
MEMORANDUM

PHD-C 4-2021

Subject: Considerations & Context Regarding Declaration of a State of Emergency

Date: February 16, 2021

To: Public Health & Social Services Committee

From: M. Mustafa Hirji, Medical Officer of Health & Commissioner (Acting)

There have been multiple requests recently regarding declaration of a state of emergency on mental health and related issues. Public Health staff provide the following to Regional Councillor as additional considerations and context in order to help inform Council's decision on these request.

The declaration of a state of emergency on any issue does not automatically cause resources or additional support to be brought to bear on that issue. However, there would likely be a public expectation that if a state of emergency existed on an issue such as mental health, then Council would marshal additional resources or efforts directed to it. Council may therefore wish to make decisions around declaring a state of emergency with consideration of how much additional resources would be commensurate with the emergency. As well, Council may also wish to consider where those resources might come from: by reducing efforts on other issues, or by levying new resources.

If redirecting resources by reducing effort on other health issues, it is important that Council be aware of the burden of illness for those health issues that would now be neglected. As well, Council may wish to be mindful that any particular request for a declaration of emergency on one issue may set precedent for other issues with a similar or higher burden.

Data on Top Health Issues in Niagara

In 2019, as part of a fulsome planning process to support the prioritization of public health's health promotion priorities, staff completed a comprehensive Community Health Status Assessment which provides a ranked analysis of the health conditions and risk factors faced by Niagara.

By using the Winnipeg Regional Health Authority Priority Setting Framework (which is a nationally accepted framework), Niagara data from between 2013 and 2018 was tabulated to allow for the ranking of all health conditions and diseases. Qualitative and quantitative analysis was completed with equal weighting applied ensuring that no criterion was deemed to be of greater importance.

The quantitative assessment considers

- The number of deaths
- The potential years of life lost
- The hospitalization rates
- The length of stay in hospital
- Emergency Department visits

The qualitative assessment utilized a selection of relevant criteria from the Center for Disease Control (CDC) common criteria list. Criteria selected considered the communities readiness to address an issue, public health's ability to impact the health issue, programs offered by other service providers, and the impact of the health issue and disease on the Social Determinants of Health (SDOH).

These two assessments were then combined to provide a ranked list of 26 health conditions and diseases here in Niagara.

The list below outlines in rank order the top 26 health conditions and diseases in Niagara.

1. Ischaemic heart disease
2. Accidental Falls
3. Diabetes
- 4.5 Cerebrovascular disease (stroke)
- 4.5 Lung, bronchus and trachea cancer
6. Chronic lower respiratory diseases
7. Influenza and pneumonia
- 8.5 Perinatal conditions (low birth weight)
- 8.5 Cirrhosis and other liver diseases
10. Intentional self-harm (suicide)
11. Accidental poisoning (overdose)
12. Diseases of the urinary system (Urinary tract infections)
13. Colon, rectum and anus cancer

14. Congenital malformations
15. Heart failure
16. Disease of the musculoskeletal system and connective tissue (osteoarthritis)
17. Sexually-transmitted infections
18. Pregnancy, childbirth and the puerperium
19. Transport accidents
20. Dementia and Alzheimer disease
21. Breast cancer
22. Lymph, blood and related cancers
23. Appendicitis, hernia and intestinal obstruction
24. Septicaemia
25. Acute respiratory diseases
26. Pancreatic cancer

Ischemic Heart Disease ranks 1st given we see the highest number of deaths, the greatest number of years of life lost and the third highest hospitalization rate across all health conditions and diseases.

Accidental Falls ranks 2nd being responsible for the greatest number of ED visits, the fifth highest number of hospitalization admittances but with the greatest total days admitted to hospital (length of stay).

By contrast, health issues directly attributable to **Mental Health** and **Addictions** (Intentional self-harm and Accidental poisoning) are ranked 10th and 11th respectively.

Chronic risk factors were also considered as part of this analysis, recognizing that they can greatly influence and effect the health conditions and diseases identified.

Smoking, Alcohol use and Problematic substance use, all of which could fall within the broad 'Addictions' category were each identified as increasing the of risk of a number of the ranked health conditions identified:

- Smoking – 11 Health conditions or diseases affected
- Alcohol – 9 Health conditions or diseases affected
- Problematic Substance Use – 3 Health conditions or diseases affected

Stress, which is a risk factor linked to mental health, was identified as increasing the risk across three of the ranked health conditions.

The result of this analysis was the identification of five broad Health Promotion priorities for Niagara Region Public Health to focus its health promotion efforts over the coming years:

- Healthy Eating and Physical Activity
- Substance Use and Addictions
- Mental Health Promotion
- Healthy Child Development
- Sexually Transmitted Infections

Implications of Data

These priorities were presented to and received approval of Council as part of the 2020 Levy Operating Budget. Since then, Public Health & Emergency Services has been reorienting and consolidating greater efforts behind these five priorities to ensure a critical mass to make a measurable impact. This has included identifying indicators, researching the most effective public health interventions to implement, and engaging partners to align with these five priorities. However, given limited budget, it has also meant that other topics (e.g. promoting vaccinations, cancer prevention) are receiving only minimal attention as resources have been redirected.

Should a state of emergency be declared around mental health and/or addictions, there would presumably be an intention to enhance resources behind these two issues either with new budget or by further deprioritizing other issues to redirect those efforts.

Respectfully submitted and signed by

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Medical Officer of Health & Commissioner (Acting)

This memo was prepared with input by Andrew Scott, Manager of Continuous Quality Improvement & reviewed by Siobhan Kearns, Director/Chief of Staff (Public Health)

Appendix 1: In-Depth Epidemiological Analysis

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Further, in depth analysis is provided here, which aligns with the request for an emergency declaration (mental health promotion, substance use and addictions).

Mental Health

- A significantly higher proportion of individuals (12 years and older) perceive their mental health to be excellent or very good in Niagara (77.1%) compared to the provincial average (71.1%).
- Significantly more females (21.7%) than males (10.3%) talked to a health professional about their mental health status (Canadian Community Health Survey, 2015/16)
- There are significant levels of inequality in mental health related ED visits by those impacted by residential instability. This inequality is also significantly greater than the provincial average.
- In 2016, the age standardized rate of ED visits related to self-harm in Niagara (217.0 per 100,000) was significantly higher than the provincial average (141.3 per 100,000).
- The highest number of self-harm injury-related hospitalizations occur among individuals 15 to 19 years old.
- Since 2009, females had a significantly higher rates of emergency department visits and hospitalizations related to self-harm injuries.
- The rate of males dying from self-harm is significantly higher than the rate of females dying from self-harm.



Health conditions or diseases associated with mental health with current ranking in overall priority level from community health status assessment.

Health Condition or Disease	Number of Deaths	Potential years of life lost (PYLL)	Emergency Department (ED) visits	Hospitalizations	Total Length of Stay (LOS) during Hospitalization	Quantitative Total Score	Quantitative Rank	Qualitative Rank	Total Rank	Final Overall Priority Score
Intentional self-harm	129	3,304	2,341	634	2,263	79	19.5	1.5	21	10
Accidental poisoning	94	3.136	3.944	435	1,289	81	21	1.5	22.5	11

Substance Misuse and Addictions

Smoking

- A significantly higher proportion of individuals 25 to 44 are current smokers compared to other age groups.
- Individuals 19 to 24 years are significantly more likely to vape than other age groups.
- There are significant levels of inequity in Chronic Obstruction Pulmonary Disease (COPD) hospitalizations in those impacted greatest by the social determinants of health. These patterns of inequality are significantly greater in Niagara compared to Ontario.
- There are significant differences in smoking and vaping rates by municipality, residents of Port Colborne and Thorold are more likely to smoke, residents in Thorold are more likely to vape.
- There are a significantly higher proportion of Niagara students in grades 11 and 12 who have vaped any type of e-cigarette than compared to the provincial average.

Disease of Health Condition	Number of Deaths	Potential years of life lost (PYLL)	Emergency Department (ED) visits	Hospitalizations	Total Length of Stay (LOS) during Hospitalization	Quantitative Rank	Qualitative Rank	Total Rank	Final Overall Priority Score
Ischaemic heart disease	2,035	6,744	3,081	6,348	28,885	1	5	6	1
Lung/bronchus cancer	913	4,846	454	687	5,676	11	5	16	4.5
Cerebrovascular disease	825	1,701	3,433	2,455	21,999	6	10	16	4.5
Chronic lower respiratory diseases	535	1,522	10,717	3,871	23,590	3	14	17	6
Perinatal conditions	23	1,725	457	5,773	30,469	10	10	20	8.5
Colon, rectum and anus cancer	411	2,040	156	935	9,153	13.5	14	27.5	13

Disease of Health Condition	Number of Deaths	Potential years of life lost (PYLL)	Emergency Department (ED) visits	Hospitalizations	Total Length of Stay (LOS) during Hospitalization	Quantitative Rank	Qualitative Rank	Total Rank	Final Overall Priority Score
Congenital malformations	49	1,820	207	843	5,233	23	5	28	14
Heart failure, complications and ill-defined heart disease	210	477	4,354	3,704	31,461	9	20.5	29.5	15
Pregnancy, childbirth and the puerperium	-	-	7,469	11,825	24,358	12	20.5	32.5	18
Lymph, blood and related cancers	341	1,626	273	692	10,164	18	20.5	38.5	22
Pancreatic cancer	276	1,426	133	159	1,601	25	20.5	45.5	26

Alcohol

- 43% of adults in Niagara exceed the low-risk alcohol drinking guideline for chronic disease or injury.
- Over 65% of students used alcohol in some frequency in 2019.
- Rates of alcohol related ED visits are high across all age groups until the age of 65 and older.
- The rate of alcohol related hospital admittance increases with age
- Among adults, males are more likely to be regular drinkers and heavy drinkers
- Males are more likely to visit the ED and be hospitalized for alcohol related health conditions.
- A significantly lower proportion of individuals with less than a high school diploma are considered regular drinkers over those who graduated high school.
- There are significant levels of inequality in alcohol-attributable hospitalizations by those facing increased levels of maternal deprivation and residential instability.
- There is a significantly higher proportion of secondary school students in Niagara who have drank alcohol in the past 12 months when compared to the provincial average.
- Age standardized ED visits entirely attributable to alcohol was significantly higher in Niagara compared to the provincial average.



Health conditions or diseases associated with alcohol use with current ranking in overall priority level from community.

Health Condition or Disease	Number of Deaths	Potential years of life lost (PYLL)	Emergency Department (ED) visits	Hospitalizations	Total Length of Stay (LOS) during Hospitalization	Quantitative Total Score	Quantitative Rank	Qualitative Rank	Total Rank	Final Overall Priority Score
Cerebrovascular disease	825	1,701	3,433	2,455	21,999	49	6	10	16	4.5
Cirrhosis and other liver diseases	227	2,748	724	732	7,306	71	15	5	20	8.5
Intentional self-harm	129	3,304	2,341	634	2,263	79	19.5	1.5	21	10
Accidental poisoning	94	3,136	3,944	435	1,289	81	21	1.5	22.5	11
Colon, rectum and anus cancer	411	2,040	156	935	9,153	68	13.5	14	27.5	13

Health Condition or Disease	Number of Deaths	Potential years of life lost (PYLL)	Emergency Department (ED) visits	Hospitalizations	Total Length of Stay (LOS) during Hospitalization	Quantitative Total Score	Quantitative Rank	Qualitative Rank	Total Rank	Final Overall Priority Score
Congenital malformations	49	1,820	207	843	5,233	88	23	5	28	14
Transport accidents	53	1,502	10,947	747	5,784	76	17	16	33	19
Breast cancer	310	2,524	96	320	993	91	24	14	38	21
Pancreatic cancer	276	1,426	133	159	1,601	100	25	20.5	45.5	26

Cannabis

- Individual in 19 to 24 years and 25 to 29 years were significantly more likely to report using cannabis in the past 30 days compared to all other age groups.
- The proportion of school students using cannabis increases with grade level.
- The highest rate of cannabis-related ED visits is among 15 to 19 year olds and declines by age group thereafter.
- Males are more likely to visit the ED for cannabis related health conditions.
- Use of cannabis is highest among individuals without a high school diploma and significantly decreases as educational attainment increased.
- Residents of St. Catharines are more likely to use cannabis than other municipalities.
- A significantly higher proportion of students in grades 9 and 10 in Niagara used cannabis than the provincial average.
- Age Standardized ED visits for all cannabis-related harms was significantly higher than the provincial average, but age standardized hospitalizations were significantly lower.



Health conditions or diseases associated with cannabis use with current ranking in overall priority level from community health status assessment.

Health Condition or Disease	Number of Deaths	Potential years of life lost (PYLL)	Emergency Department (ED) visits	Hospitalizations	Total Length of Stay (LOS) during Hospitalization	Quantitative Total Score	Quantitative Rank	Qualitative Rank	Total Rank	Final Overall Priority Score
Cerebrovascular disease	825	1,701	3,433	2,455	21,999	49	6	10	16	4.5
Chronic lower respiratory diseases	535	1,522	10,717	3,871	23,590	41	3	14	17	6
Intentional self-harm	129	3,304	2,341	634	2,263	79	19.5	1.5	21	10
Accidental poisoning	94	3,136	3,944	435	1,289	81	21	1.5	22.5	11
Transport accidents	53	1,502	10,947	747	5,784	76	17	16	33	19

Opioids

- Males are more likely to visit the ED for a health condition related to opioids.
- Rates of opioid related ED visits are significantly higher in Niagara (151.3 per 100,000) than the provincial average (63.4 per 100,000).
- Opioid related ED visits and hospitalizations are increasing in Niagara.
- The rate of individuals prescribed opioids was higher in Niagara than the provincial average in 2016, 2017 and 2018.



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Health conditions or diseases associated with opioid use with current ranking in overall priority level from community health status assessment.

Health Condition or Disease	Number of Deaths	Potential years of life lost (PYLL)	Emergency Department (ED) visits	Hospitalizations	Total Length of Stay (LOS) during Hospitalization	Quantitative Total Score	Quantitative Rank	Qualitative Rank	Total Rank	Final Overall Priority Score
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