



Board of Health Orientation Part 2: Population Health Assessment and Public Health Priorities

January 16, 2023

Public Health Mandate

- Boards of Health are required to increase the use of population health information to guide the planning and delivery of programs and services in an integrated health system
- A key step is to understand the health of our local population as well as priority populations – this process is referred to as **population health assessment**



What is Population Health Assessment?

Population Health Assessment is the measuring, monitoring, analysis, and interpretation of the health of the population.

*How healthy is our population?
What can we improve?
Who is most affected?*

Planning and
Evaluation

Decision Making

Accountability

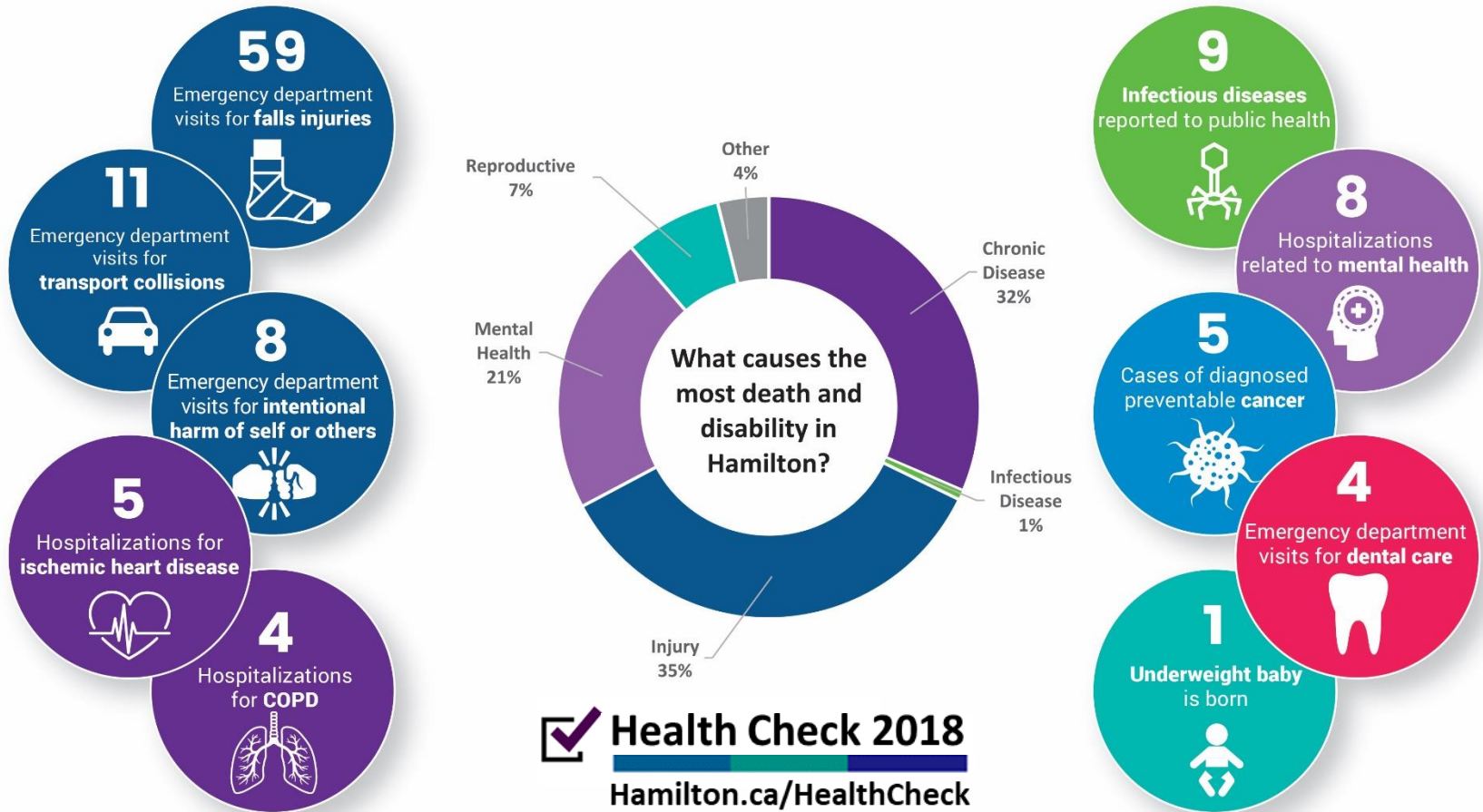
Strategic
Spending

Policy
Development

Awareness and
Advocacy

On any given day residents in Hamilton....

Each day there are approximately...



*Estimates are approximate and do not account for seasonality.



WHAT MAKES CANADIANS SICK? ~~HEALTHY!~~

50%

YOUR LIFE

- INCOME
- EARLY CHILDHOOD DEVELOPMENT
- DISABILITY
- EDUCATION
- SOCIAL EXCLUSION
- SOCIAL SAFETY NET
- GENDER
- EMPLOYMENT/WORKING CONDITIONS
- RACE
- ABORIGINAL STATUS
- SAFE AND NUTRITIOUS FOOD
- HOUSING/HOMELESSNESS
- COMMUNITY BELONGING

25%

YOUR HEALTH CARE

- ACCESS TO HEALTH CARE
- HEALTH CARE SYSTEM
- WAIT TIMES

15%

YOUR BIOLOGY

- BIOLOGY
- GENETICS

10%

YOUR ENVIRONMENT

- AIR QUALITY
- CIVIC INFRASTRUCTURE

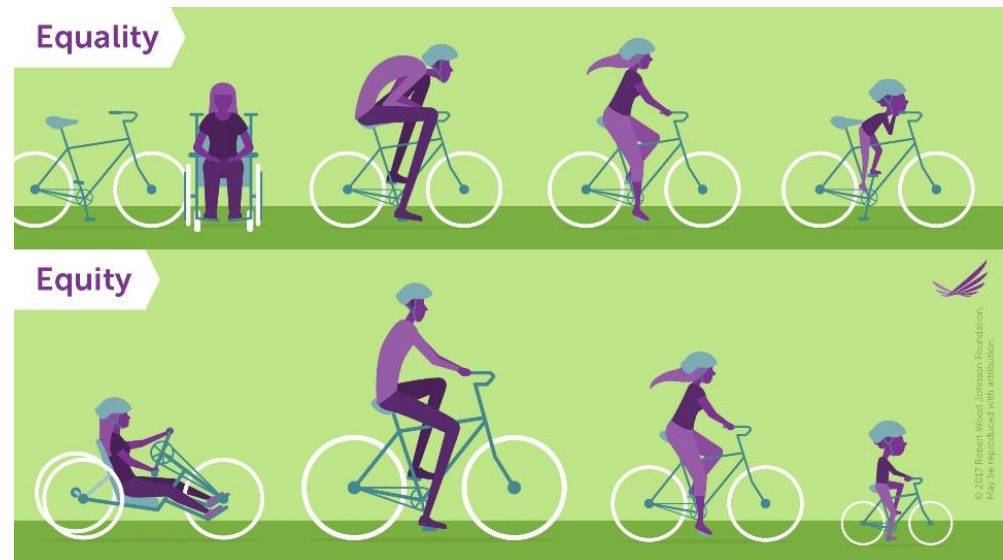


THESE ARE CANADA'S SOCIAL DETERMINANTS OF HEALTH #SDOH

Source: Canadian Medical Association (2013)

What is Health Equity?

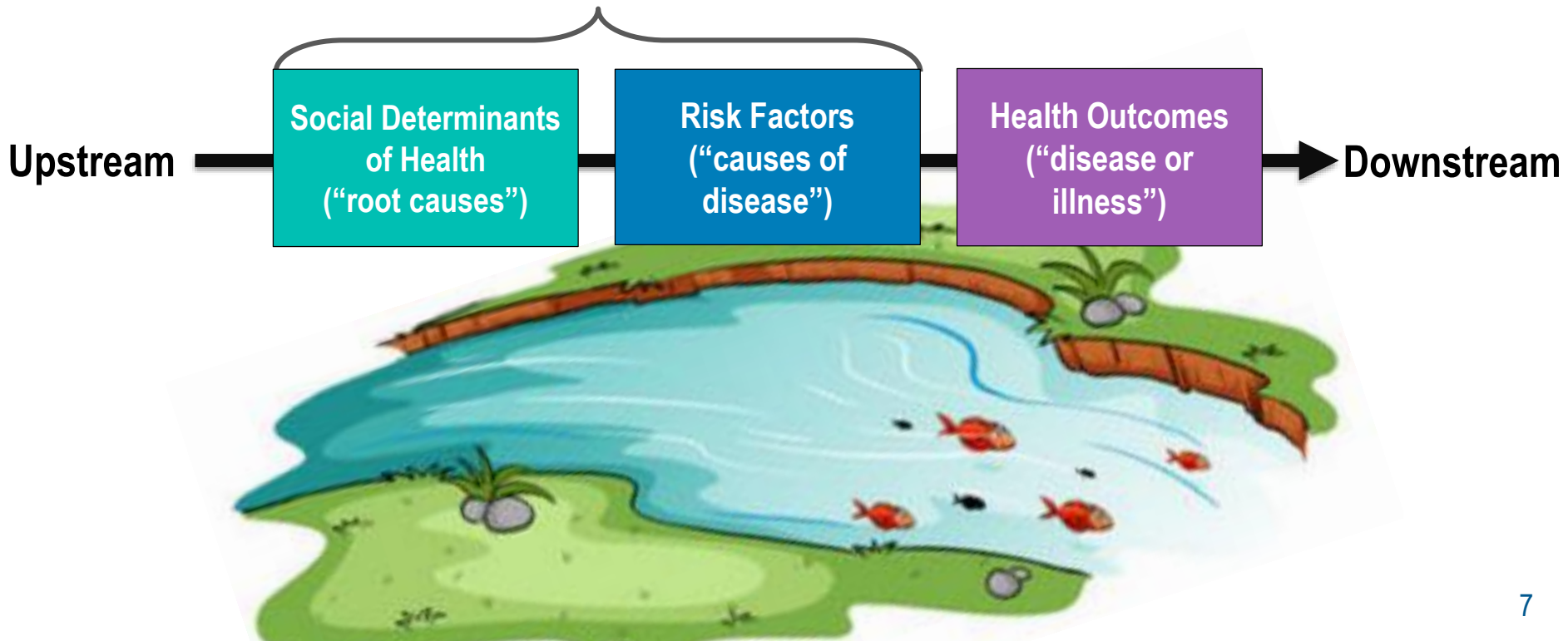
- Health is influenced by a broad range of determinants, many of them are social determinants which are factors beyond our biology, behaviours, and lifestyle choices.
- **Health equity** is when all people can attain their full health potential because they are not disadvantaged by social determinants of health.



Source: Robert Wood Johnson Foundation

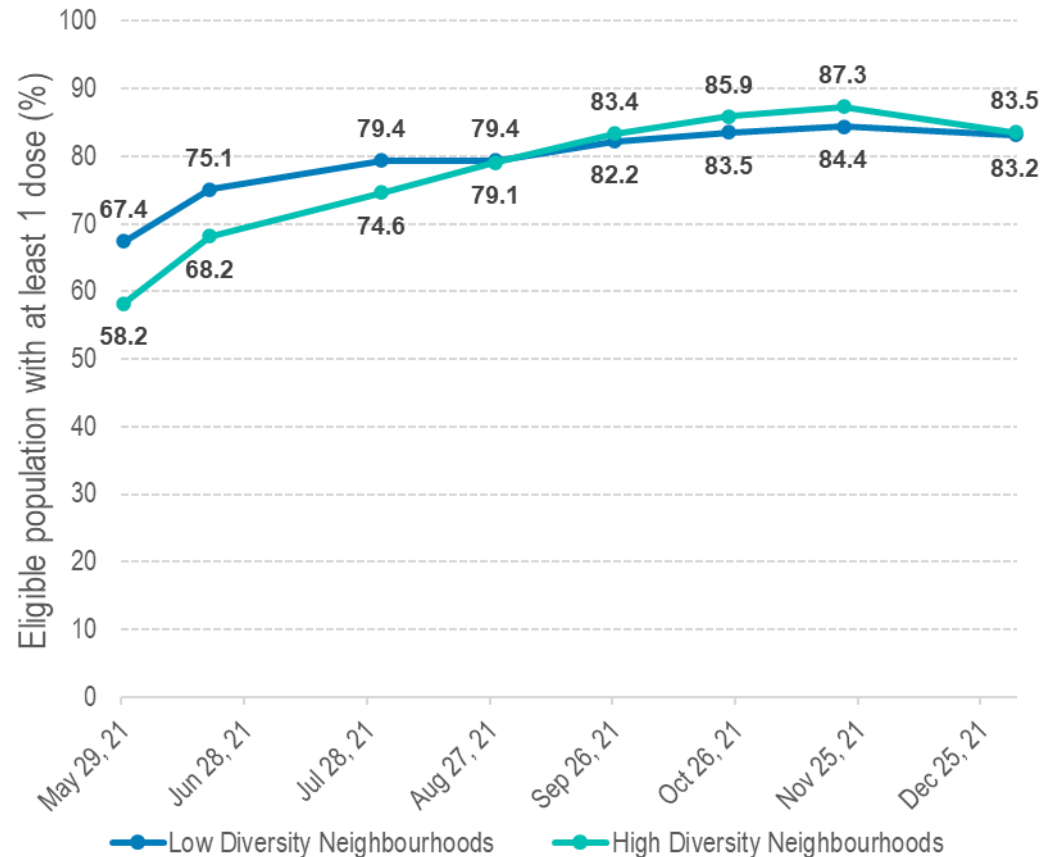
Public Health Focus

Public health focuses on upstream efforts to promote health and prevent disease



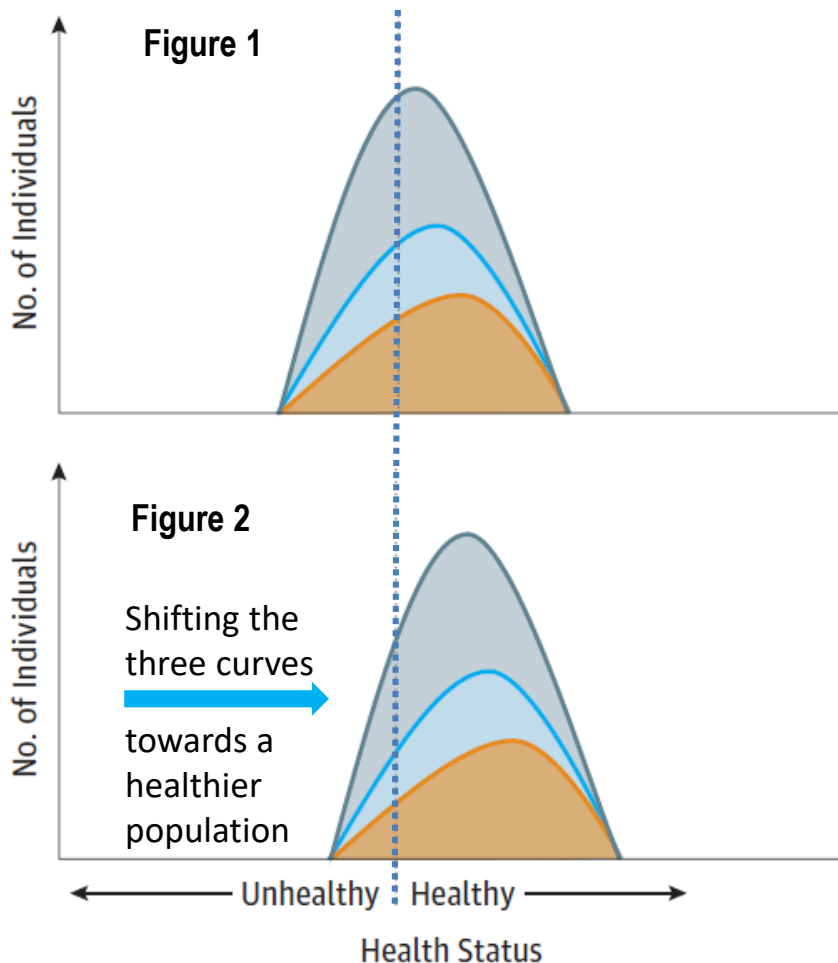
Health Equity Example: COVID-19 Vaccination Rates for Hamiltonians

- At the beginning of the COVID-19 vaccine rollout, neighbourhoods with more diverse, racialized populations had lower vaccine rates
- The community worked together to prioritize Black and racialized people for vaccination by April 2021
- By August 2021, the inequity was reduced so that the most racialized neighbourhoods had a similar rate to the least racialized neighbourhoods



Source: Public Health Ontario. Available at: <https://www.hamilton.ca/people-programs/public-health/diseases-conditions/coronavirus-covid/covid-19-data#social-determinants>

Public Health's Role in Producing Population Health

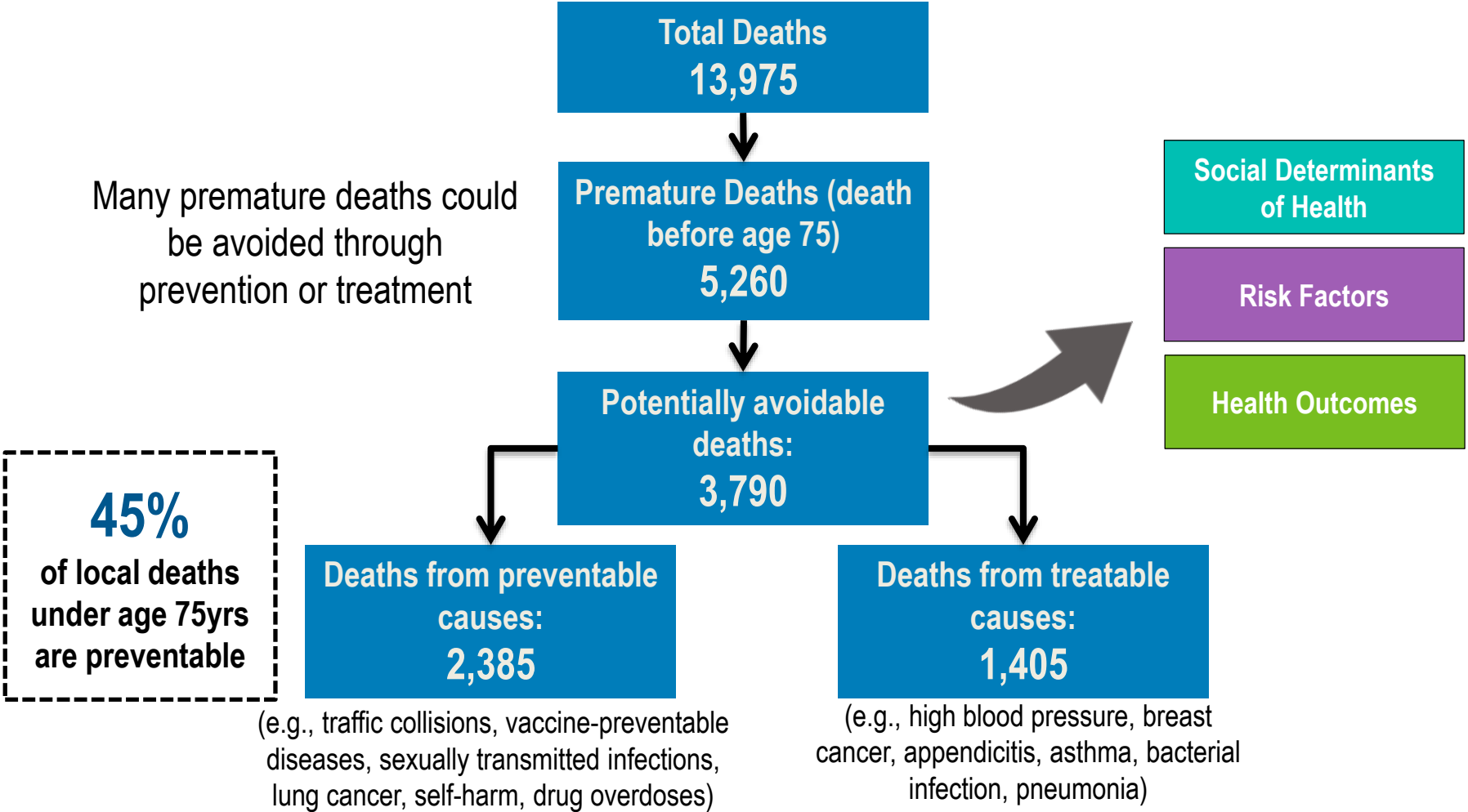


- Entire community affected through population-based policies & interventions
 - Focused on determinants of health, health promotion and prevention over the lifespan
- Specific populations affected through clinical outreach
 - Proactive management of behavioural risks and chronic conditions
- Patients seek care for acute health problems
 - Reactive to individual patient needs

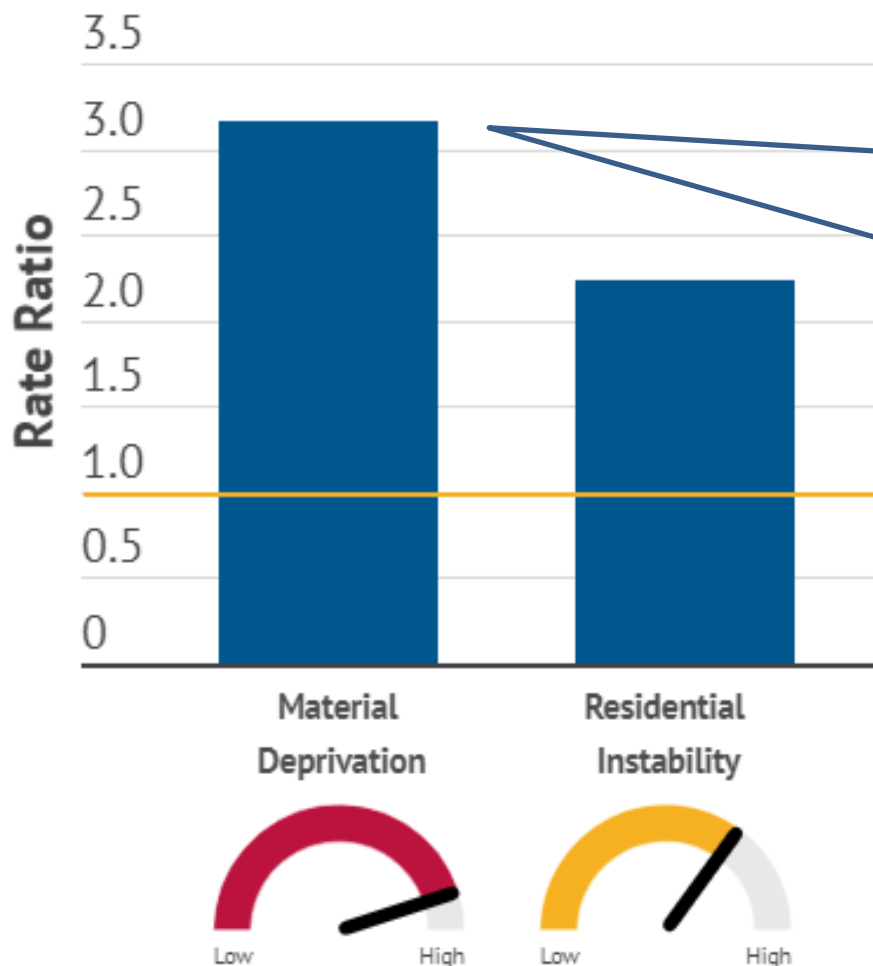
Adapted from Washington AE et al JAMA 2016 315(5); 4590460

Premature Deaths

Hamiltonians (2014-2016)



Do all Hamiltonians have the same likelihood of dying prematurely from an avoidable cause?



Hamiltonians living in the most materially deprived neighbourhoods are **three times** more likely to die from a potentially avoidable cause

Source: Public Health Ontario (2018). Health Equity Snapshots

Evidence to Action

Public Health's role is to:

- 1) **Identify** population health needs
- 2) **Contribute** to collective action on addressing the population health needs

Population health assessments, combined with other evidence are used to determine Hamilton's Population Health Needs.

Population Health Assessment



Source: National Collaborating Centre for Methods and Tools

Identifying Priority Population Health Needs

- Used Health Check 2018
 - Population health assessment to be updated by early 2024
- Used other existing information and intelligence:
 - Existing population health assessment (Health Check 2018)
 - Evidence review re: disproportionate impacts of COVID-19
 - Key documents outlining the deficits of care (Ontario Public Health Association and Association of Local Public Health Agencies)
 - Insight from the frontlines and partners

Priority Population Health Needs for Hamilton



Health Equity



Child and Youth Healthy Growth and Development

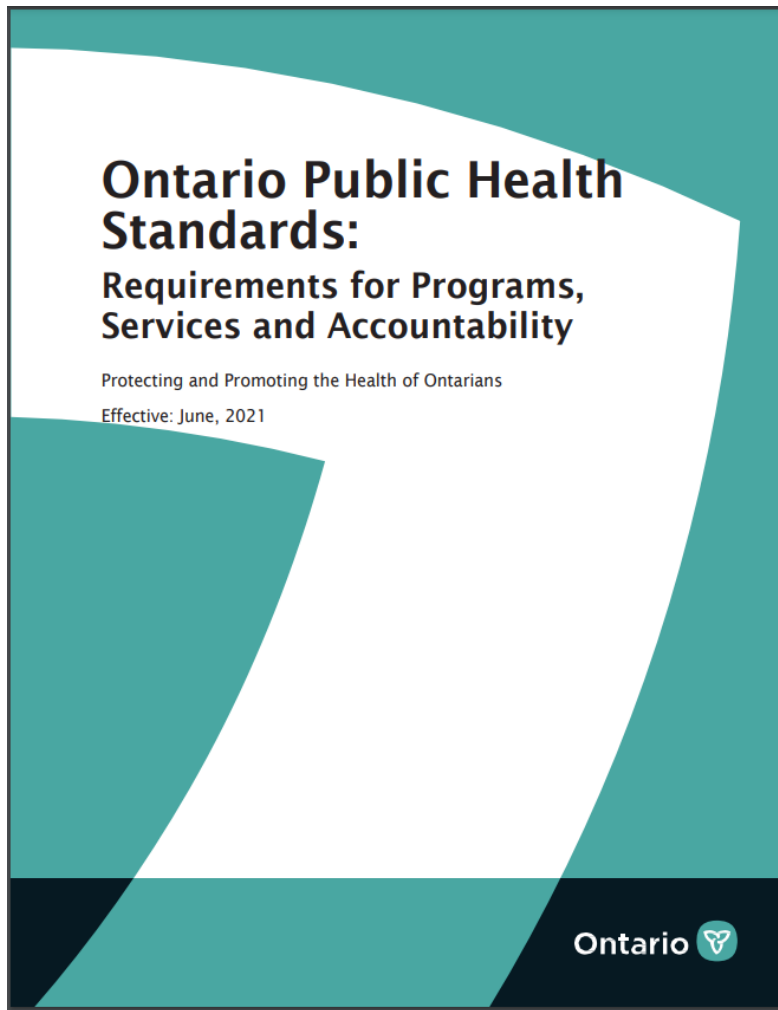


Mental Health and Substance Use



Climate Change

Scope of Public Health Programs and Services



Program Standards

1. Chronic Disease Prevention & Well-Being
2. Food Safety
3. Healthy Environments
4. Healthy Growth & Development
5. Immunization
6. Infectious and Communicable Diseases Prevention & Control
7. Safe Water
8. School Health
9. Substance Use & Injury Prevention

Foundational Standards

1. Health Equity
2. Population Health Assessment
3. Effective Public Health Practice
4. Emergency Management

Priority Population Health Needs and Public Health Services Actions

- Priority Population Health Needs are:
 - Long-standing issues that require collective action by multiple partners
 - Not new, have worsened through the COVID-19 pandemic
- Public Health Services identified priority actions to adapt and improve existing programs and services to address population health needs
 - Will be incorporated into the Annual Service Plan and Budget Submission

Health Equity



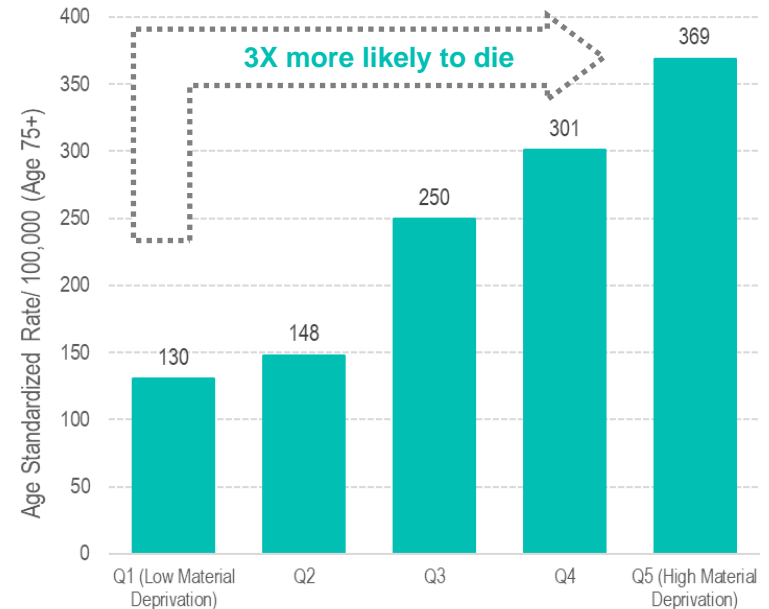
Health Equity



Population Health Assessment - Highlights

- ▶ The poorest Hamiltonians live over a decade shorter than the wealthiest Hamiltonians
- ▶ Those living in Hamilton's poorest neighbourhoods are 3 times more likely to die prematurely from a preventable or treatable cause compared to those living in the wealthiest neighbourhoods
 - This inequity is widening in Hamilton and is greater than in most Ontario public health units.
- ▶ Males are 1.5 times more likely to die prematurely than females from a potentially avoidable cause.
- ▶ Racialized people in Hamilton were disproportionately impacted by COVID-19.

Potentially Avoidable Mortality by Deprivation Quintile
2014-15, City of Hamilton



Source: PHO. Snapshots: City of Hamilton: Health Inequities in Potentially Avoidable Mortality 2014-15

Impacts of COVID-19 Pandemic on Health Equity



Women and Black, Indigenous, and People of Colour (BIPOC) communities experienced greater health and socioeconomic impacts

- *Higher rates of infection, increased income and job loss, greater financial strain*



Seniors, people living in low income, and persons with disabilities face greater service loss and barriers to accessing information



Social and structural conditions that contribute to health inequities were exacerbated

- *Racism, sexism, discrimination; inadequate housing; poor working conditions and lack of protections; barriers to services and care*

Health Equity



Goal: Public health practice results in decreased health inequities such that everyone has equal opportunities for optimal health and can attain their full health potential without disadvantage due to social position or other socially determined circumstances.

*- Ontario Public Health Standards,
Health Equity foundational standard*

Priority Action Areas for Public Health

Competency
Development

Data for Equity

Community
Collaboration

Awareness and
Communication



Health Equity

Public Health Services Priority Action Areas

Competency Development

Enhance staff competency to improve equitable health outcomes in Public Health Services programs by ensuring all staff have the required knowledge and skills to apply equity and anti-racism principles to their work.

Data for Equity

Enhance use of data on the social determinants of health to enhance understanding of health inequities in Hamilton and inform Public Health Services program planning.

Community Collaboration

Continue to engage priority populations in identifying and addressing health inequities and collaborate with community partners to reduce health inequities through multi-sectoral action.

Awareness and Communication

Increase public and community partners' awareness of local health inequities and their structural causes to drive collective action.

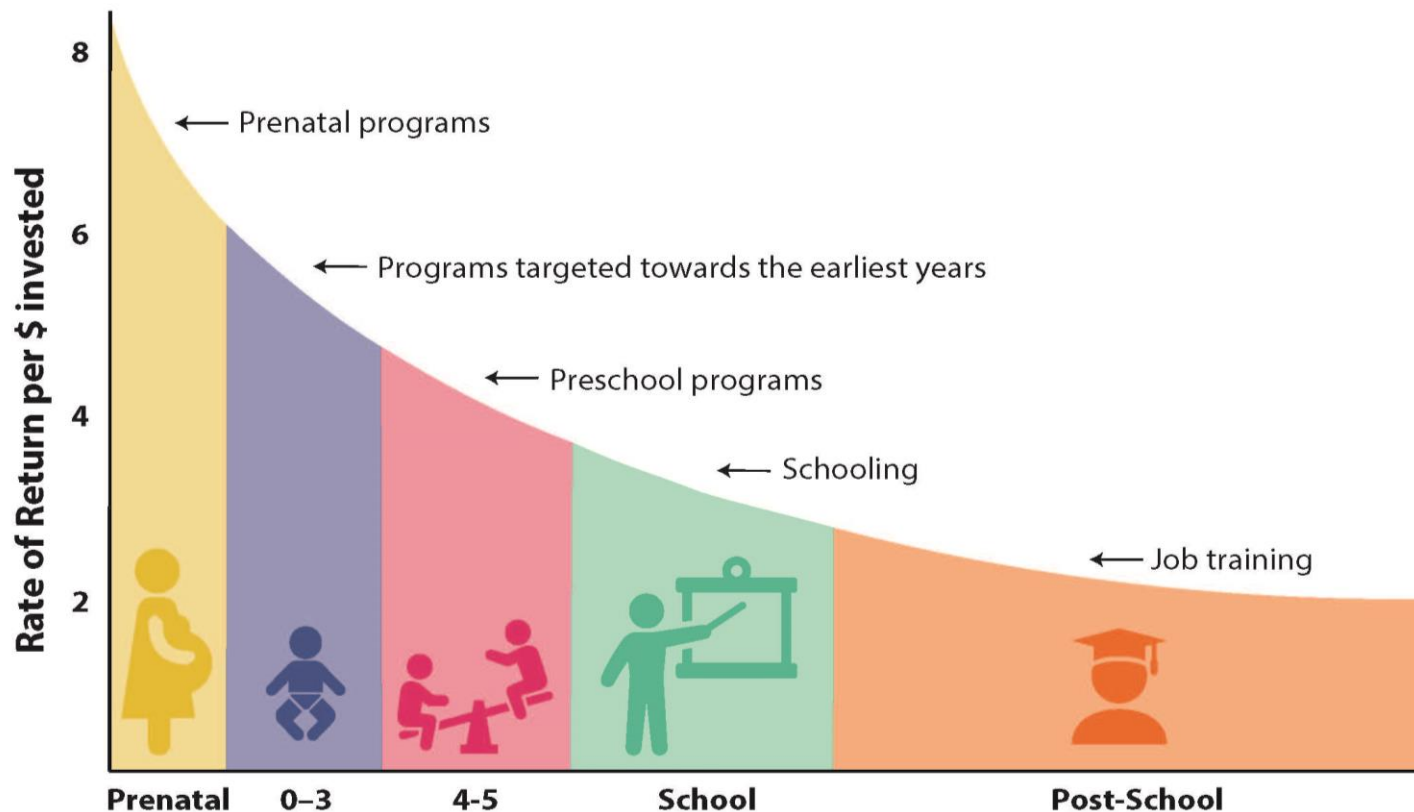
Child and Youth Healthy Growth & Development



Child and Youth Healthy Growth & Development



It is well documented that intervening in the early years provides the building blocks for educational attainment, economic productivity, and lifelong health.



Source: Heckman (2008)

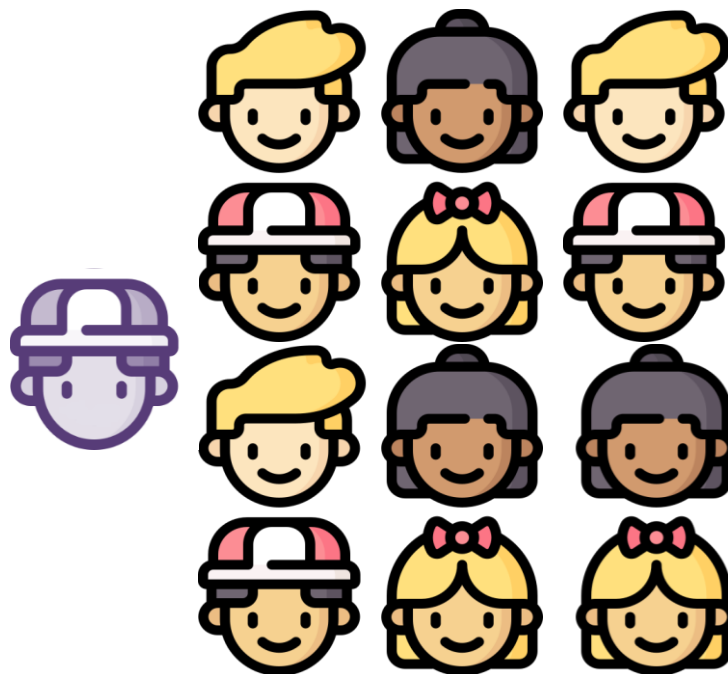


Child and Youth Healthy Growth & Development



Population Health Assessment - Highlights

- ▶ Every week, nearly four of Hamilton's youth visit the emergency department for self harm
 - Significant increase in visits from 2009 – 2020
- ▶ 30% of Hamilton kindergarten students in 2018 were likely to experience future challenges in their school years and beyond in at least one of the five core areas of early child development.
- ▶ 1 in 13 Hamilton students required urgent dental care according to 2019/20 school dental screening in publicly funded schools.
- ▶ The estimated percentage of Hamilton students without a vaccine record was higher after the 2021/22 school year compared to pre-pandemic school years.



1 in 13 students require urgent dental care

Impacts of COVID-19 Pandemic on Healthy Growth & Development



Negative impacts on mental health for infants, children, youth, and parents



Decrease in perinatal mental health and lack of parenting supports

Increase in Adverse Childhood Experiences (ACEs)



Children's literacy and math delays, especially for the most vulnerable



Fewer children getting routine immunization and increase in children's dental care needs



Child and Youth Healthy Growth & Development



Goal: To achieve optimal preconception, pregnancy, newborn, child, youth, parental, and family health.

*- Ontario Public Health Standards,
Healthy Growth and Development program standard*

Priority Action Areas for Public Health

Optimal Perinatal
Health

Infant and Early
Years Mental
Health

School Health



Child and Youth Healthy Growth & Development

Priority Action Areas

Optimal Perinatal Health

Support the healthiest start in life through prenatal education, early identification of individuals at risk for poor mental health during pregnancy and postpartum, support for breastfeeding and facilitating access to a range of community supports.

Infant and Early Years Mental Health

Reduce the number of children aged 0-6 years at risk for poor social and emotional development through education, early identification and coordinating access to community supports.

Comprehensive School Health

Enhanced school dental screenings and immunization clinics to address deficits of care resulting from pandemic.
Maintain and continually improve partnership and collaboration with local schools and school boards through universal school supports and intensive services to priority schools.

Mental Health & Substance Use



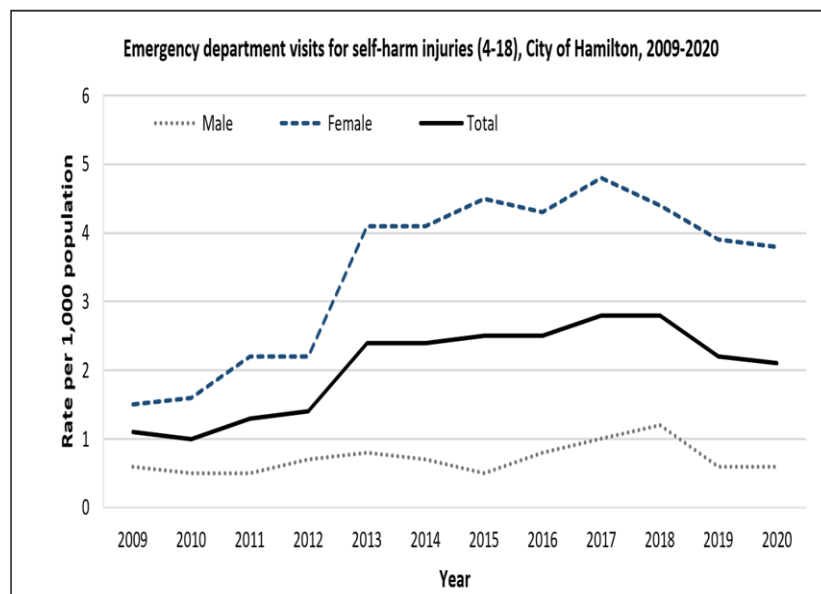


Address Mental Health & Substance Use



Population Health Assessment - Highlights

- ▶ Mental illness accounts for 21% of healthy years of life lost due to disability or illness for Hamiltonians (2012).
- ▶ Suicide is a leading cause of death for Hamiltonians under 45 years of age (2008-2012)
- ▶ Intentional self harm Emergency Room visits continue to increase among Hamiltonians and were 181/100,000 in 2018
 - The highest rates were among those <20 years old, particularly females
- Opioid-related deaths have increased exponentially from 26 deaths in 2005 to 166 deaths estimated in 2021
 - Over 65% of opioid deaths are among males 25 to 65 years.
 - Rates of opioid-related death rate were 45% greater for Hamiltonians as compared to Ontarians.



Source: Ambulatory All Visit Main Table (2009-2020), Population Estimates (2009-2020), and Population Projections (2016), Ontario Ministry of Health, IntelliHEALTH ONTARIO, Date Extracted: November 2021.



Mental Health & Substance Use



Goal: To promote community mental health and wellbeing and reduce the burden of substance use.

*- Ontario Public Health Standards,
Substance Use and Injury Prevention program standard*

Priority Action Areas for Public Health

Trauma and Violence
Informed Care

Community Mental
Health Promotion in
Middle Years

Municipal Policies on
Substance Use

Harm Reduction



Mental Health & Substance Use



Priority Action Areas

Trauma and Violence Informed Care	Implement an organizational approach to Trauma and Violence Informed Care through staff training, and implementing policies throughout Public Health Services programs.
Community Mental Health Promotion in Middle Years	Collaborate across City divisions and community partners to promote mental well-being, resilience and prevent substance use in youth.
Municipal Policies on Substance Use	<p>Lead the review and update the 2011 Municipal Alcohol Policy in collaboration with City departments.</p> <p>Collaborate with community stakeholders and other public health units to apply to Health Canada to decriminalize the personal possession of illegal substances.</p>
Harm Reduction	Coordinate interventions to support safer substance use and decrease adverse events from individuals using alone.

Climate Change

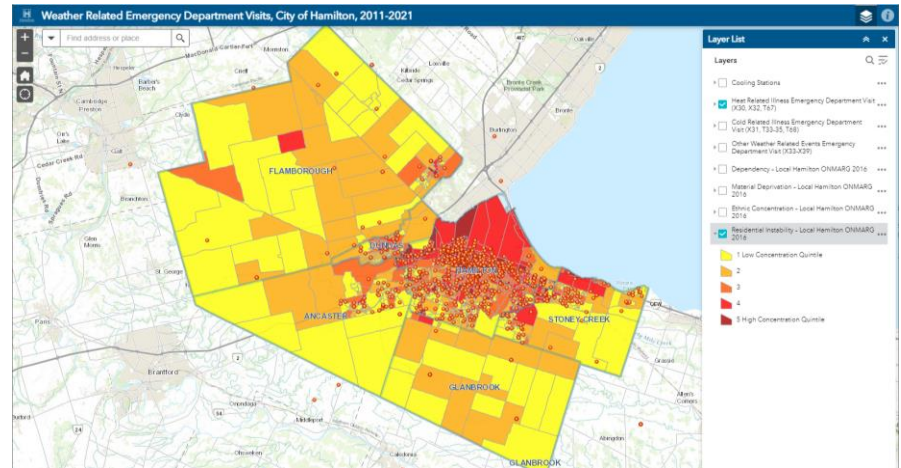


Climate Change



Population Health Assessment - Highlights

- ▶ Hamilton's heatwaves will increase; the total annual number of days at or above 30°C is projected to increase from about 16 days on average to 37 days by 2050.
- ▶ There were about 750 emergency department visits (ED) for heat-related illness for Hamiltonians from 2011-21
 - Neighbourhoods with the most housing instability were most disproportionately affected by heat-related illness. Poorer or more racially diverse neighbourhoods were also disproportionately affected.
- ▶ Climate change can affect ecosystems and increase spread of infectious diseases, such as vector-borne diseases, into new geographic regions.
 - Lyme disease for Hamiltonians increased from 2 reported cases in 2011 to 13 cases in 2020.



Climate Change



Goal: To promote healthy built and natural environments that support health and mitigate existing and emerging risks, including the impacts of a changing climate.

*- Adapted from Ontario Public Health Standards,
Healthy Environments program standard*

Priority Action Areas for Public Health

Extreme Heat
and Health

Vector-Borne
Diseases

Data for Climate
Change Health
Impacts

Climate and
Health Education
and Awareness

Climate Change



Priority Action Areas

Extreme Heat and Health	Participate in local efforts to address excessive indoor temperatures in rental housing and identify ways to expand cooling programming and interventions across Hamilton.
Vector-Borne Diseases	Coordinate and work with partners to ensure vulnerable groups understand and have the means to be adequately protected from Vector Borne Disease (e.g. Lyme, West Nile etc.).
Data for Climate Change Health Impacts	Develop a plan to establish an ongoing weather-related health event monitoring system for the City of Hamilton that works towards more real-time communication.
Climate and Health Education and Awareness	Support Corporate Office for Climate Initiatives and others across the City in the development of climate/health promotional material, education/ awareness through research and identification of existing communication channels to priority and at risk populations.

Summary

- Population health assessment provides information to identify current and evolving population health issues, health inequities and priority populations
- Through population health assessment combined with other evidence, four priority population health needs were identified:



Health Equity



Mental Health and Substance Use



Child and Youth
Healthy Growth and Development



Climate Change

- Population health assessment results, population health needs and Public Health Services priorities inform the Annual Service Plan and Budget
2023 Annual Service Plan & Budget to be reviewed at the February 16, 2023, Board of Health meeting
- Public Health Services will comprehensively review population health data by early 2024 to inform planning for 2024 and beyond