Region of Waterloo
Public Health and Emergency Services
Infectious Diseases, Dental, and Sexual Health

To: Chair Geoff Lorentz and Members of the Community Services Committee

Date: March 20, 2018   File Code: P25-20

Subject: Update on Opioid Data

For information.

Summary:
This purpose of this report is to provide an update on opioid-related data, including local and provincial data recently made available by the Province in early March 2018. This data includes:

- Opioid-related emergency department visits and rates;
- Opioid-related hospitalizations and hospitalization rates;
- Opioid-related deaths and death rates;
- Distribution of opioid-related overdose Paramedic Services calls;
- Distribution of opioid-related emergency department visits by postal code at time of visit; and
- Rate per 100,000 of suspected opioid overdose related calls, by municipality and year.

Overall, the data indicate that opioid-related harms, such as opioid-related emergency department visits and mortality rates, continue to grow in Waterloo Region, with rates which are similar or higher than overall provincial rates. The geographical distribution of opioid-related Paramedic Service overdose calls show that they originate from across the region, and that numbers are higher in areas of greater population density. Mapping of postal code data for emergency department visits reveals a similar pattern with a concentration of visits by people living in Central Kitchener and South Cambridge.
Report:

On June 6, 2017, Community Services Committee endorsed Public Health’s request to enhance harm reduction services in Waterloo Region which included exploring the feasibility of supervised injection services. The request from Public Health along with community partners was in response to the rising number of overdose deaths in Waterloo Region (refer to Report PHE-IDS-17-04). To support updates to Public Health programming, opioid and overdose related data have been shared through various reports.

On December 5, 2017, a report summarizing harm reduction programming and the region’s opioid response provided data related to overdoses and deaths in Ontario and Waterloo Region (refer to PHE-IDS-17-10). On February 26, 2018, a report on the findings from the Supervised Injection Services Feasibility Study provided a summary of overdose and opioid-related data for Waterloo Region (refer to PHE-IDS-18-04). Data is also provided in the Waterloo Region Supervised Injection Services Feasibility Study.

Provincial and local opioid-related data monitoring and reporting systems are undergoing constant improvements to support opioid response planning. Communities in Ontario rely on timely data to ensure local services and programs are responsive and a support population health approach. This purpose of this report is to provide an update on opioid-related data including,

- Opioid-related emergency department visits and rates;
- Opioid-related hospitalizations and hospitalization rates;
- Opioid-related deaths and death rates;
- Distribution of opioid-related overdose Paramedic Services calls;
- Distribution of opioid-related emergency department visits by postal code at time of visit; and
- Rate per 100,000 of suspected opioid overdose related calls, by municipality and year.

Opioid-related Emergency Department Visits, Waterloo and Ontario

Opioid-related emergency department visits are provided to the Canadian Institute of Health Information (CIHI) via the National Ambulatory Care Reporting System (NACRS) which is then provided to, and monitored provincially, by the Ministry of Health and Long-Term Care through). Starting in April 1, 2017, all Ontario hospitals with emergency departments were required to report cases of opioid overdose presenting in their Emergency Departments. Data is captured and analyzed by coders who review clinical documentation completed at the hospital. Assigning a code specifically for opioid
overdose (poisoning) depends on clear documentation of the clinician. The following clinical documentation requirements for capturing opioid overdose cases are provided through the CIHI Guidelines to Support Capturing Cases of Opioid Overdose (Poisoning):

- “Opioid overdose” when known or when findings are clinically consistent with an opioid overdose (e.g. positive response from opioid antidote)
- Specific opioid drug causing overdose when known
- When an opioid antidote (e.g. naloxone) is administered
- Any positive response from an opioid antidote (e.g. starts breathing normally, and/or regains consciousness, opens eyes)

In a 2016 report, CIHI noted that “the reason for opioid poisoning is also based on patients’ chart documentation and relies on disclosures by the patient or witness accounts. An investigation of the validity of intentional poisoning codes from Canadian hospitals has shown that the data can be subject to under-reporting” (Canadian Institute for Health Information, Canadian Centre of Substance Abuse, 2016).

Data viewed at a local level are prone to fluctuate month to month, showing the impact of problem drugs in the local supply. When the same data is viewed for all regions across Ontario, monthly variation decreases, revealing a provincial trend. Figure 1 provides the number of visits made to the Emergency Department in Waterloo Region and shows that in the region, the rate of overdose (per 100,000) was higher than that of the province for nine of the twelve months in 2017. The highest number of visits occurred in April when 44 visits were recorded, and July and December when 38 visits in each month were recorded.
Figure 1. Opioid-related Emergency Department Visits and Rates, Waterloo Region and Ontario, by month, 2017

Sources:

National Ambulatory Care Reporting System (NACRS), 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth Ontario, extracted March 8, 2018

Preliminary ED Visits (October – December, 2017) extracted from PHO Interactive Opioid Tool on March 8, 2018

Population Projections, 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth ONTARIO, extracted March 8, 2018
Opioid-related emergency department visits in Waterloo Region increased from 149 visits in 2015 to 351 visits in 2017. Figure 2 shows that the rate of opioid-related emergency department visits in Waterloo Region has been higher than Ontario since 2015 with a similar trajectory.

Figure 2. Opioid-related Emergency Department Visits and Rates, Waterloo Region and Ontario, by year, 2015-2017

Sources:
National Ambulatory Care Reporting System (NACRS), 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth Ontario, extracted March 8, 2018
Preliminary ED Visits (October – December, 2017 extracted from PHO Interactive Opioid Tool on March 8, 2018
Population Projections, 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth ONTARIO, extracted March 8, 2018
Opioid-related Hospitalizations, Waterloo Region and Ontario

Similar to Emergency Department visit data, expected fluctuations are observed in monthly opioid-related hospitalization data. Figure 3 shows available data (January to September 2017), and shows the number of opioid-related hospitalization by month with rates which fluctuate around the provincial rate.

Figure 3. Opioid-Related Hospitalizations and Hospitalization Rates, Waterloo Region and Ontario, by month, 2017

Sources:

Discharge Abstract Database (DAD), 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth Ontario, extracted on March 8, 2018

Population Projections, 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth ONTARIO, extracted March 8, 2018
When viewed by year, opioid-related hospitalization rates in Waterloo Region have remained stable between 2015 and 2017 and are similar to the provincial rates overall (refer to Figure 4). Between January and September 2017, there was an average of 6.5 opioid-related hospitalizations per month.

Figure 4. Opioid-Related Hospitalizations and Hospitalization Rates, Waterloo Region and Ontario, by year, 2015- 2017*

*Note: 2017 year-end totals and rates are projections based on available data (January 2017 to the end of September 2017).

Sources:
Discharge Abstract Database (DAD), 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth Ontario, extracted on March 8, 2018
Population Projections, 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth ONTARIO, extracted March 8, 2018

Opioid-related Deaths, Waterloo Region and Ontario
In 2017, Waterloo Region has seen an opioid-related death rate (per 100,000) higher than that of the province. Available data for Waterloo Region in 2017 (January to
October) show higher rates of deaths in seven of the ten months, with rates more than double that of the province on four occasions (January, March, April and October).

Figure 5. Opioid-Related Deaths and Death Rates, Waterloo Region and Ontario, by month, 2017

Sources:

Ontario Related Death Database, 2017, Office of the Chief Coroner for Ontario, extracted from [PHO Interactive Opioid Tool](#) on March 8, 2018

Population Projections, 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth ONTARIO, extracted March 8, 2018
Between 2015 and 2017, the rate of opioid-related deaths in the region increased from 4.2 per 100,000 to 12.7 per 100,000. This is an increase of 202.4 per cent over three years. From 2016 and 2017, the rate of opioid-related deaths in Waterloo Region was higher than that of the province.

Figure 6. Opioid-Related Deaths and Death Rates, Waterloo Region and Ontario, by year, 2015-2017*

*Note: Waterloo Region’s 2017 year-end total and rates are based on the number of calls for service that the Waterloo Region Police Services attended where a death occurred and a drug overdose was suspected (not confirmed). This number includes all suspected drug overdoses and is not limited to opioids. Ontario’s 2017 year-end rate is a projection based on available data (January 2017 to the end of October 2017).

Sources:

Ontario Related Death Database, 2017, Office of the Chief Coroner for Ontario, extracted from PHO Interactive Opioid Tool on March 8, 2018

Waterloo Region Police Service Data, 2017, Deaths Due to Suspected Drug Overdoses, extracted from Waterloo Region Integrated Drugs Strategy Overdose Monitoring (OMARS) on March 8, 2018

Population Projections, 2017, Ontario Ministry of Health and Long-Term Care, IntelliHealth
Mapping of Opioid-Related Data

In the report shared in February 27, 2018, the map of Waterloo Region showing the number of opioid overdose calls provided data from January 1 2017 to November 15, 2017. The updated map shown in Figure 5 provides complete data for 2017 and shows opioid-related Paramedic Services calls in Waterloo Region remain concentrated in Central Kitchener, Central-South Kitchener, and South Cambridge (refer to Figure 7).

Figure 7. Distribution of Opioid-Related Overdose Paramedic Services Calls, Waterloo Region, 2017

Sources:
The map provided in Figure 8 represents the distribution of opioid-related emergency visits in Waterloo Region by the patient’s place of residence. Mapping of postal code data reveals a similar pattern observed in the map representing location of opioid overdose calls with a concentration of visits by people living in Central Kitchener, Central-South Kitchener, and South Cambridge.

Figure 8. Distribution of Opioid-Related Emergency Department Visits by postal code at time of visit, Waterloo Region, January to November 2017
Suspected Opioid Overdose Calls by Municipality

Overdose calls are received from across Waterloo Region. Table 1 provides call data analyzed by municipality and reveals a higher rate (per 100,000) of suspected opioid overdose calls in Kitchener and Cambridge. When viewed over a three-year period (2015 to 2017), rates in Kitchener and Cambridge were almost identical (102.7 per 100,000 versus 105.3 per 100,000, respectively). For 2017, rates in Waterloo and North Dumfries are similar (61.5 per 100,000 and 58.1 per 100,000), and higher than rates in Woolwich (42.3 per 100,000) and Wilmot (28.2 per 100,000).

Table 1. Rate per 100,000 of suspected opioid overdose related calls, by municipality and year, Waterloo Region, 2015-2017.

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Sources:


Ontario Public Health Standards:

Harm reduction planning, programming, and service provision relates to the following Ontario Public Health Standards (2018):
- Infectious and Communicable Diseases Prevention and Control (Requirements 7, 8, 9 and 10)
- Substance Use and Injury Prevention (Requirements 1 and 2)

**Corporate Strategic Plan:**

This report relates to strategic objective 4.4 (Promote and support healthy living and prevent disease and injury) in the Healthy, Safe and Inclusive Communities focus area in the 2015-2018 Strategic Plan.

**Financial Implications:**

The Ministry of Health and Long-Term Care fully funds supervised injection services in Ontario.

**Other Department Consultations/Concurrence:**

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