SCAN OF OPIOID-RELATED INFORMATION SYSTEMS AND EMERGENCY RESPONSE PLANS AMONG ONTARIO PUBLIC HEALTH UNITS

Summary Report

Prepared by: Chantee Steinberg and Kyle Swerhun

MPH practicum students at Thunder Bay District Health Unit

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Contact: For questions or follow-up, please contact Erica.Sawula@tbdhu.com

Scan of Opioid-Related Information Systems

The following table is comprised of links to publicly available opioid-related information systems and adverse reaction reporting tools by Ontario public health units (PHUs). The information within the table was mainly gathered through a scan of publicly available PHU websites, with some additional information provided in a survey to Ontario PHUs.

Table 1: PHU opioid-related information systems and reporting tools

Public Health Unit (PHU)	Link to Opioid-related Information and Indicators (if publicly available)	Reporting Tool for Unexpected, Adverse Reactions/Events for Unregulated Substance Use (if publicly available)*
Algoma Public Health Unit	https://www.algomapublichealth.com/healthy-living/substance-use-harm-reduction/opioids/local-data/	

Brant County Health Unit	https://bchu.org/statistics-and-reports/opioid-surveillance/	
Chatham-Kent Health Unit	https://ckphu.com/health-topics/opioids-other-substances/	
Durham Region Health Department	https://www.durham.ca/en/health-and-wellness/opioid-information-system.aspx www.durham.ca/opioidstats	https://forms.durham.ca/Health/Drug-Reporting-Tool
Eastern Ontario Health Unit	https://eohu.ca/en/my-health/opioids	
Grey Bruce Health Unit	https://www.publichealthgreybruce.on.ca/Your-Health/Opioids-and-Overdose	https://www.publichealthgreybruce.on.ca/Your-Health/Opioids-and-Overdose/211-Report-a-Bad-Drug
Haldimand-Norfolk Health Unit	https://hnhu.org/health-topic/%e2%80%8bsubstance-use-and-injury-prevention/opioid-misuse-statistics-in-haldimand-and-norfolk/	
Haliburton, Kawartha, Pine Ridge District Health Unit	https://www.hkpr.on.ca/inspections-data-and-reports/public-health-data/opioid-overdose-report/	https://questionnaire.simplesurvey.com/f/s.aspx?s=CB549D75-0D19-4D00-ADFA-8DCEEF55A4AC
Halton Region Health Department	https://www.halton.ca/For-Residents/Public-Health/Substance-Use/Opioids	
Hamilton Public Health Services	https://www.hamilton.ca/people-programs/public-health/alcohol-drugs-gambling/hamilton-opioid-information-system	
Hastings and Prince Edward	https://www.hpepublichealth.ca/opioid-monitoring-dashboard/	https://www.hpepublichealth.ca/report-an-overdose/

Counties Health Unit		
Huron Perth District Health Unit	https://www.hpph.ca/en/health-matters/needle-exchange-naloxone-and-opioids.aspx	
Kingston, Frontenac and Lennox & Addington Public Health	https://www.kflaph.ca/en/about-us/annual-reports.aspx	
Lambton Public Health	In Development	
Leeds, Grenville and Lanark District Health Unit	https://healthunit.org/about/health-statistics-reports/health-dashboards/drug-related-overdose-death-summary/	https://healthunit.org/health-information/drug-use-harm-reduction/opioid-community-response/overdose-reporting-tool/
Middlesex-London Health Unit	https://communityhealthstats.healthunit.com/indicator/substance-use/opioids-and-other-substances#Opioid-related-Deaths	
Niagara Region Public Health Department	https://www.niagararegion.ca/living/health_wellness/alc-sub-abuse/drugs/opioids.aspx	
North Bay Parry Sound District Health Unit	https://app.powerbi.com/view?r=eyJrIjoiYWI2Y2NiN2ItOGFhNi00ZTZjLWFjNTItZjI4MTEzODBhZDExIiwidCI6IjgzZTQ0ZDk4LTcwNTgtNDFlNS1iODBiLWFlYWE4YzI0NTdlNyJ9&wmode=transparent	
Northwestern Health Unit	https://www.nwhu.on.ca/for-professionals/opioid-report/	
Ottawa Public Health	https://www.ottawapublichealth.ca/en/public-health-services/stop-overdose-ottawa.aspx	

	https://www.ottawapublichealth.ca/en/reports-research-and-statistics/mental-health-addictions-and-substance-use-health-in-the-community.aspx	
Peel Public Health	https://www.peelregion.ca/health/opioids/overdoses.asp	
Peterborough Public Health	https://www.peterboroughpublichealth.ca/your-health/drugs-and-harm-reduction/opioids/	https://www.peterboroughpublichealth.ca/your-health/drugs-and-harm-reduction/opioids/opioids-drug-reporting-tool/
Porcupine Health Unit	https://www.porcupinehu.on.ca/en/your-community/opioid-surveillance/	
Renfrew County and District Health Unit	https://www.rcdhu.com/healthy-living/health-statistics/substance-use-related-harms-in-renfrew-county-and-district-dashboard/	https://www.rcdhu.com/healthy-living/needle-exchange-and-harm-reduction-supplies/
Simcoe Muskoka District Health Unit	https://www.simcoemuskokahealth.org/health-stats/HealthStatsHome/SubstanceUse/OpioidSurveillanceDashboard https://www.simcoemuskokahealth.org/health-stats/HealthStatsHome/SubstanceUse/Opioids https://www.simcoemuskokahealth.org/Topics/Drugs/opioids/Consumption-and-treatment-services	
Southwestern Public Health	https://www.swpublichealth.ca/en/reports-and-statistics/opioid-monitoring.aspx	
Public Health Sudbury and Districts	https://www.phsd.ca/health-topics-programs/alcohol-drugs/community-drug-strategy/research/opioid-surveillance/http	

Thunder Bay District Health Unit	https://www.tbdhu.com/opioidinfo	https://www.tbdhu.com/contact/bad_reaction_to_street_drug_
Timiskaming Health Unit	https://www.timiskaminghu.com/90494/Opioid-Surveillance-Dashboard	https://www.surveymonkey.com/r/JH35FVT
Toronto Public Health	https://public.tableau.com/app/profile/tphseu/viz/TOISDashboard_Final/ParamedicResponse	
Region of Waterloo, Public Health	https://www.regionofwaterloo.ca/en/regional-government/overdose-drug-poisoning-dashboard.aspx	
Wellington-Dufferin-Guelph Public Health	https://bi.wdgpublichealth.ca/shield/	
Windsor-Essex County Health Unit	https://wecoss.ca/statistics	
York Region Public Health Services	https://www.york.ca/health/substance-use/opioids	https://www.york.ca/form/report-bad-drugs-in-york-region

*Reporting tool links were provided by 7 of the 23 respondents to a survey administered to Ontario PHUs. Three additional links were found through a scan of publicly available PHU websites.

Survey Results: Opioid-Related Surveillance and Reporting

The TBDHU conducted a province-wide survey of all Ontario PHUs from May 15-31, 2024 as part of an environmental scan of both external and internal opioid-related surveillance and emergency response plans. **Twenty-three PHUs responded** (herein referred to as “respondents”). Values of “n” reported for certain indicators refer to the number of PHUs who provided a response.

Externally Reported Opioid Information and Indicators

The terms “external” or “externally-reported” refer to any data/information that is available to the public (e.g., dashboard or report).

- The main externally reported indicators related to naloxone use, emergency medical services (EMS), emergency department visits, hospitalizations, and deaths.
    - The most commonly reported external indicators for these categories included (n=23):
        - **Naloxone:** doses distributed, doses used, kits distributed
            - Source: Ontario Harm Reduction Database / Ontario Drug Policy Research Network / Ministry of Health, Drugs and Devices
        - **Emergency medical services:** paramedic calls for suspected overdose, paramedic calls for confirmed overdoses, paramedic calls for opioid-related incidents
            - Sources: Regional EMS Databases or Sources
        - **Emergency department visits:** visits for a confirmed opioid overdose, visits for a suspected opioid overdose, substance-related visits
            - Sources: National Ambulatory Care Reporting System (NACRS) via IntelliHealth or Public Health Ontario, and Acute Care Enhanced Surveillance (ACES)
        - **Hospitalizations:** opioid-related hospitalization, opioid and drug-related hospitalization, hospitalization from an opioid overdose
            - Source: Discharge Abstract Database (DAD) via IntelliHealth or Public Health Ontario
        - **Deaths:** suspected opioid-related deaths, confirmed opioid-related death, suspected drug-related death
            - Source: Ontario Opioid-Related Death Database via the Office of the Chief Coroner for Ontario or Public Health Ontario

- For externally reported opioid-related indicators, **27%** of respondents report **only confirmed cases/incidents** while **73%** report **both confirmed and suspected cases/incidents** (n=22):
    - Common indicators reported with **suspected case/incident data**;
        - Drug-related deaths, paramedic calls for opioid-related overdoses, emergency department visits for opioid-related overdoses
    - Common indicators reported with **confirmed case/incident data**;
        - Opioid-related deaths, opioid-related emergency department visits, opioid-related hospitalizations

Internally Reported Opioid Information and Indicators

The terms “internal” or “internally-reported” refer to any data/indicators that are not available to the public.

- When it comes to the mechanism of distribution for internally reported opioid-related data/indicators (n=22):
    - **55%** of respondents use **reports**
    - **59%** of respondents use a **dashboard**
    - **77%** of respondents use **emails**

- With regards to the frequency of distribution for internally reported opioid-related data/indicators (n=20);
    - **10%** of respondents reported in **real-time**
    - **55%** of respondents reported **weekly**
    - **35%** of respondents reported **Monthly**
    - **30%** of respondents reported **Quarterly**
    - **10%** of respondents reported **Annually**
    - **5%** of respondents reported **Daily**
    - **5%** of respondents reported it **as applicable**

Targeted Communications of Opioid-Related Information and Alerts

- Specific/separate communication of opioid-related information or alerts is done by (n=22);
    - **55 %** of respondents to **people who use substances**
        - **HOW:** Examples included via service provider/outreach partners who are partnered with the local PHU. Also, posting physical copies of alerts/information in places where people who use substances are known congregate.
        - **WHAT:** Specific disseminated information included risk and protective information in the event of an alert.
    - **96 %** of respondents to **service providers**
        - **HOW:** Examples included via e-mail.
        - **WHAT:** Specific disseminated information included surveillance data reports (PDFs).
    - **68 %** of respondents to **media outlets**
        - **HOW:** Examples included via email/bulletins.
        - **WHAT:** Specific disseminated information included types of substances, locations, and any other relevant precautionary information by a PHU.

The Use of Real-Time Data Sources

- The most commonly reported real-time data source currently being used was the **Acute Care Enhanced Surveillance (ACES)** system (n=19), which respondents indicated is used to monitor for:
    - both opioid and non-specific drug poisoning
    - any aberration in emergency department triage visits for opioid-related events

- Other real-time data sources used by PHUs included **EMS-provided updates** (paramedic, Ontario Provincial Police [OPP]) acquired through pathways such as EMS databases and monitored public reporting tools. This data included;
    - Ambulance call data
        - Whether 911 was called
        - Location
        - Suspected opioid-toxicity
        - Naloxone usage and distribution
        - Age
        - Gender
    - Opioid-related fatalities

- With respect to how real-time sources were used (n=19):
    - **42%** of respondents use real-time sources to inform their **emergency response plan**
    - **58 %** of respondents use real-time sources for **both internal and external reporting**
    - **42 %** of respondents use real-time sources for **internal reporting only**
    - **5 %** of respondents use real-time sources for **external reporting only**
    - **5 %** of respondents use real-time sources to **generate alerts**

- With respect to the use of real-time data sources for either opioid or non-opioid substance-related data/indicators (n=22);
    - **32%** of respondents use real-time data sources for **opioid-related data/indicators only**
    - **5%** of respondents use real-time data sources for **non-opioid substance-related data/indicators only**
    - **50%** of respondents use real-time data sources for both **opioid-related and non-opioid substance-related data/indicators**
    - **14%** of respondents **do not** use real-time data sources for **either opioid-related or non-opioid substance-related data/indicators**

The Reporting of Non-Opioid Substances

- **Benzodiazepines:**
    - **31 %** of respondents reported data/information on them externally as part of opioid reporting (n=16)
    - **21 %** of respondents reported data/information on them both externally and separate from opioid reporting (n=14)
    - **35 %** of respondents reported data/information on them internally as part of opioid reporting (n=17)
    - **7 %** of respondents reported data/information on them both internally and separate from opioid reporting (n=14)
    - **53%** of respondents **did not report** on them at all (n=17)
- **Stimulants:**
    - **33 %** of respondents reported data/information on them externally as part of opioid reporting (n=15)
    - **14 %** of respondents reported data/information on them both externally and separate from opioid reporting (n=14)
    - **35 %** of respondents reported data/information on them internally as part of opioid reporting (n=17)
    - **14 %** of respondents reported data/information on them both internally and separate from opioid reporting (n=14)
    - **53%** of respondents **did not report** on them at all (n=17)
- **Xylazine:**
    - **31 %** of respondents reported data/information on them externally as part of opioid reporting (n=13)
    - **17 %** of respondents reported data/information on them both externally and separate from opioid reporting (n=12)
    - **38 %** of respondents reported data/information on them internally as part of opioid reporting (n=16)
    - **8 %** of respondents reported data/information on them both internally and separate from opioid reporting (n=12)
    - **59%** of respondents **did not report** on it at all (n=17)

- **Alcohol:**
    - **17 %** of respondents reported data/information on them externally as part of opioid reporting (n=12)
    - **50 %** of respondents reported data/information on them both externally and separate from opioid reporting (n=16)
    - **17 %** of respondents reported data/information on them internally as part of opioid reporting (n=12)
    - **50 %** of respondents reported data/information on them both internally and separate from opioid reporting (n=14)
    - **38%** of respondents **did not report** on it at all (n=16)

Survey Results: Opioid-Related Emergency Response Plans and Alerts

- **57%** of respondents indicated that they have an opioid-related emergency response plan.
- **23%** of emergency response plans included non-opioid substances in addition to opioids. Some of the additional substances were benzodiazepines, stimulants, xylazine, and alcohol. There were 0 reports of having a separate emergency response plan for a non-opioid substance.

Qualitative Indicators in Opioid-Related Emergency Response Plans

The survey asked respondents to detail the qualitative indicators and thresholds used in their opioid-related emergency response plans. The following is a comprehensive list of the results. Items are listed in order of descending frequency. Please note that there were no reports of aberration detection methods or thresholds applied as common practice to these qualitative data sources.

- Police identification of high-potency opioid formulations available in community *(included in 10 opioid-related emergency response plans)*
- Concerns of people who use substances or their service providers *(included in 9 opioid-related emergency response plans)*
- Unusual pattern of, or increase in, emergency department visits, as recognized by clinician/physician reports *(included in 9 opioid-related emergency response plans)*
- Lab confirmation of high-potency opioid formulations in community *(included in 5 opioid-related emergency response plans)*
- Surge plan initiated at a hospital in response to opioid poisonings *(included in 5 opioid-related emergency response plans)*
- Communications from community partners (e.g., health and emergency services partners, hospital reports, addiction treatment centers) *(included in less than 5 opioid-related emergency response plans)*
- Drug Checking Services *(included in less than 5 opioid-related emergency response plans)*

- Capacities of responding agencies (e.g., paramedic services) *(included in less than 5 opioid-related emergency response plans)*
- Overdose reporting tools *(included in less than 5 opioid-related emergency response plans)*
- Health Canada Drug Analysis Service reports *(included in less than 5 opioid-related emergency response plans)*
- Opioid alerts from jurisdictions outside of local health unit *(included in less than 5 opioid-related emergency response plans)*

Quantitative Indicators in Opioid-Related Emergency Response Plans

The survey asked respondents to detail the quantitative indicators, aberration detection methods, and thresholds used in their opioid-related emergency response plans. The following is a comprehensive table of the results, in order of descending frequency. Please note that some thresholds may not be included in this list, as they were used to move through emergency response levels, rather than applied directly to the data sources (e.g., risk score calculation thresholds). Less than 5 respondents incorporated a level system in their plans.

Table 2: Quantitative Indicators included in Opioid-Related Emergency Response Plans

Data Source or Indicator	Aberration Detection Method(s)	Threshold(s)	Total Number of Emergency Response Plans Including Data Source
Number of hospital emergency department visits for opioid-related syndromes, collected from health provider triage notes and provided through Acute Care Enhanced Surveillance (ACES)	Moving average** ACES algorithm PHIDO EARS	Greater than 2 SD above the 4 week moving average** Greater than 2 SD above the 12 week moving average** Greater than or equal to 5 ED visits for the current week	12
Number of hospital emergency department visits for opioid poisonings, as collected by the Canadian Institutes of Health Information (CIHI) through the National Ambulatory Care Reporting System (NACRS), provided by the Ministry of Health	Moving average**	Greater than 2 SD above the 4 week moving average** Greater than 2 SD above the 12 week moving average** Greater than or equal to 5 ED visits for the current week	10

and Long-term Care (MOHLTC)		In some instances, no threshold is applied, but the historical trend is monitored	
Number of opioid-related calls to paramedic services	Moving average**	Greater than 2 SD above the 4 week moving average** Greater than 2 SD above the 12 week moving average** Greater than 3 SD above the 90 day moving average In some instances, no threshold is used but a 3- and 7-day moving average is monitored In some instances, no quantitative threshold is used, rather, qualitative communication is prioritized (e.g., paramedic services will inform of unexpected increases)	9
Number of opioid-related poisonings responded to at Consumption and Treatment Services (CTS) sites	Not specified	Not specified	Less than 5
Weekly suspect drug-related mortality surveillance data provided by the Office of the Chief Coroner (OCC)	Moving average** PHIDO EARS (CUSUM) IQR-based method	Greater than 2 SD above the 4 week moving average** Greater than 2 SD above the 12 week moving average**	Less than 5
Toxicology data for opioid toxicity deaths provided by the Office of the Chief Coroner (OCC)	Not specified	Not specified	Less than 5
Quarterly update on opioid-related deaths provided by provided by the Office of the Chief Coroner (OCC)	Not specified	Not specified	Less than 5

**most commonly reported

Opioid-Related Alert Criteria

Respondents were asked to detail the various alert criteria, aberration detection methods, and respective thresholds that they may use to issue an opioid-related alert. The following is a comprehensive list of the results in order of descending frequency. An alert may be issued in the presence of one criterion being met, however, often involves the consideration or presence of several. The issuing of an alert is determined most importantly by an in-depth knowledge and judgement of the local contextual situation and often in collaboration with community partners. The items in this list may have overlap with the quantitative and qualitative data sources used to inform an Opioid-Related Emergency Response Plan.

Table 3: Quantitative indicators included in Opioid-Related Emergency Response Plans

Indicator	Aberration Detection Method(s)	Threshold(s)	Total Number of Respondents Using Indicator as Alert Criteria
An increase in opioid-related emergency department visits in the community	Moving average*** PHIDO ACES algorithm	Greater than 2 SD above the 4 week moving average*** Greater than 2 SD above the 12 week moving average*** Greater than 3 SD above the 2 week moving average Greater than 3 SD above the 30 day moving average Visit count is greater than or equal to 5 for the past 24 hours or for the current week	11
The detection of a high-potency opioid formulation in the community	Not specified	Not specified	10
An increase in opioid-related paramedic calls	Moving average***	Greater than 2 SD above the 4 week moving average*** Greater than 2 SD above the 12 week moving average*** Greater than 3 SD above the 90 day moving average	9

		In some instances, no threshold is used but a 3- and 7-day moving average is monitored In some instances, no quantitative threshold is used, rather, qualitative communication is prioritized (e.g., paramedic services will inform of unexpected increases)	
Confirmed cases of opioid poisonings linked to the illicit drug supply	Not specified	Not specified	7
Community reports	Not specified	Not specified	Less than 5
Suspect opioid-related mortality	Moving average*** PHIDO EARS (CUSUM) IQR-based method	Greater than 2 SD above the 4 week moving average*** Greater than 2 SD above the 12 week moving average*** In some instances, no quantitative threshold is used, rather, qualitative communication is prioritized (e.g., police services will inform of unexpected increases)	Less than 5

***most commonly reported