



Public Health Services COVID-19 Situation Report & Organizational Update

Board of Health
September 20, 2021

Overview

1. Overall Status Update
2. COVID-19 Situation Report
3. Scarsin Forecast Update
4. Organization Update – Impacts of COVID-19
5. COVID-19 Vaccine Update

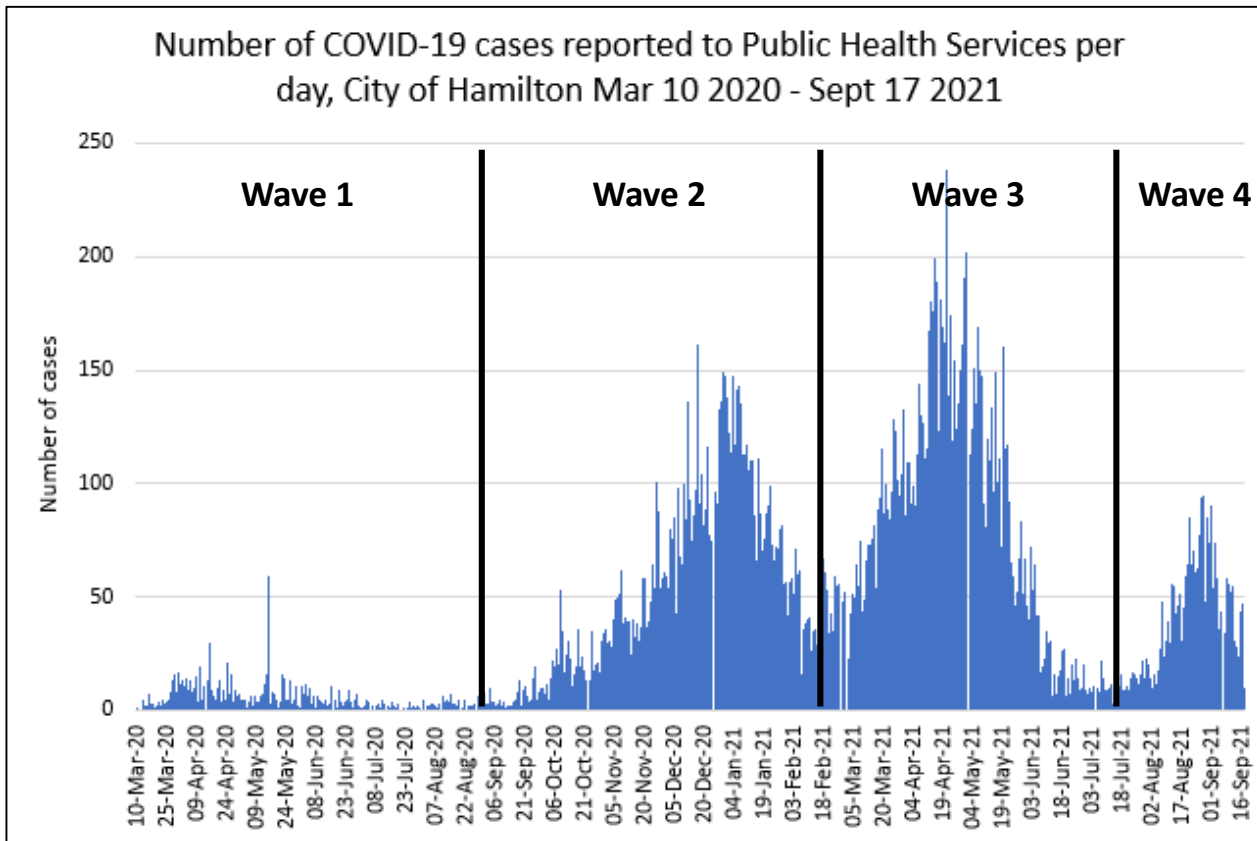
Overall Status

- Hamilton is currently seeing a decrease in COVID-19 case activity and outbreaks.
- As of September 16, 2021 there were 804,981 doses given; 81.7% of Hamiltonians 12yrs+ vaccinated with one dose and 74.8% vaccinated with both doses.
- This is a difficult point to predict the future trajectory of Hamilton's 4th wave. Even with the vaccine certification system, expected on September 22, 2021 and achievement of 80% vaccination of the eligible population by mid-October 2021, Hamilton is expected to continue to experience the 4th wave.
- Underscores importance of receiving two doses of vaccine as soon as possible to have strong protection against COVID-19 and Delta variant.
- Achieving equitable and high levels of vaccination coverage continues to be major focus of the COVID-19 control effort. |

SITUATION REPORT

Stephanie Hughes, Epidemiologist

Reported cases



Key Messages

- Hamilton is currently in Wave 4 of COVID-19
- COVID-19 case activity is currently trending downwards

Waves of COVID-19 in Hamilton

WAVE 1

Mar 10 – Aug 31, 2020
(5.5 months)

- 976 cases reported
- 31 outbreaks
- 145 hospitalizations and 45 deaths
- Initial infections mostly due to travel, community spread detected late March
- Significant spread in long-term care homes, affected by outbreaks
- Older age groups (60-79, 80+) adversely affected

WAVE 2

Sept 1, 2020 – Feb 16, 2021
(5.5 months)

- 8,913 cases reported
- 217 outbreaks
- 617 hospitalizations and 231 deaths
- Socialization contributed to spread
- Many long-term care, school and hospital outbreaks
- First cases in local schools
- Older age groups continued to be affected
- First variant cases (Alpha – B.1.1.7)

WAVE 3

Feb 17 – Jul 16, 2021
(5 months)

- 11,559 cases reported
- 292 outbreaks
- 715 hospitalizations and 124 deaths
- Ongoing socialization contributed to spread
- Many school, workplace outbreaks
- Low numbers of cases in older populations
- Variant activity shifted from predominantly Alpha (B.1.1.7) to Delta (B.1.617.2)

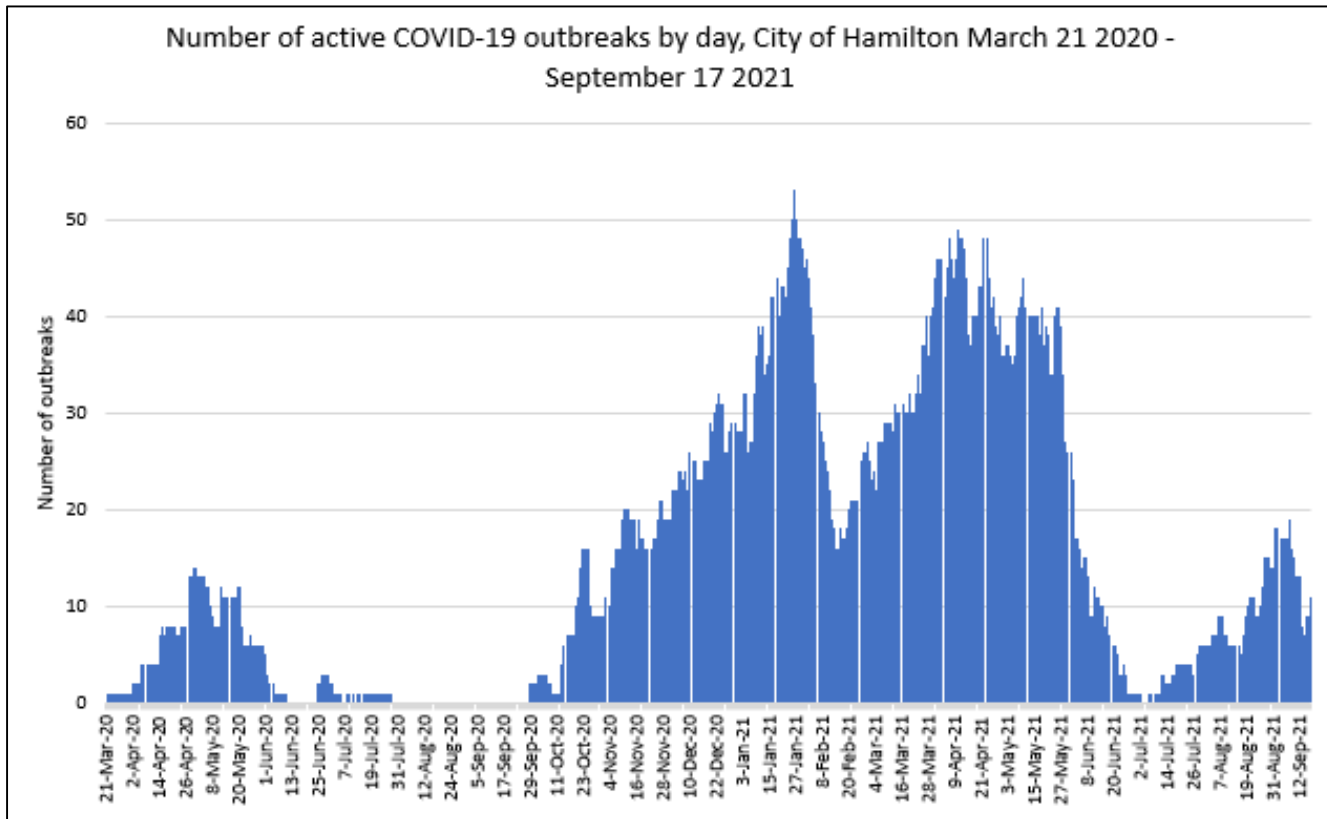
Waves of COVID-19 in Hamilton

WAVE 4

Jul 17 – Sept 17, 2021
(2 months thus far)

- 2,552 cases reported
- 52 outbreaks
- 157 hospitalizations and 10 deaths
- Increased socialization due to stages of provincial reopening
- Ongoing workplace outbreaks, also shelters, childcare settings and non-essential settings
- Young-to-middle-aged groups (0-59 years) most affected
- Delta variant continues to be dominant

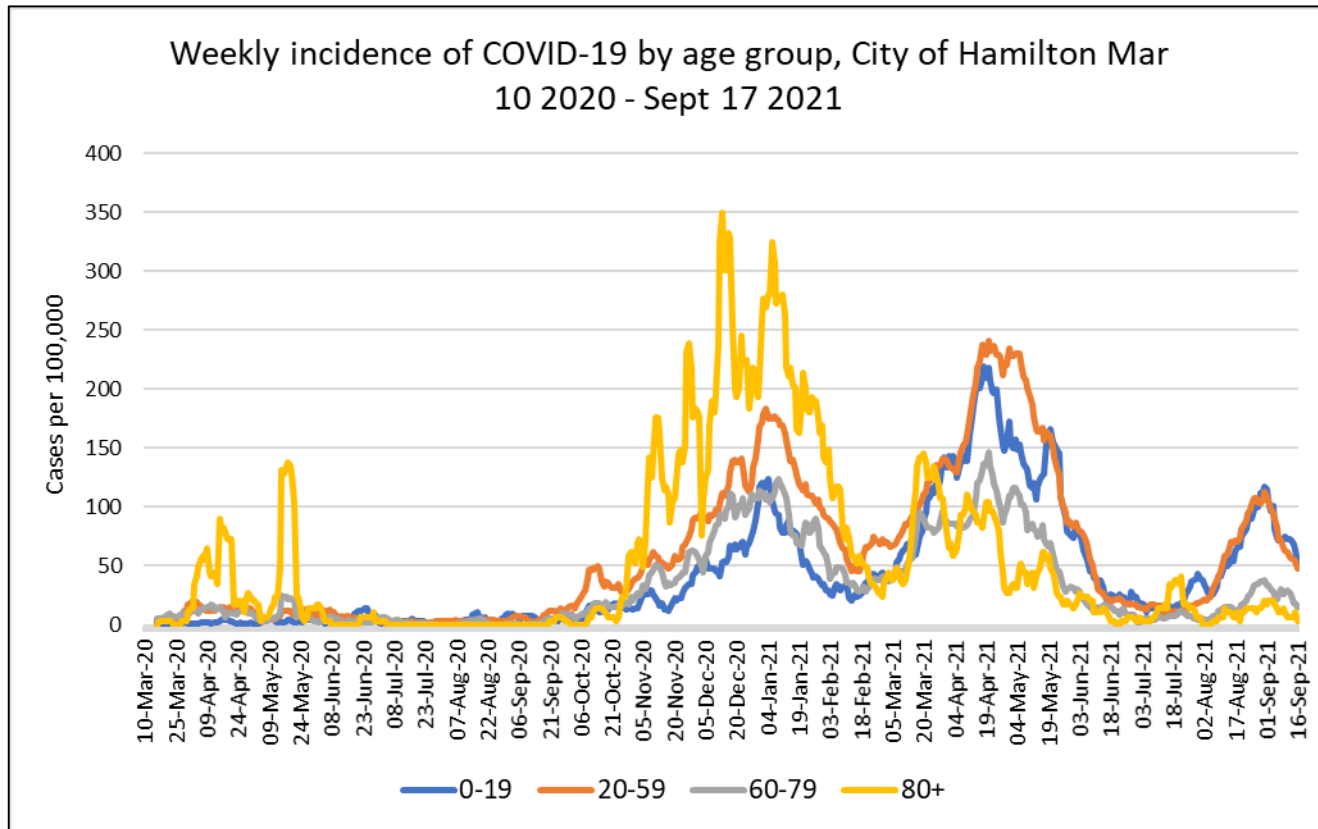
Active outbreaks



Key Messages

- There have been a total of 592 COVID-19 outbreaks in Hamilton since March 2020
- The number of active COVID-19 outbreaks in recent weeks has decreased

Affected age groups



Key Messages

- Earlier waves of COVID-19 in Hamilton disproportionately affected older age groups (60-79, 80+ years)
- Wave 4 cases have been predominantly younger/middle-aged individuals (0-59 years)

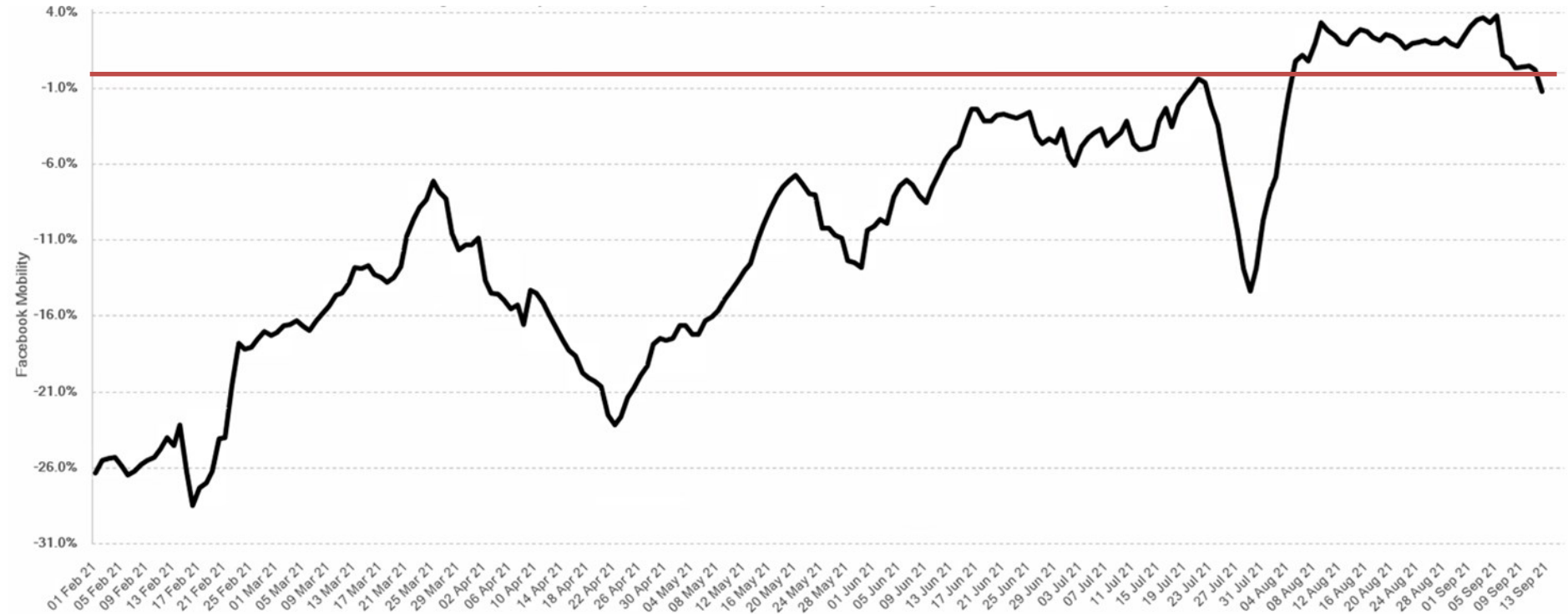
SCARSIN FORECAST

Ruth Sanderson, Epidemiologist

Scarsin Forecast

- This is a complex point to predict the shape of Hamilton's 4th wave given:
 - The recent decrease in cases
 - The uncertainty caused by the opposing impacts of improving vaccination rates, the anticipated introduction of a vaccine certificate system, school reopening and the effects of the Delta variant
- Even with the vaccine certification system, expected on September 22, 2021 and achievement of 80% vaccination of the eligible population by mid-October 2021, Hamilton is expected to continue to experience the 4th wave.
- The peak is predicted to occur in mid-October 2021, with increased case numbers expected to continue through to the year's end.
- Vaccinations will help to reduce severe outcomes of COVID-19. Hospitalizations and deaths during the 4th wave are predicted to be lower than in the 3rd wave.

Scarsin Forecast – Overall Mobility in Hamilton



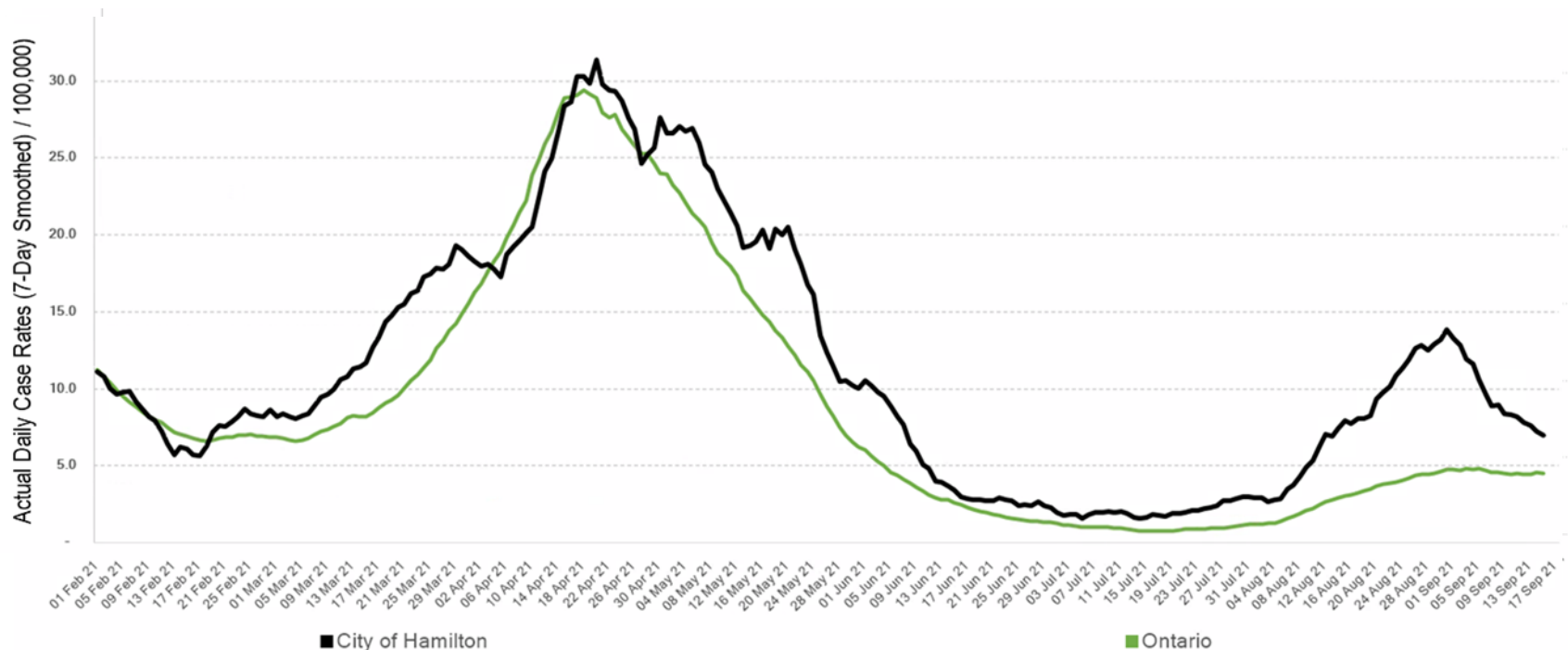
Data Source: Scarsin Decision Support System retrieved Sep 15, 2021

Key Messages:

- Mobility recently decreased below 0% and below pre-pandemic levels (red line). Note that Ontario’s “enhanced COVID-19 vaccine certificate” system announced September 1, 2021 may account for some of that reduced mobility.

Scarsin Forecast

COVID-19 Daily Case Rates (per 100,000) Hamilton Compared with Ontario



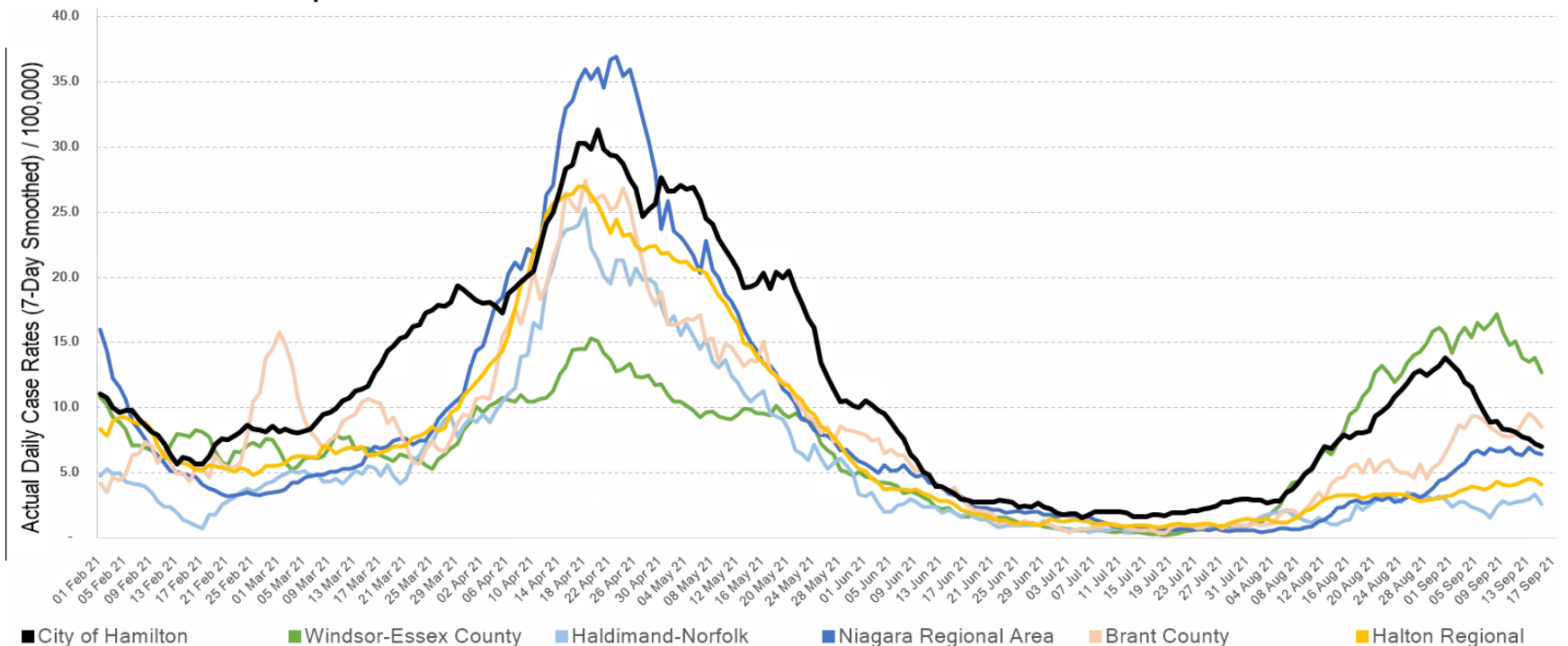
Data Source: Scarsin Decision Support System retrieved Sep 17, 2021

Key Messages:

- Hamilton continues to have a high case rate, higher than Ontario overall (green).

Scarsin Forecast

COVID-19 Daily Case Rates (per 100,000) Selected Comparison Public Health Units to Hamilton



Data Source: Scarsin Decision Support System retrieved Sep 17, 2021

Key Messages:

- Experiencing unique case trajectories across the region. Hamilton's rate had been similar to Windsor's (green), but Hamilton has decreased as other areas such as Niagara (dark blue) and Brant (peach) have increased.

Scarsin Forecast – Overview of Scenario

Scenario 1

80% full vaccination of eligible population by mid-October 2021, maintaining public health measures and adjustment for introduction of a vaccine certificate system on September 22, 2021 through decreased transmission and mobility

Scenario assumes:

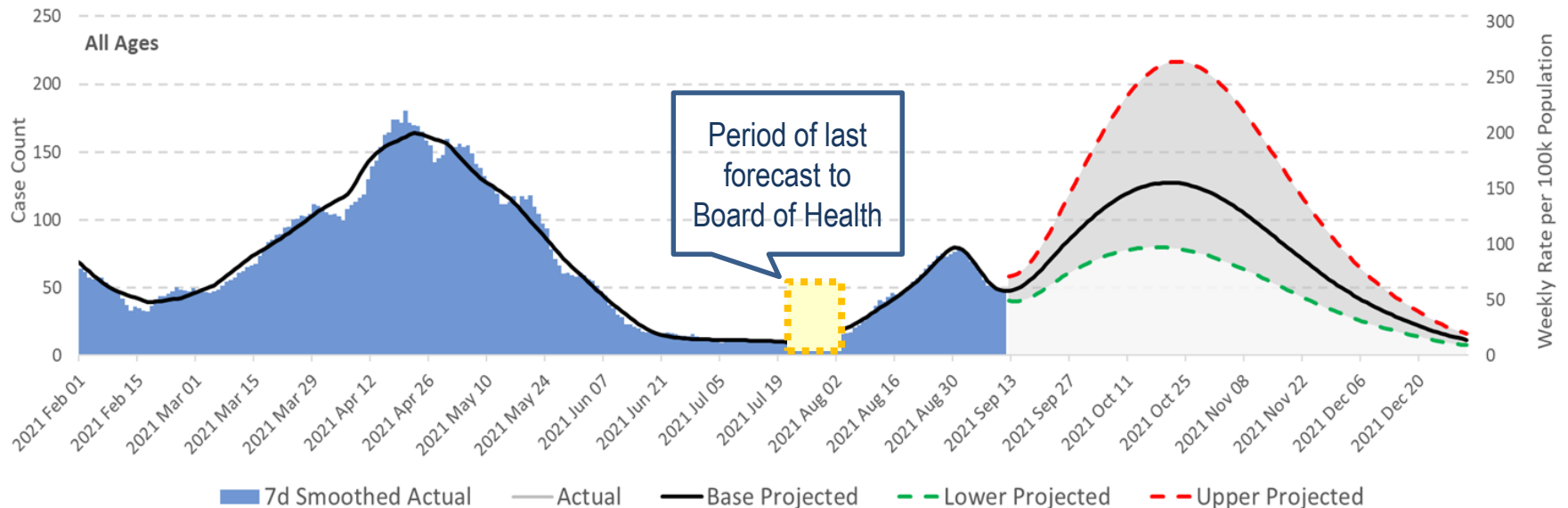
- Passport introduction September 22, 2021 resulting in decreased transmission and mobility
- Delta variant circulating at 98% of cases by September 1, 2021
 - Recalibrated of case severity probability of hospitalization
 - Immunity curves adjusted for vaccine type
 - First dose immunity adjusted for Delta
 - Reduced dosing interval to 4 weeks in July 2021
 - Increased contact transmission in Aug/ early September 2021
 - Fall 2021 in-class learning schools/ universities
 - Public Health Measures maintained throughout the year (e.g., 70% masking in community to end-of-year)
 - 3% of school-children opted for online learning

-Updated data:

- Case data retrieved Monday, September 13, 2021
- Updated mobility data Monday, September 13, 2021
- Vaccination data retrieved Sunday, September 12, 2021

Scarsin Forecast

COVID-19 Cases among Hamiltonians



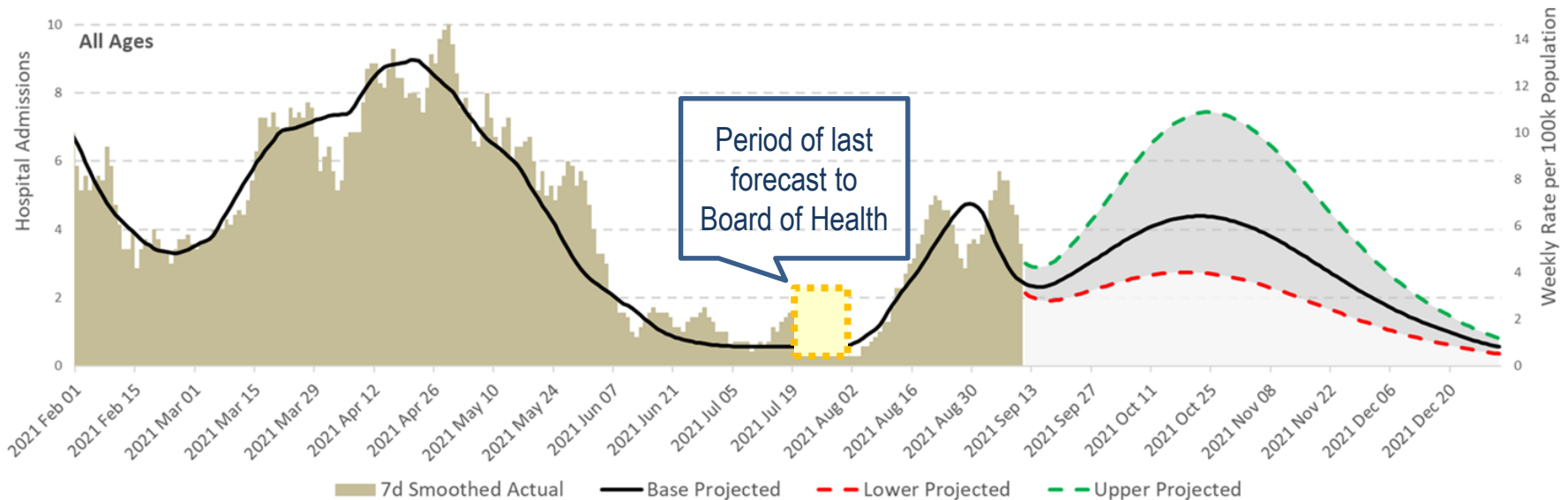
Data Source: Scarsin Decision Support System retrieved Sep 13, 2021

Key Messages:

The 4th wave will likely continue even with the recent decrease in cases. Cases are predicted to reach about 120 cases per day and the peak may be lower than that of the 3rd wave. Note the forecast's wide upper (over 200 cases at peak) and lower (below 100 cases at peak) boundaries due to the current instability in case numbers.

Scarsin Forecast

COVID-19 Hospital Admissions among Hamiltonians



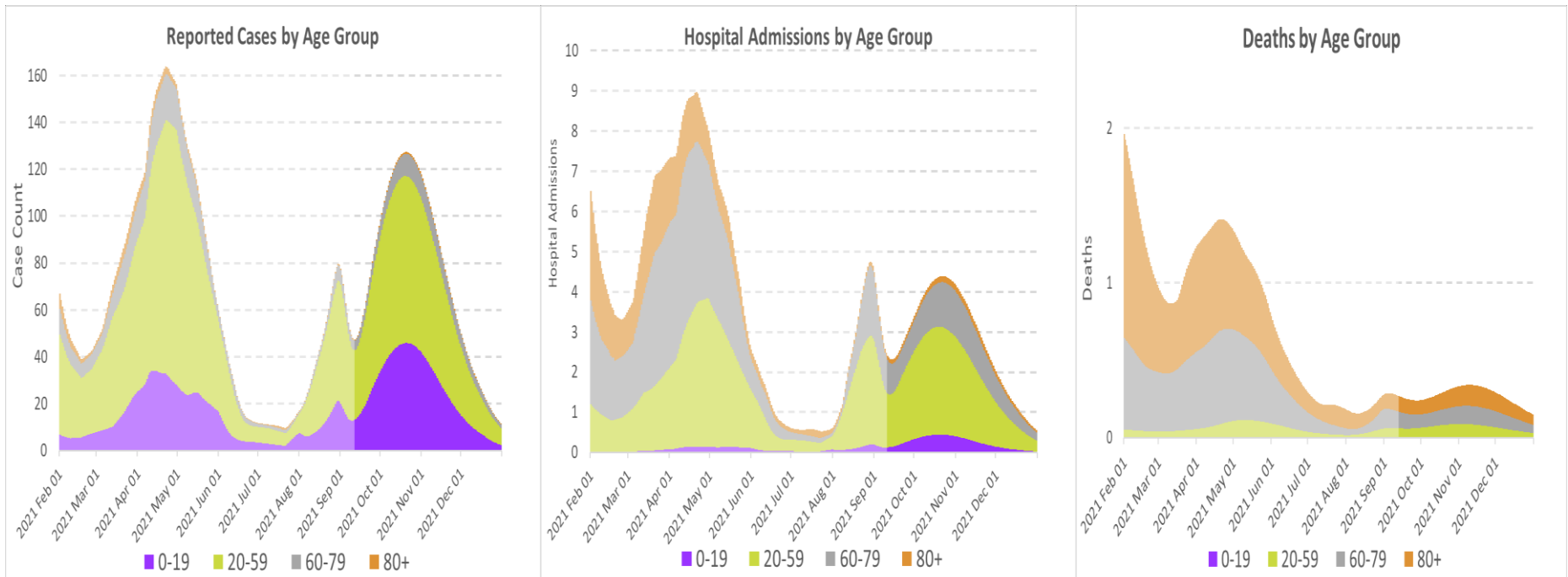
Data Source: Scarsin Decision Support System retrieved Sep 13, 2021

Key Messages:

Hospital admissions are now predicted to reach just under five admissions per day for Hamiltonians and the 4th wave peak may be lower than that of the 3rd wave. Note the forecast's wide upper and lower boundaries due to the current uncertainty of the future trajectory.

Scarsin Forecast

Age Group Difference for COVID-19 Cases, Hospital Admissions and Deaths for Hamiltonians



Data Source: Scarsin Decision Support System retrieved Sep 13, 2021

Key Messages:

- Between now and the end of the year, cases are predicted to be primarily in those aged 0-19 (34%) and 20-59 (59%), whereas hospitalizations will be among those aged 20-59 (59%) and to a lesser extent those aged 60-79 (27%). Three-quarters of deaths will be among those aged 60 and older (aged 80+ (40%) and 60-79 (35%)) between Sep 20 and Dec 31, 2021.

Scarsin Forecast Summary

- The latest forecast predicts that Hamilton will remain in the 4th wave due to the ongoing presence of the Delta variant, despite the recent decrease in cases.
- Hamilton's 4th wave is predicted to peak at approximately 120 cases per day by mid-October 2021 but could be as high as 200 cases per day or lower than 100 cases per day at its peak.
- All age groups will be affected:
 - Over a third of cases are predicted to occur in younger age group, including those <12yrs who are not yet eligible for vaccination.
 - Over half of hospitalizations are predicted to be in those 20-59yrs, whereas three-quarters of deaths are predicted to occur in those aged 60yrs and older.
- Increased vaccination and maintaining public health measures should reduce the impact of the 4th wave.

ORGANIZATIONAL UPDATE – IMPACTS OF COVID-19 ON HEALTH & WELL-BEING

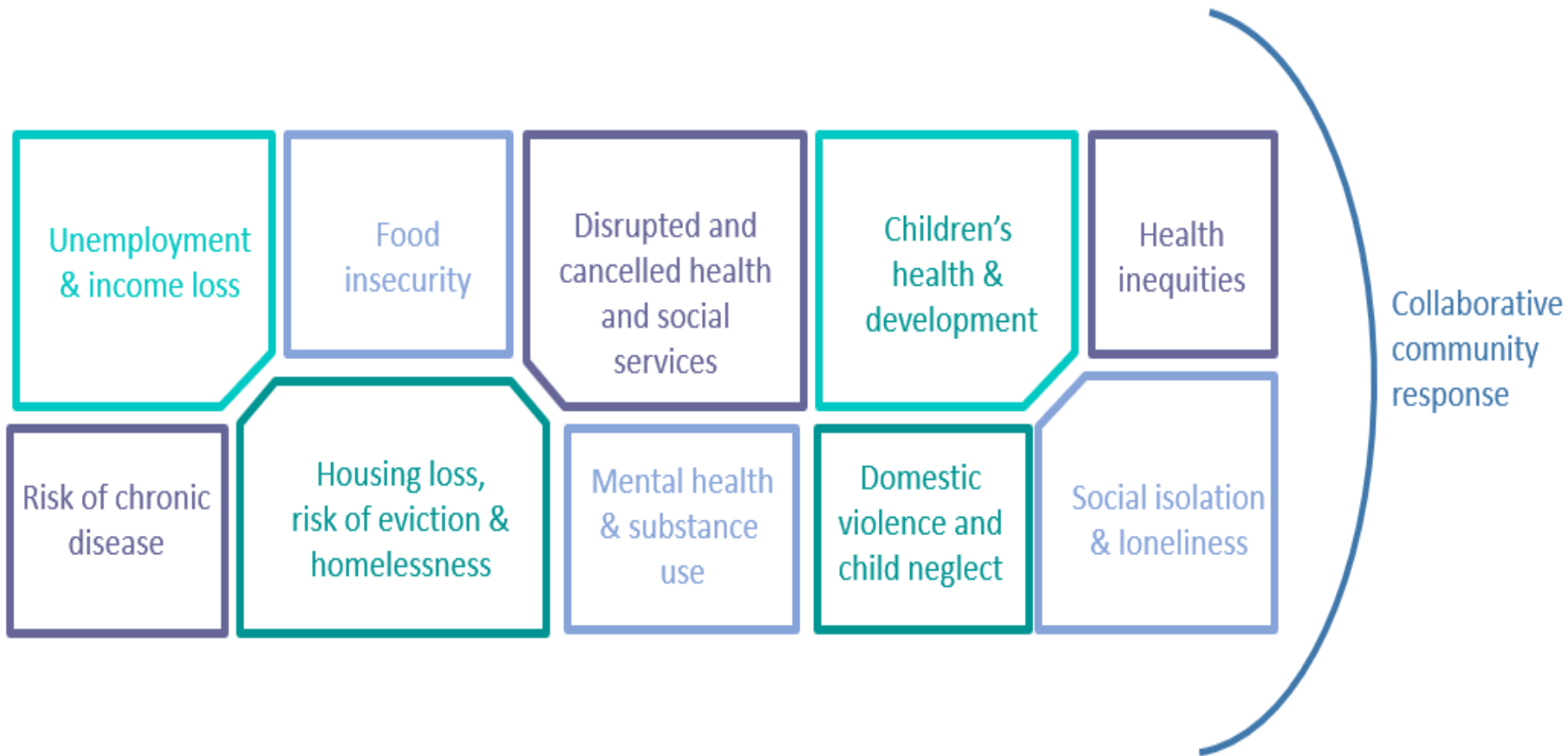
Elizabeth Richardson, Medical Officer of Health

Purpose

- Demonstrate how the pandemic has impacted health and well-being including:
 -
 - Individual and community health and well-being
 - Specific populations and communities
 - Capacity within health and social service system
 - Ability of Hamilton Public Health Services to deliver core services
- Share Hamilton Public Health Service's priorities to help address the impact of COVID-19 on health and well-being
- Review what's next as pandemic continues to evolve

Health and social outcomes have worsened during COVID-19

Areas impacted by COVID-19



Populations disproportionately impacted by COVID-19

- Racialized and Black, Indigenous, and other People of Colour (BIPOC) communities
- Essential workers
- Women
- Youth/Young Adults
- Seniors
- Low income individuals
- Persons with disabilities

In Hamilton, these populations are likely to continue to be disproportionately impacted by the fourth wave

12% lower vaccine coverage in neighbourhoods with the lowest incomes versus the highest incomes

Hamilton's racialized communities continue to have a higher burden of COVID-19 cases

Males, seniors, and those living in low-income households were more likely to be hospitalized when infected with COVID-19

Impact of pandemic on access to services



Non-elective surgeries cancelled or delayed in many hospitals across Ontario, including Hamilton



Food Banks in Ontario saw surge in demand



McMaster Children's Hospital emergency department visits decreased by almost 50% during first two waves

Reduced capacity for primary care to provide Preventative medicine



Opioid-related deaths trending upwards in past 5 years



Significant decline in referrals for developmental assessments for children



33% reduction in number of pap smear test for cervical cancer



76% of victim services agencies affected in their ability to serve clients based on disruptions

Increase in outpatient visits for mental health care in Ontario



Less than half of diabetes patients had up to date sugar tests



Increase in emergency shelter occupancy pressures



Reduced activities and visits for residents in Long-Term Care Homes



Strain on home and community-based palliative care resources

Impact of COVID-19 on Public Health service delivery

Immunization rates decreased for school-aged children



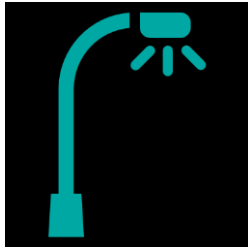
No children have received dental assessments or vision screening in schools since March 2020

Child & adolescent mental health service wait times and length of service have increased significantly



Impact of COVID-19 on Public Health Service Delivery

Reduced ability to provide in-person support and group programs for alcohol, drug, and gambling services



Fewer high risk Healthy Baby and Healthy Children clients receiving services

No Tobacco Cessation Clinics have been offered since March 2020

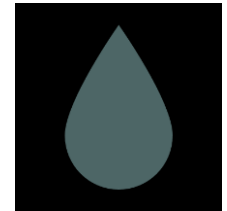


Impact of COVID-19 on Public Health Service Delivery

No food handler certifications completed since March 2020



No standing water inspections since March 2020



No pest control inspections completed since March 2020



Unable to complete routine compliance inspections of personal service settings



Status of Public Health Services 2021

Open with some modifications

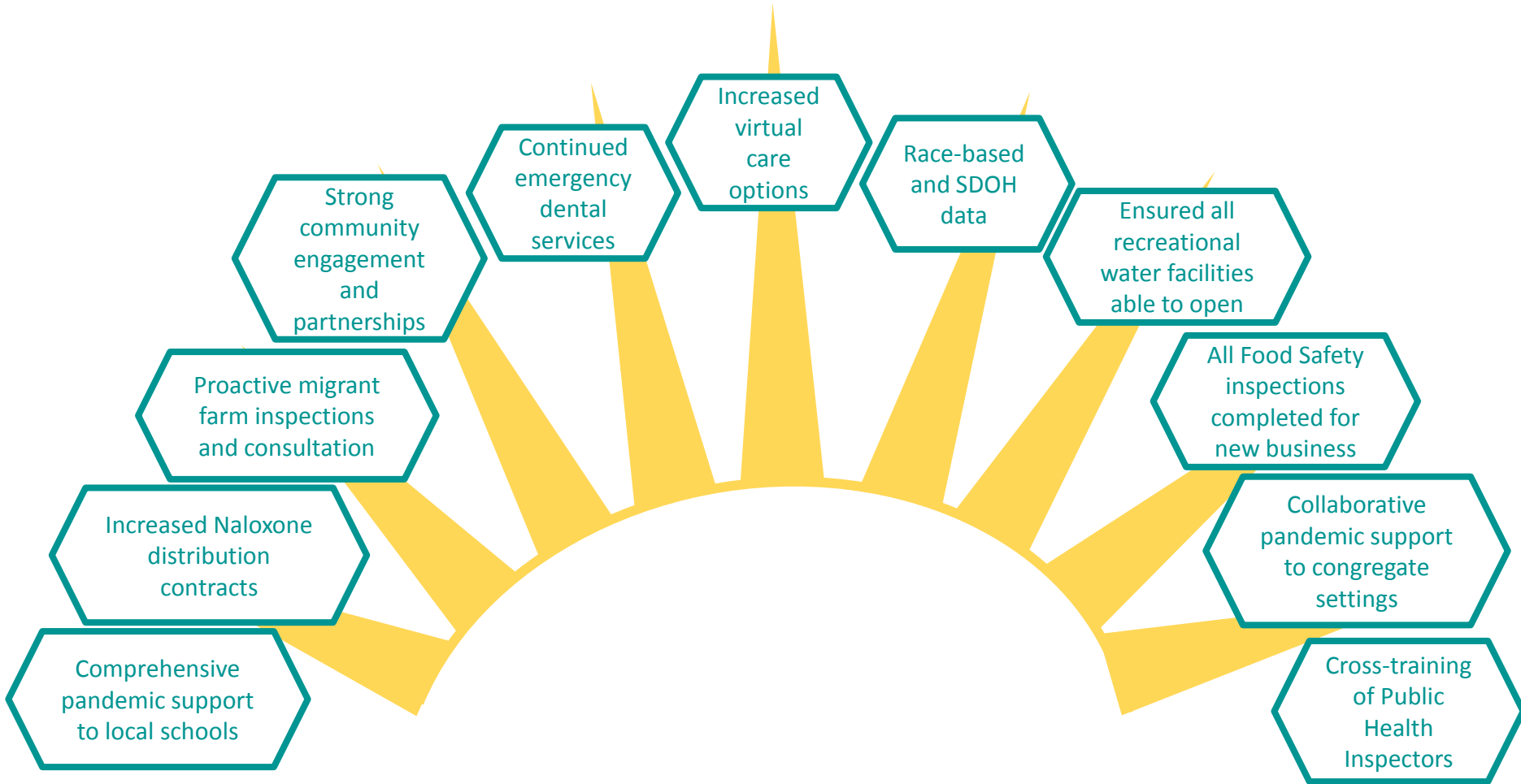
- Alcohol, drugs & gambling services
- Breastfeeding support
- Child & adolescent services
- Case and contact management for communicable diseases
- Virtual home visits for babies, children, and families
- Sexual health clinics, case management, phone line
- Heat/Cold Alerts
- Dental Clinics & Bus
- High & moderate-risk food premises inspections
- Residential Care Facility inspections
- Harm reduction – street health clinics, nursing shift on the VAN
- Vaccine cold chain inspections & some community catch up clinics
- Vector Borne Disease Program
- Air Quality & Climate Change
- Mental health & street outreach
- Naloxone distribution
- Epidemiology & evaluation
- Rabies investigations
- Tobacco Enforcement – *complaint-based only*
- Urgent health hazard complaint investigations
- Vaccine management and delivery
- Response to reports of food-borne illness and other urgent health hazards
- Fixed premise & child care inspections (routine)
- Recreational water facility inspections
- Small drinking water inspections
- Special event inspections
- Health inspection public disclosure notices

Status of Public Health Services 2021

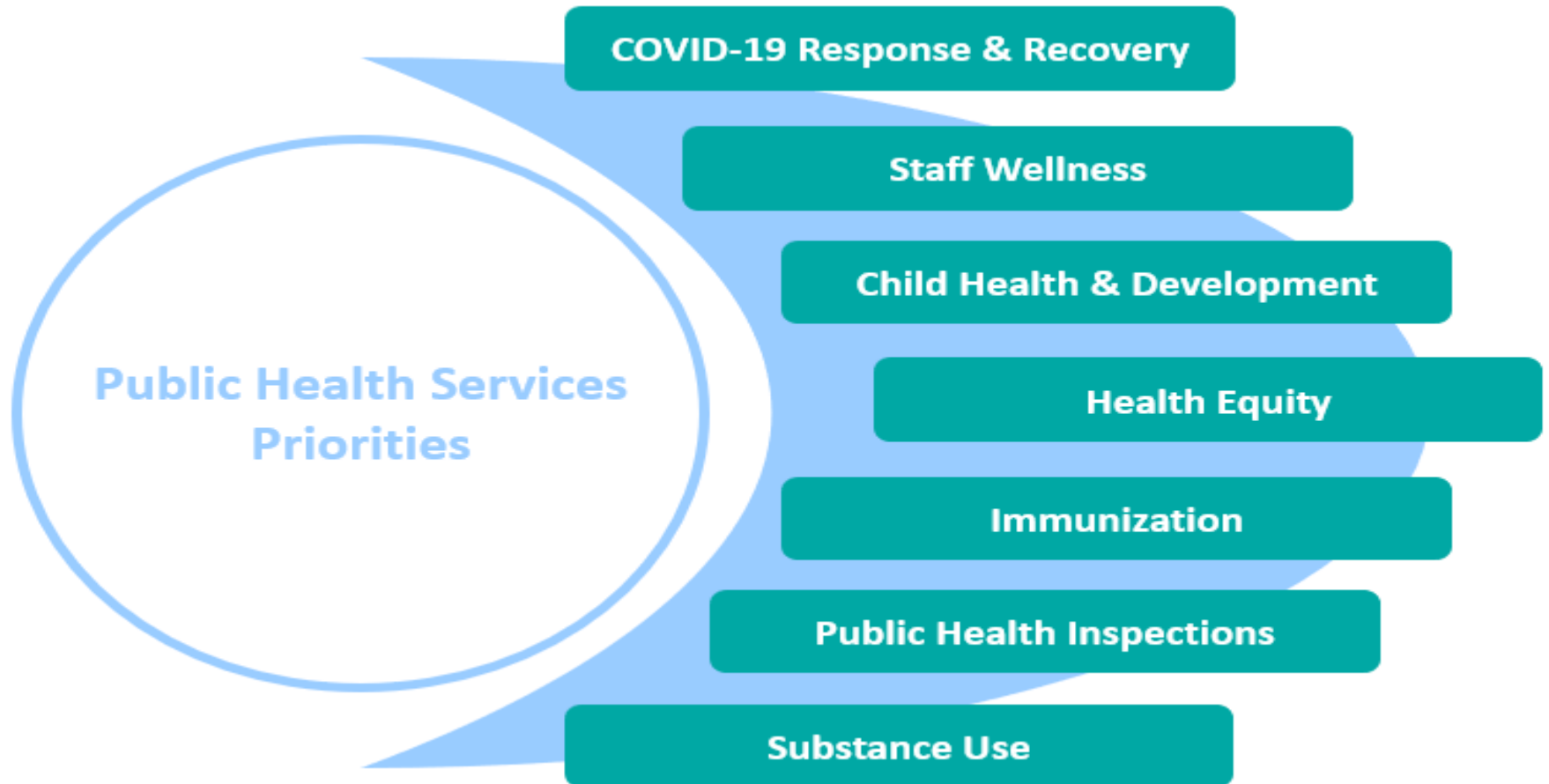
On hold

- School Board Liaison Public Health Nurses (virtual school support, priority projects)
- School program (*non COVID-19*)
- School program (universal service delivery and development of resources)
- Tobacco Enforcement (non complaint based)
- Tobacco cessation clinics
- Drug Strategy
- Prenatal & parenting groups, face to face home visiting
- Dental Clinics – additional treatment capacity
- Food Safety – non urgent complaints
- Comments on building/planning applications
- Inspections of low-risk food premises
- Health Hazards – non urgent complaints and reviews
- Tobacco Hotline
- Lyme tick submissions
- Pest control inspections

Areas of Achievement & Innovation



PHS Priorities as capacity allows for reopening



What's next? It depends on.....



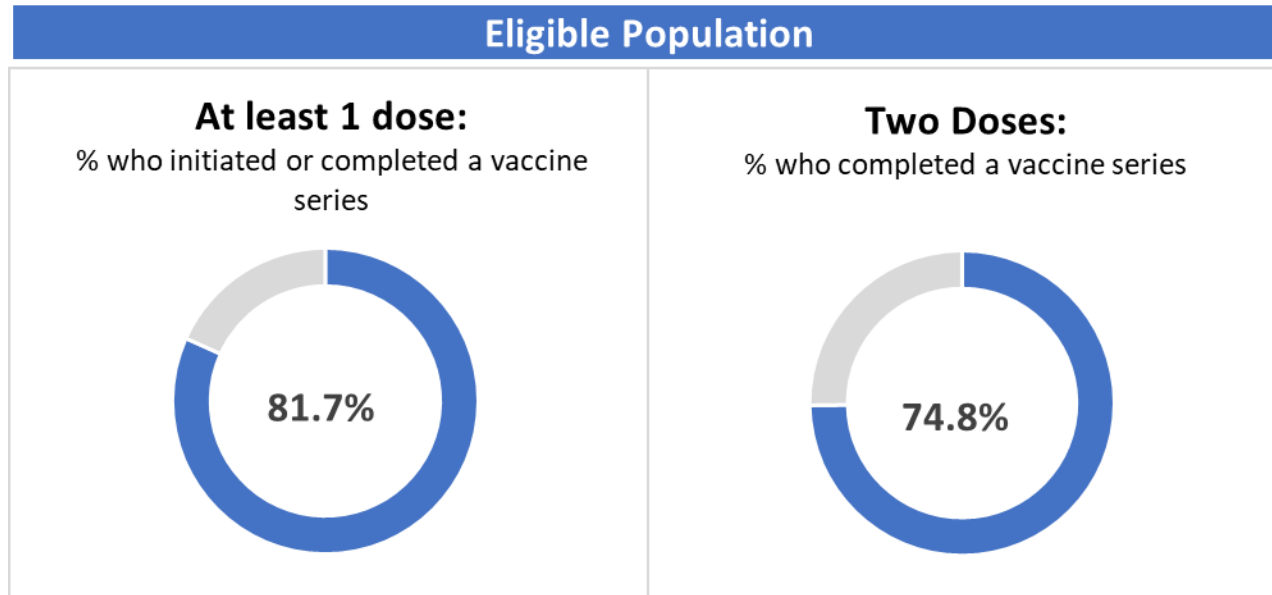
Adapted from: [@Epidemiologic Triad- Agent, Host, Environment - Epidemiology - Microbe Notes](#)

COVID VACCINE UPDATE

Melissa Biksa, Manager – COVID-19 Vaccine

COVID-19 Vaccine – Overall Coverage

Estimated as of End Of Day September 16, 2021



Note: Includes Hamilton residents and individuals vaccinated in Hamilton who cannot be assigned to a health unit region.

Eligible population includes individuals born in 2009 or earlier.

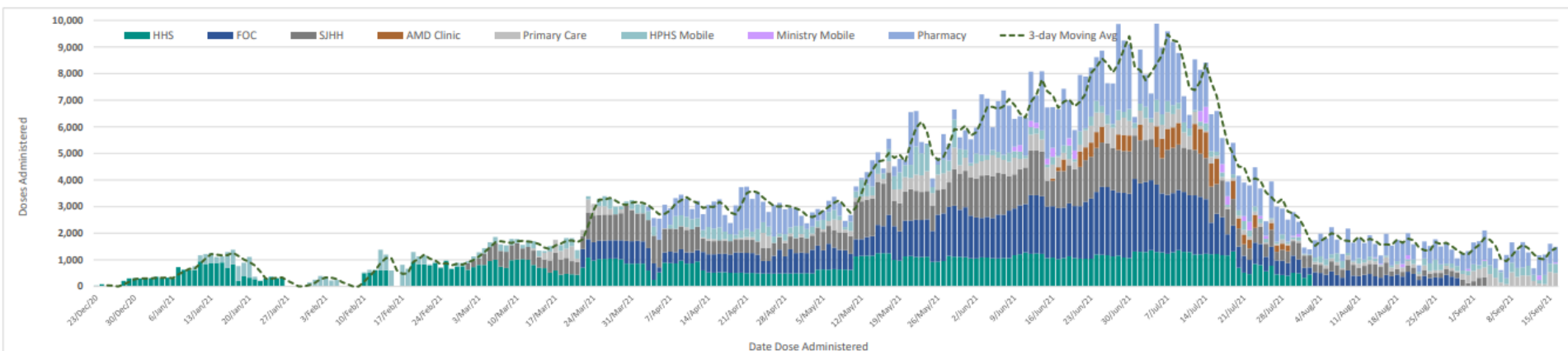
Sources: IntelliHealth (COVAXon Data Load); IntelliHealth (Population Projections, 2020).

COVID-19 Vaccine – Vaccine Distribution Over Time

Estimated as of End Of Day September 16, 2021

Product	Pfizer	Moderna	AstraZeneca
Total doses administered	558,988	202,967	43,026

Total Doses Administered in Hamilton by Day

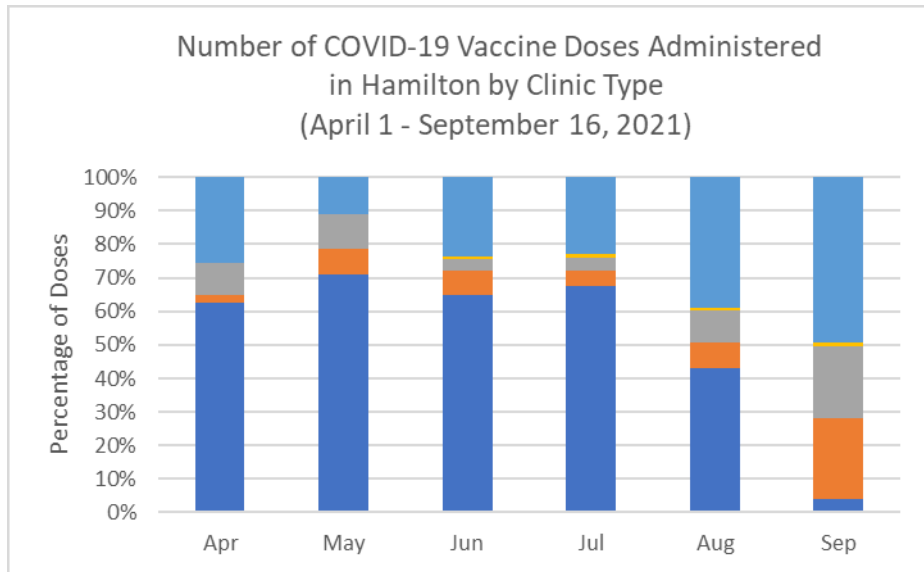
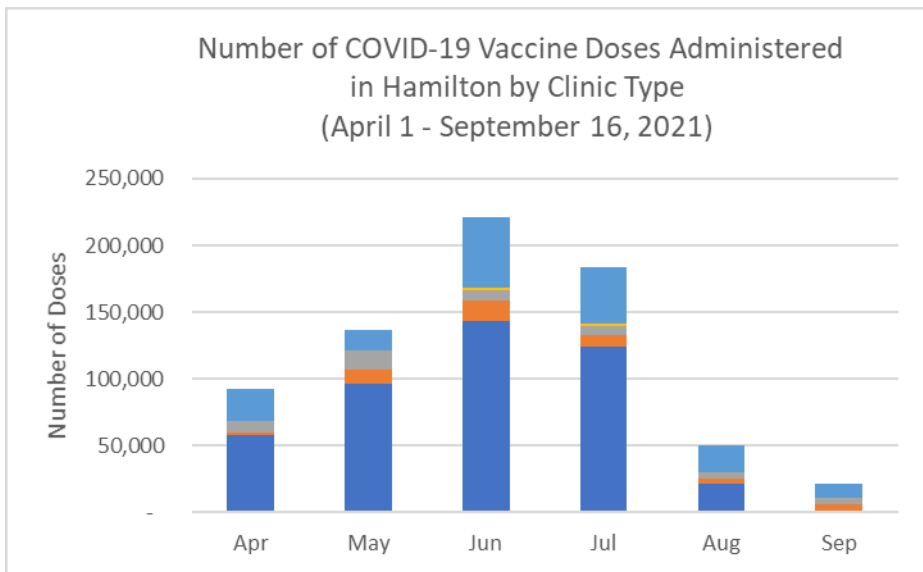


Source: IntelliHealth (COVAXon Data Load).

COVID-19 Vaccine – Vaccine Distribution Over Time

Estimated as of End Of Day September 16, 2021

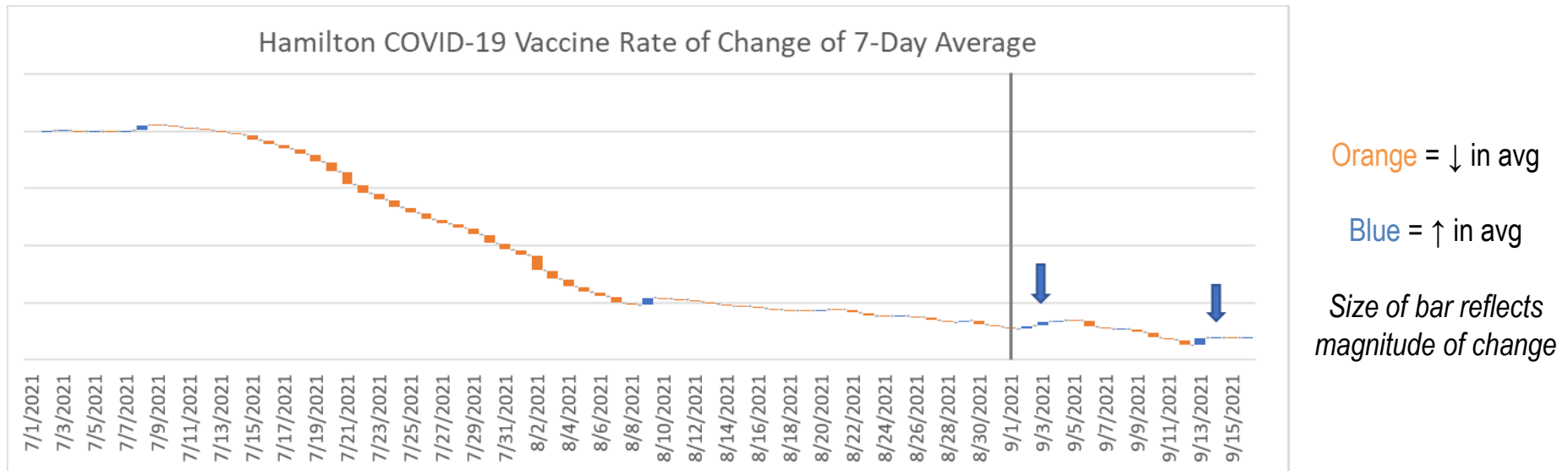
■ Large scale clinic
 ■ Primary care clinic
 ■ Mobile/pop-up clinic
 ■ Ministry clinic
 ■ Pharmacy



Source: IntelliHealth (COVAXon Data Load).

COVID-19 Vaccine – Vaccine Distribution Over Time

Estimated as of End Of Day September 16, 2021



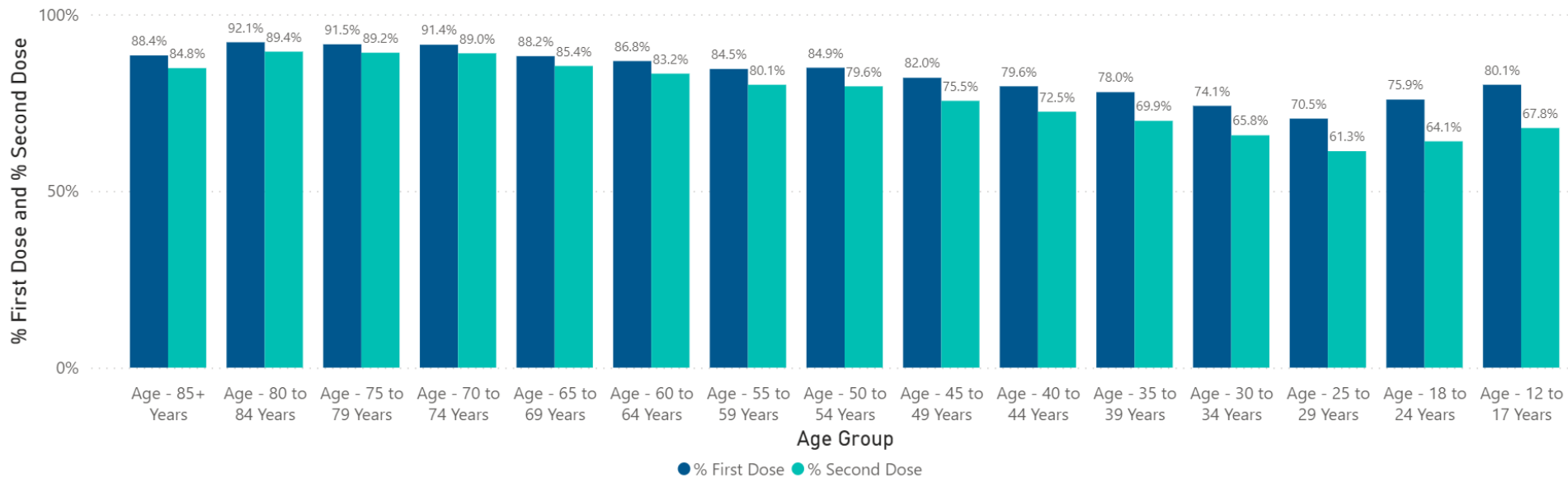
- Overall decline in 7-day average leading up to September 1, 2021 announcement (rapid in July 2021, slow and steady in August 2021)
- Periods of increase in 7-day average (September 2-4, 2021 and September 13-16, 2021) not observed since early July 2021

Source: IntelliHealth (COVAXon Data Load).

COVID-19 Vaccine – Coverage by Age

Estimated as of End Of Day September 16, 2021

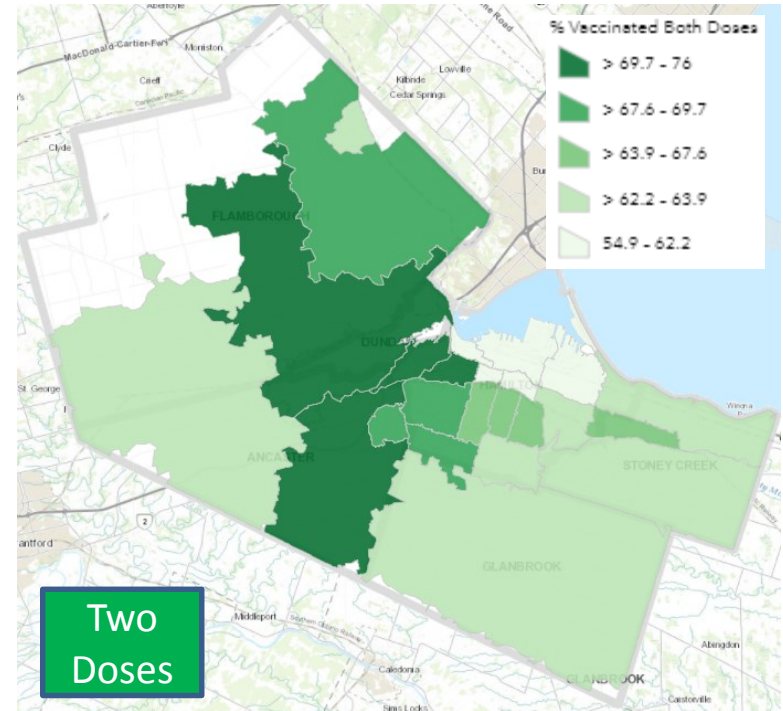
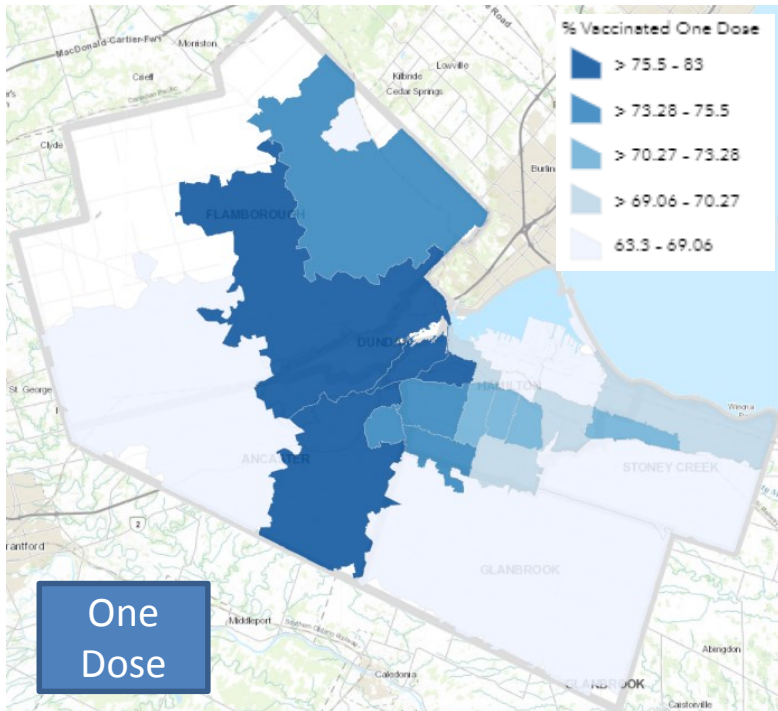
% Vaccinated by Age Group



Sources: IntelliHealth (COVAXon Data Load); IntelliHealth (Population Projections, 2020).

COVID-19 Vaccine – Coverage by Forward Sortation Area

Estimated Vaccine Coverage by Forward Sortation Area (All Ages) (up to September 12, 2021)



Source: ICES COVID-19 Dashboard, Applied Health Research Questions (AHRQ) # 2021 0950 080 000. Toronto: ICES; 2020.

Notes:

1. Coverage estimates are for all ages and include ages in the estimated population size that may not be eligible for vaccination. Estimates are therefore lower than overall coverage for the eligible population.
2. Interpret with caution. Numerators may be under-counted due to missing or incorrect postal codes in COVAXon; denominators may be under-estimated due to limitations of enumerating people in the Registered Persons Database (ICES).
3. Some FSAs cross multiple health regions and include a mix of Hamilton and non-Hamilton residents, especially LOR.

	Vaccine Coverage (Eligible Population) up to August 8, 2021		Vaccine Coverage (Eligible Population) up to September 12, 2021	
FSA (Approximate Geography)	Estimated % vaccinated with ≥1 dose	Estimated% vaccinated with 2 doses	Estimated % vaccinated with ≥1 dose	Estimated% vaccinated with 2 doses
Average/Total	78.2%	68.6	82.0%	74.9%
L8B (Waterdown Area)	81.4%	74.8%	84.0%	79.3%
L8E (Lower East)	75.5%	65.1%	80.0%	72.0%
L8G (Lower East)	77.7%	69.2%	81.1%	74.9%
L8H (Lower Central)	69.2%	57.9%	74.0%	65.3%
L8J (Upper East)	76.2%	66.7%	80.8%	73.4%
L8K (Red Hill Valley)	74.5%	64.6%	78.6%	71.2%
L8L (Lower Central)	68.5%	55.9%	73.7%	63.9%
L8M (Lower Central)	72.4%	61.6%	76.7%	68.2%
L8N (Lower Central)	74.8%	62.1%	78.9%	69.9%
L8P (Lower West)	81.9%	73.6%	84.8%	78.9%
L8R (Lower Central)	75.0%	61.5%	79.3%	70.1%
L8S (Lower West)	88.0%	77.8%	92.0%	84.1%
L8T (Upper Central)	78.9%	69.3%	82.7%	75.7%
L8V (Upper Central)	77.5%	67.6%	81.8%	74.3%
L8W (Upper Central)	76.7%	67.0%	80.9%	73.6%
L9A (Upper Central)	78.4%	68.1%	82.7%	75.1%
L9B (Upper Central)	80.5%	71.9%	84.4%	78.3%
L9C (Upper West)	81.9%	72.5%	86.0%	78.9%
L9G (Ancaster Area)	84.9%	78.8%	87.5%	82.9%
L9H (Dundas Area)	85.6%	79.6%	87.6%	83.5%
L9K (Ancaster Area)	82.3%	74.9%	85.4%	79.5%
L0R** (Mostly Rural)	72.1%	63.8%	75.6%	69.6%

COVID-19 Vaccine Coverage by Census Tracts (“neighbourhoods”)

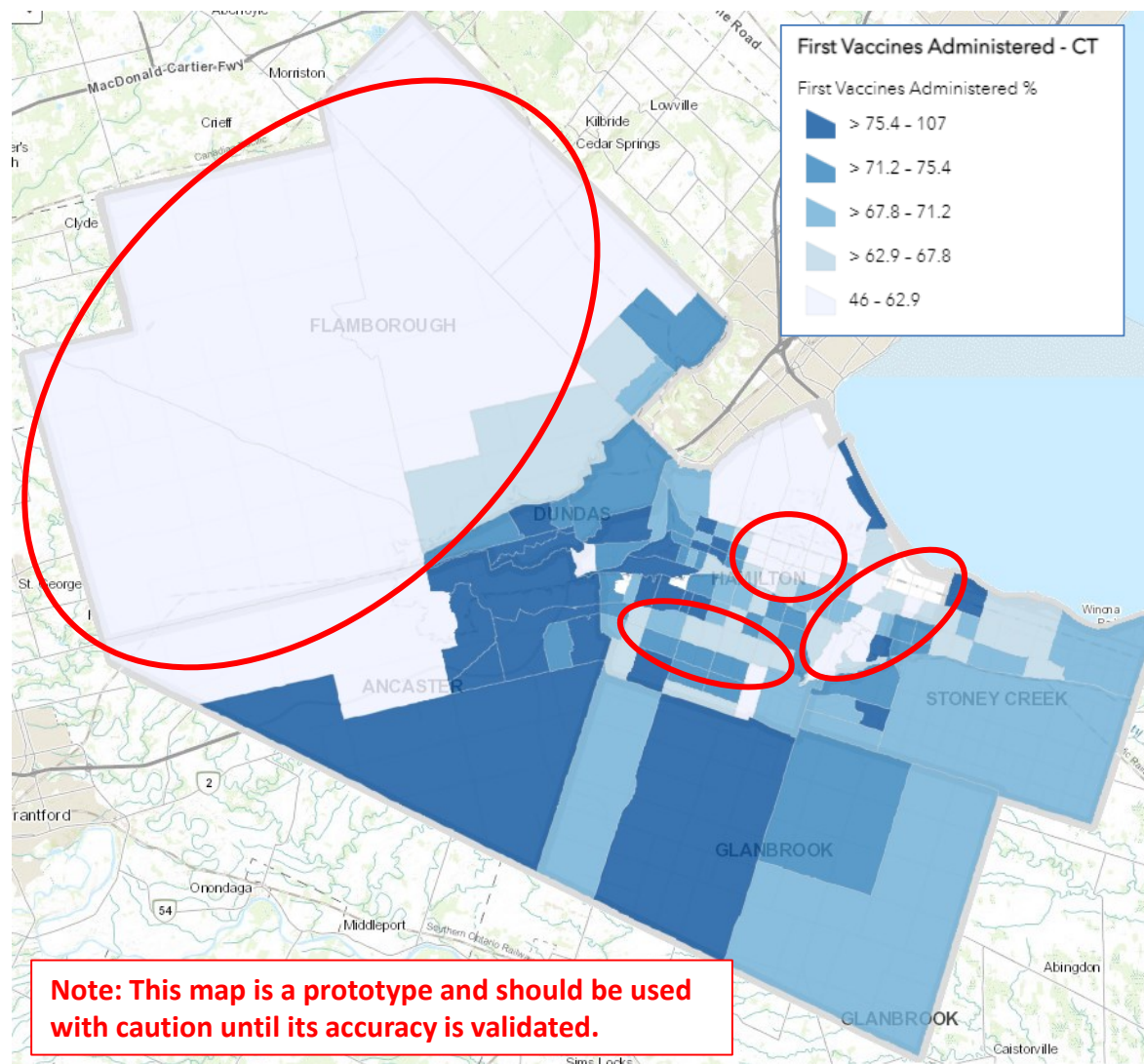
Areas requiring greater focus:

Lower Central Hamilton

Flamborough

Red Hill Valley / East End

Mountain Pockets around the Linc



COVID-19 Vaccination – Last Mile Strategy Update

- Renewed push through mobile clinics
 - Opportunistic vaccination
 - Hyper local clinic opportunities
- Public Health Mobile Teams– 3 Areas of Focus
 1. Census Tract Areas
 2. Schools & Post-Secondary Institutions
 3. Workplaces

Last Mile Strategy - Highlights

- 59 Clinics at 33 Locations

High density buildings, parks, malls, restaurants, cafes, libraries, community events

In addition:

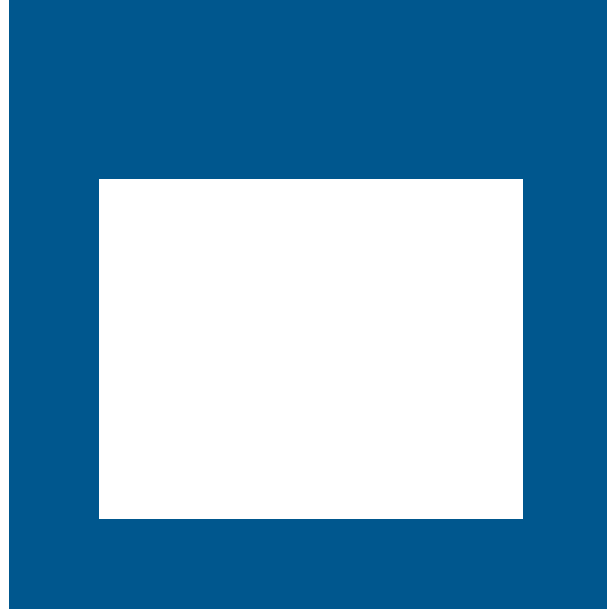
- High Schools – 36 Clinics
- Post-Secondary – 4 Clinics
- Rec Centres – 30 Clinics
- Workplaces – 3 Clinics
- Ministry of Health – 9 Clinics



Key Messages

- Key to remember: Time to full immunity = 6 weeks
- Don't wait to vaccinate!
 - Visit <https://www.hamilton.ca/coronavirus/covid-19-vaccination> for clinic options





QUESTIONS?