INFORMATION REPORT

TO:	Mayor and Members Board of Health
COMMITTEE DATE:	February 22, 2019
SUBJECT/REPORT NO:	Population Health Assessment and Health Priorities (BOH19005) (City Wide)
WARD(S) AFFECTED:	City Wide
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Council Direction:

Not applicable.

Information:

The Ontario Public Health Standards (OPHS)[1] mandates public health units to improve population health and reduce health inequities. Improvements in population health can be achieved through an assessment of health equity combined with a comprehensive understanding of the health of the community. In order to understand the health of the community, population health assessment provides the necessary information to identify health inequities and priority populations. By using the information gained from the population health assessment process, resources can be directed to programs and services which are tailored to have the greatest impact for the community. In addition, those who are most likely to benefit from public health interventions can be targeted.

What is Population Health Assessment?

When individuals seek medical care they often receive a check-up, and questions may be asked about diet, exercise, and other health habits. Public health professionals use a similar approach to measure the overall health of a community or group of individuals.

Measuring population health produces important information that informs program planning and decision-making, including targeted investment of resources that will have the greatest impact on the health of our population. The process of measuring the health of the population and using the information to inform action is known as population health assessment.[1]

A key objective of the OPHS and an expectation of the Board of Health (BOH) is to increase the use of public health knowledge, expertise, and population health assessment to inform decisions on local public health program and service delivery within an integrated health system. This includes working with the Local Health Integration Network to inform health system planning[1]. The BOH is required to demonstrate and document the use of population health information in the Annual Service Plan & Budget (ASP&B), submitted to the Ministry of Health and Long-Term Care annually.

In order to meet this objective, Public Health Services (PHS) will continue to provide population health assessment information to the BOH, our partners and stakeholders, and the public to inform future decision making. The aim is to improve population health outcomes, reduce health inequities, and tailor public health services to meet local needs in our community.

One example of population health assessment is the HealthCheck project completed by PHS' Epidemiology and Evaluation program. This project provides an overview of the burden of health issues in Hamilton and prioritizes local health issues based on key criteria. The full report is available at http://www.hamilton.ca/HealthCheck. The Epidemiology and Evaluation program also contributed population health status, healthcare utilization, and health behaviour data to the 2018 City of Hamilton ward profiles.

What is Health Equity?

Health is the physical, mental, spiritual, emotional, social, cultural, and economic wellness of individuals and the community. Health is influenced by a broad range of factors. It is estimated that 50% of our health is determined by social and economic determinants, which are factors beyond our biology, behaviours, and lifestyle choices. Gender, ethnicity, income, education, stable housing, and social networks are examples of the social determinants that can impact our health. Health equity means all people can attain their full health potential because they are not disadvantaged by the social determinants of health.[1] Conversely, health inequities are avoidable or modifiable differences in the health status between groups caused by socially determined circumstances. Health inequities are typically systematic – that is, beyond our individual control – and unfair.[2]

> "For many Ontarians, the chances of living a long and healthy life can seem like a rigged lottery or a stacked deck. If you are fortunate enough to be born into a family that has a high steady income and lives in a good neighbourhood and you have easy access to education, health care and other services, you are more likely to win the health lottery."
>
> – Dr. David Williams, Chief Medical Officer of Health, 2018

Many things can be done to make sure everyone has a fair chance to live a healthy life no matter who they are, where they live, and what they have. Public Health has an important role to play in achieving health equity. The OPHS require the BOH to identify local health inequities, share this information with partners, and work on strategies to reduce health inequities in our community.[1] Public Health cannot eliminate health inequities alone and must work with other local partners.[2]

One expectation for the BOH is to identify priority populations; these are groups of people who experience greater health risks due to the disadvantages of social determinants and they are more likely to benefit from public health interventions.[1] For example, smoking prevalence is 11% higher among low income Hamiltonians and accounts for 80-85% of local lung cancer deaths.[3] Using this information, PHS has tailored smoking cessation programs to target this priority population by offering smoking cessation clinics in lower socio-economic status areas of the city: in 2017, 49% of those enrolled in the STOP program (main site) had annual household incomes below $20,000. Universal cessation services are also offered through many healthcare professionals.

To understand the priority populations in Hamilton and to identify local health priorities, a population health assessment profile is generated using data. An overview of the health and well-being of Hamiltonians is summarized in the following sections.

Hamilton's Demographics

The projected change in demographics over the next two decades will have a signifcant impact on the health of Hamiltonians and health system planning:

- The City of Hamilton is an urban-rural area of 536,000 people; [4]
- The population is projected to grow to 740,000 by the year 2041; [5]
- The population is aging rapidly and the number of seniors (age 65+) will nearly double by the year 2041; [5] and,
- The number of children and youth (age 19 or under) will only increase by 24% during the same period. For the first time in its recorded history, Hamilton will have more seniors than children and youth. [5]

Who are the Priority Populations in Hamilton?

Materially-Deprived Populations

Hamilton's concentration of urban poverty is among the highest in Canada.[4] Material deprivation is the inability of individuals to afford or attain basic material needs. Hamiltonians living in areas with the highest material deprivation are more likely to die prematurely from avoidable causes, including infections, cancer, circulatory disease, respiratory disease, suicide, and substance overdoses. Low income Hamiltonians were more likely to have a metabolic condition (e.g., hypertension, diabetes) and report being a current smoker, which are two major causes of avoidable death in Hamilton.

Marginalized Children

Adverse childhood experiences (ACEs) are potentially traumatic events (e.g., violence, victimization) that can have negative, lasting effects on health and well-being:

- There are 5,600 births each year in Hamilton and 37% of children are born into a family with at least 1 ACEs-like risk factor;[6]
- 2% of children have 4+ ACEs-like risk factors, which significantly increases the risk of negative health outcomes;[6]
- Children born into communities with high material deprivation are significantly more likely to experience 4+ ACEs-like risk factors;[6]
- Nearly 1 in 3 (31%) children are vulnerable in early childhood development at the time they enter school;[7] and,
- Children living in areas with high material deprivation and unstable housing were more likely to be vulnerable in early childhood development.[7]

Indigenous Community

The 2016 census counted 12,130 indigenous people in Hamilton, but research shows over 80% of urban inigenous people do not participate or do not identify themselves in the census.[8] As a result, Hamilton's indigenous population may be as high as 24,000 to 48,000. Our indigenous community is faced with a number of health and social inequities:[9]

- **Socioeconomic status**: a survey of 790 indigenous Hamiltonians found 78% earn less than $20,000 annually, and 69% receive social assistance;
- **Education**: 57% of adults have not completed high school;
- **Housing**: 1 in 8 reported being homeless or living in precarious housing; and,
- **Health**: higher rates of infectious and chronic diseases are experienced by the indigenous population compared to the non-indigenous population, specifically:
    - Diabetes rates are 3 times greater;
    - Hepatitis C rates are10 times greater;

- Substance use was more frequently reported, where 87% currently smoke tobacco, 1 in 5 (19%) report misuse of prescription opioids, and 55% report heavy drinking episodes (twice the Hamilton rate);
- Mental health was also a major concern with 42% of urban indigenous reporting a psychological or mental disorder diagnosis; and,
- Over 1 in 10 urban indigenous people (10.6%) are frequent users of the emergency department (greater than 5 visits per 24 months) which is seven times greater than the Hamilton average (1.6%).

What are the Local Health Priorities in Hamilton?

Hamilton is challenged by a high concentration of urban poverty and housing instability; these social determinants produce extreme health inequities and are associated with many of the most burdensome health outcomes including infections, cancer, and circulatory and respiratory diseases:

- **Poverty**: The concentration of urban poverty is among the highest in Canada. Low income rates have been decreasing in Hamilton, but 80,915 Hamiltonians (15%) are still considered low income.[4] Only one-third (33.8%) of low income individuals are employed and 76% of their total income comes from government transfer payments.[10] In our downtown centre, nearly half (47%) of children live in low income households and over 1 in 5 families (23%) have no employment income;[4]
- **Housing Instability**: 45% of Hamilton tenants spend over 30% of their income on shelter costs.[4] In some areas, 28% of children have moved twice before starting school and 90% of indigenous Hamiltonians have moved in the past five years;[9] and,
- **Single Parents**: Nearly 1 in 5 (19.2%) families in Hamilton are led by a single parent which is slightly greater than Ontario (17.1%). In Hamilton, 44.4% of single parents with children live in low income households which is greater than the Ontario average (38.6%) and 3.5-times greater than a couple with children (12.8%).[10] Single parents with children are more likely to experience poverty than many other demographic groups.[10]

Premature Death

Locally, 45% of local deaths under age 75 are preventable.[15] Many of the preventable deaths in Hamilton are linked to social disparities which cause significant health inequities. For example, those living in Hamilton's most materially deprived areas are three times more likely to die prematurely from a potentially avoidable cause compared to those living in the least materially deprived areas; this inequity is widening and it is the highest in Ontario.[12]

Mental Health

Hamiltonians are burdened by higher rates of mental health outcomes:

- Anxiety disorders, disorders of adult personality and behaviour, and self-harm are higher in Hamilton compared to Ontario;[13]
- Mental health issues account for over one-fifth (21%) of disability and premature death in Hamilton, making it the third largest driver of poor health in our community (just behind chronic disease and injuries);[13]
- Suicide and substance overdoses are among the leading causes of death among Hamiltonians under age 45;[13] and,
- Self-harm among female youth in Hamilton has tripled over the past decade.[13]

Substance Use

Local data shows that Hamilton is challenged by substance use. Hamilton has higher rates of substance overdoses compared to Ontario and this rate is increasing:

- There were 88 opioid-related deaths in 2017, which translates to one of the highest rates in the province (73% greater than the Ontario rate), and has increased by 300% since 2007 (22 opioid-related deaths);[12]
- Over 80% of opioid deaths occur in working-age males;[12]
- 1 in 5 residents are current tobacco smokers and 1 in 5 residents exceed the low risk drinking guidelines for chronic disease;[11] and,
- It is estimated that over 600 local deaths were attributed to substance use (alcohol, tobacco, and drugs) in 2012.[13]

Body Weight & Nutrition

Excess body weight, poor nutrition, and sedentary behaviour contribute to the significant burden of chronic disease in Hamilton. In addition, many deaths related to these factors are considered preventable. Hamiltonians living in the most materially deprived areas are more likely to die prematurely from these preventable chronic risk factors:

- Overweight and obesity affects 2 in 3 adults locally;[11]
- Men, middle-aged adults, and low income households report more sedentary behaviour and poorer nutrition;[11] and
- Estimates attribute 290 deaths to high body-mass index, 590 deaths to dietary risks, and 103 deaths to low physical activity in 2012.[13]

Respiratory Disease

Lung cancer and Chronic Obstructive Pulmonary Disease (COPD) are among the most burdening health outcomes in Hamilton[13], although, much of the lung issues today were caused by tobacco exposure 20-40 years ago. Morbidity rates for lung cancer and COPD are higher in Hamilton when compared to Ontario. These health outcomes are largely attributed to tobacco smoke, radon, and air pollution. It's estimated that 1 in 20 (5%) local homes have high levels of radon gas and that 45 lung cancer deaths are attributed to radon exposure in Hamilton each year.[14] Studies of the City of Hamilton's outdoor air quality show higher concentrations of some pollutants when compared to the City of Toronto.[16] In addition, 40% of the Hamilton population resides in a traffic-related air pollution zone.[14]

Conclusion

Using the population health assessment process, this report has highlighted the priority populations, health issues, and health inequitites existing in Hamilton. As a result, PHS has deternined the following three priority areas for its work:

1. Mental Health and Addiction;
2. Healthy Weights; and,
3. Health Equity.

PHS will continue to use equity-based population health assessment to inform our service delivery, as well as planning in the broader health system and community. In 2019, PHS will comprehensively review population health data and identify specific priority populations for each of our programs. It is expected that the results will be used to inform the 2020 Annual Service Plan and Budget submission. This work is one step in addressing local health inequities which is one of our local priorities.

Appendices and Schedules Attached

Not applicable.

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