Prescribed an Opioid to Treat Pain



Data Source – Ontario Drug Policy Research Network (ODPRN). Ontario Opioid Indicator Tool.

Appendix G

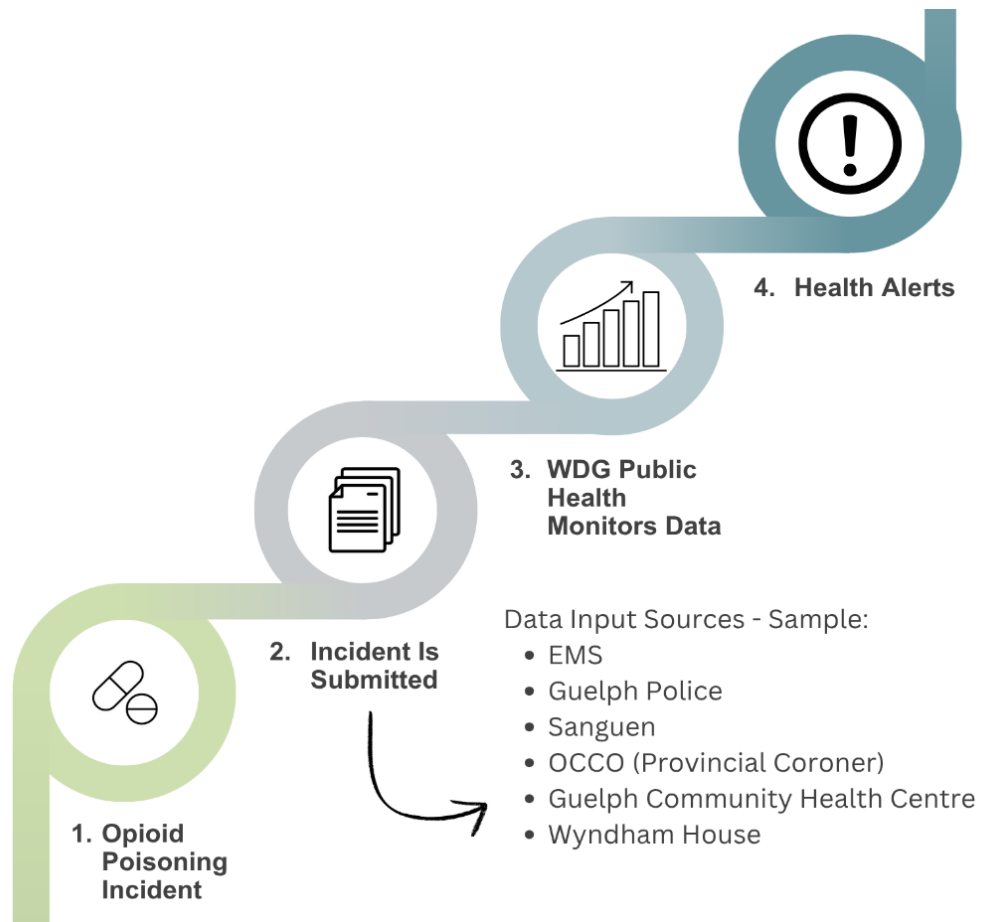
Figure G – Annual Opioid Dispensing Volume for Pain Management (in MME)



Data Source – Ontario Drug Policy Research Network (ODPRN). Ontario Opioid Indicator Tool.

Appendix H

Figure H – How the **FAST Surveillance System** Collects and Uses Local Opioid Data.



Data Source – WDGPH – FAST System Flow Chart.