

Public Health Services COVID-19 Situation Report & Organizational Update

Board of Health
August 11, 2021

Overview

1. Overall Status Update
2. COVID-19 Situation Report
3. Scarsin Forecast Update
4. Performance Metrics
5. COVID-19 Vaccine Update
6. Last Mile Strategy

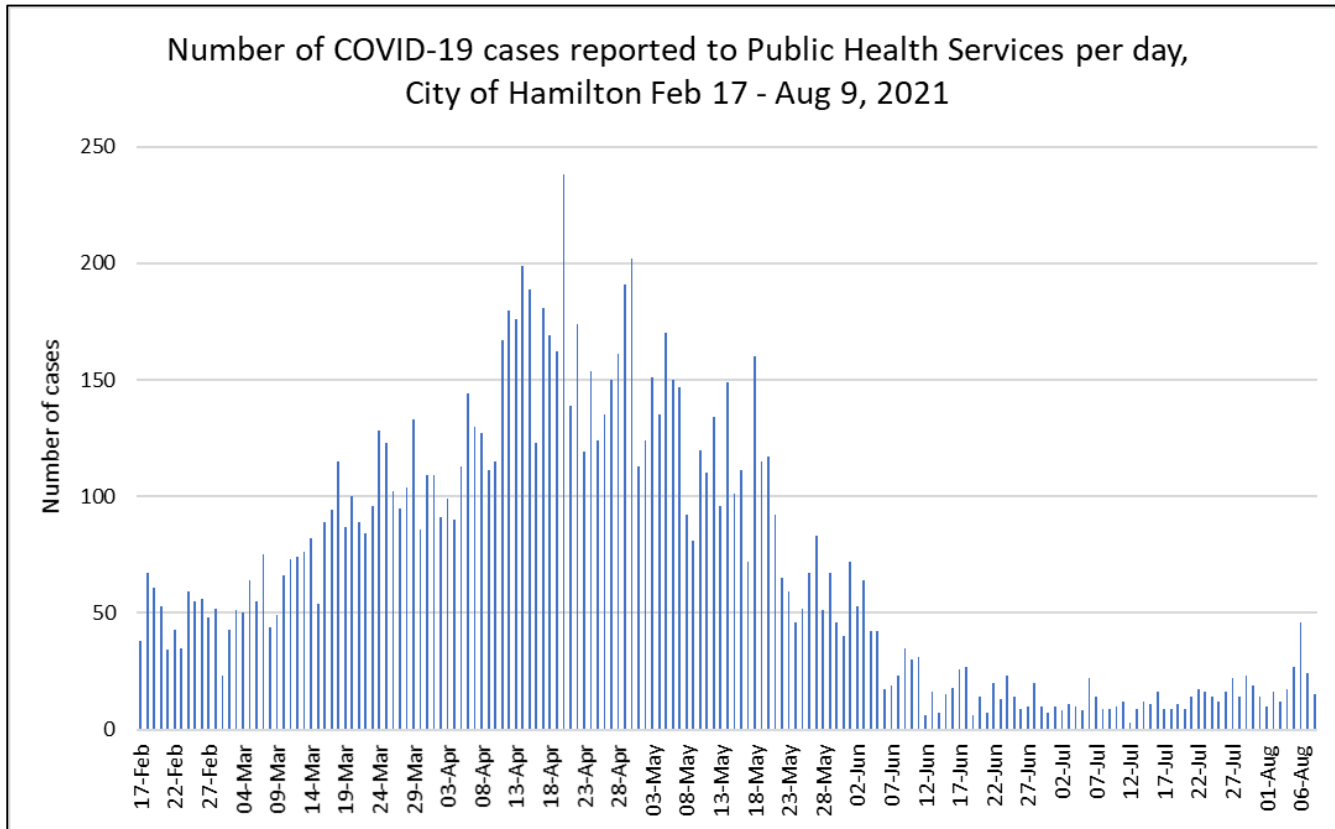
Overall Status

- Hamilton is seeing an increase in COVID-19 case activity and outbreaks.
- Scarsin forecast predicts a fourth wave is likely in the fall due to the increase in inter-personal contacts associated with reopening. This is primarily driven by transmission of the Delta variant among those not fully vaccinated (including those <12 years of age).
- Underscores importance of receiving two doses of vaccine as soon as possible to have strong protection against COVID-19 and Delta variant.
- As of August 9, 2021 there were 746,535 doses given; 77.5% of Hamiltonians 12yrs+ vaccinated with 1 dose and 68.3% vaccinated with both doses.
- Achieving equitable and high levels of vaccination coverage continues to be major focus of vaccine program.

SITUATION REPORT

Stephanie Hughes, Epidemiologist

Reported cases



Key Messages

- COVID-19 case activity has recently increased
- As of August 9, 2021, the average number of cases reported per day to Hamilton Public Health was 22

Phases of COVID-19 in Hamilton

WAVE 3: Pre-Peak

Feb 17 – Apr 10, 2021
(Almost 2 months)

- 4,243 cases reported
- 131 outbreaks
- 301 hospitalizations and 59 deaths
- Case counts following wave 2 had not yet fallen back to baseline, when activity began to rise and wave 3 commenced
- Infections were most commonly due to direct contact with other known cases of COVID-19 and undetermined sources

WAVE 3: Peak

Apr 11 – May 7, 2021
(Almost 1 month)

- 4,323 cases reported
- 94 outbreaks
- 225 hospitalizations and 34 deaths
- There was an increase in cases associated with COVID-19 outbreak activity
- The majority of cases reported shifted from the original strain to variants (predominantly the Alpha variant (B.1.1.7))

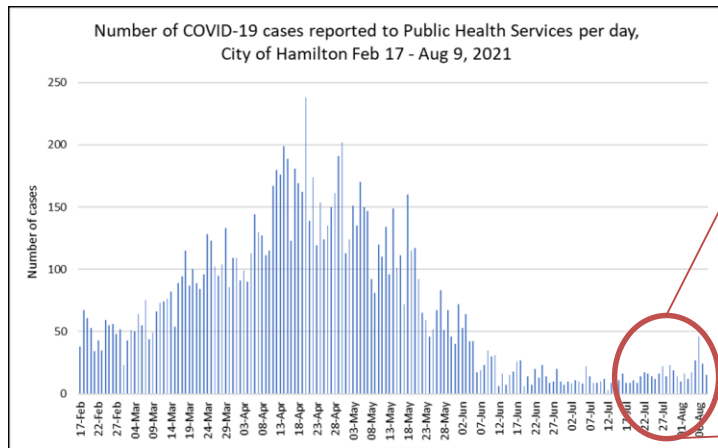
WAVE 3: Post-Peak

May 8 – Jul 16, 2021
(Almost 2 months)

- 2,996 cases reported
- 67 outbreaks
- 191 hospitalizations and 31 deaths
- Infections have been most commonly due to direct contact with other known cases of COVID-19 and undetermined sources
- Outbreak activity remained low
- Variant activity shifted from predominantly Alpha (B.1.1.7) to Delta (B.1.617.2)

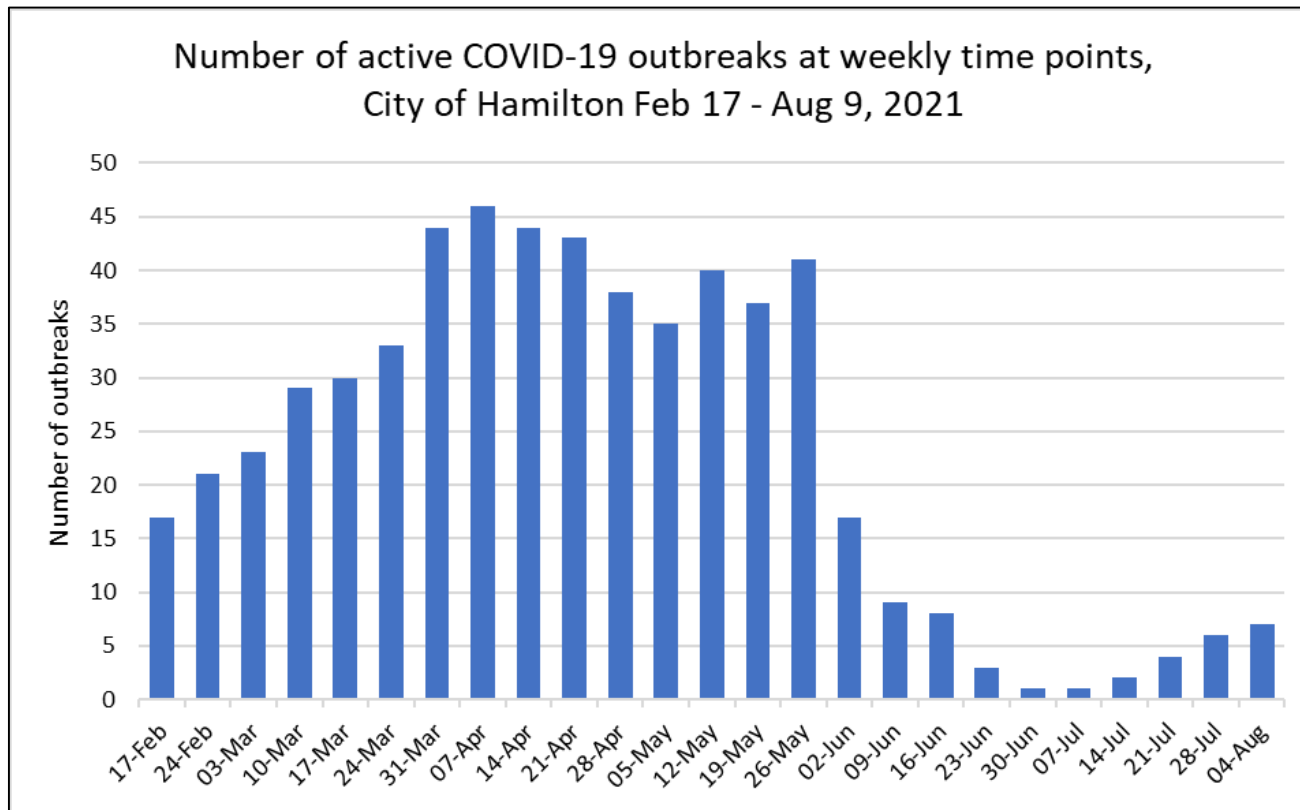
Phases of COVID-19 in Hamilton

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Jul 17 – Aug 9, 2021
(Almost 1 month)



- 386 cases reported
- 11 outbreaks
- 21 hospitalizations and 4 deaths
- Infections continue to be most commonly due to direct contact with other known cases of COVID-19 and undetermined sources
- Outbreak activity has once again increased
- The Delta variant (B.1.617.2) is now dominant in Hamilton and across Ontario

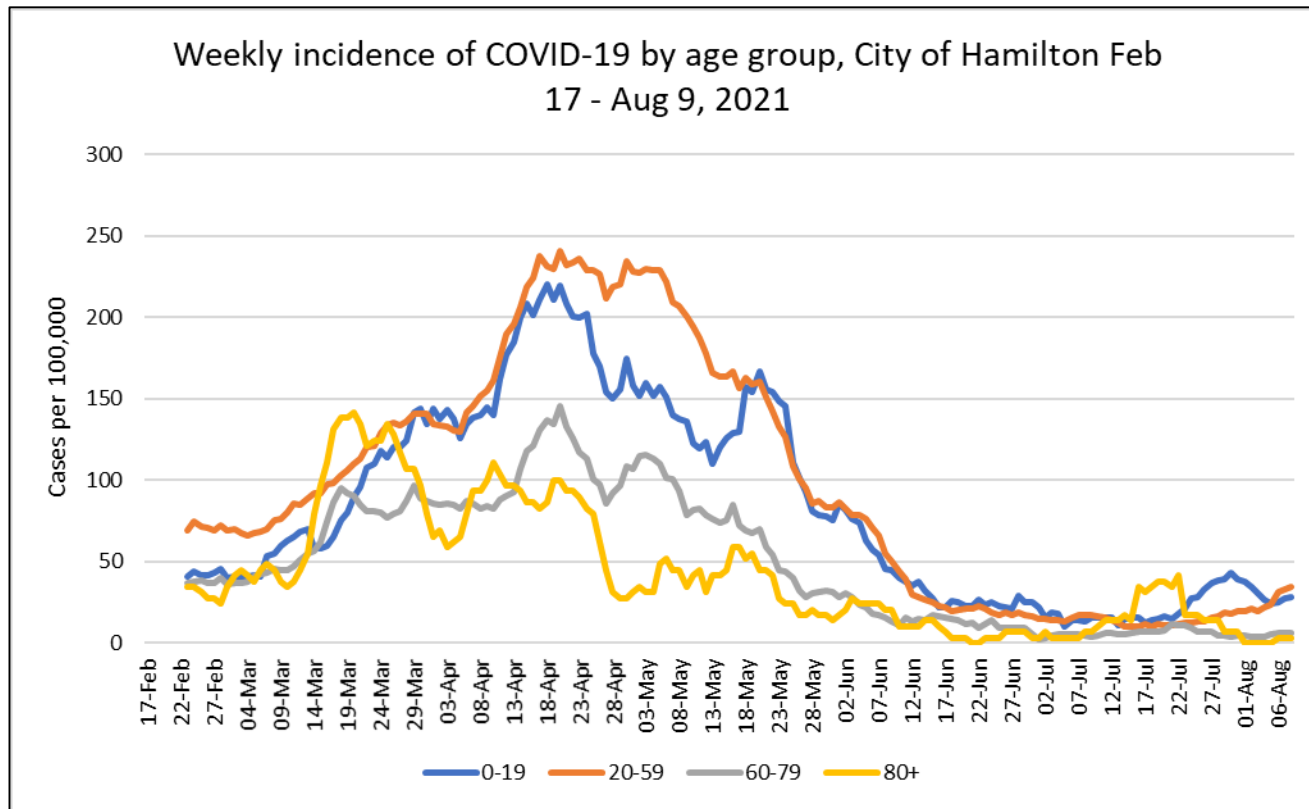
Active outbreaks



Key Messages

- The number of active COVID-19 outbreaks in recent weeks has increased
- As of Wed, Aug 4, 2021 there were 7 active COVID-19 outbreaks occurring

Affected age groups



Key Messages

- The recent increase in COVID-19 activity has been predominantly younger/middle-aged individuals (0-59 years)
- The increase in cases aged 80yrs+ in July 2021 was due to long-term care home outbreak activity

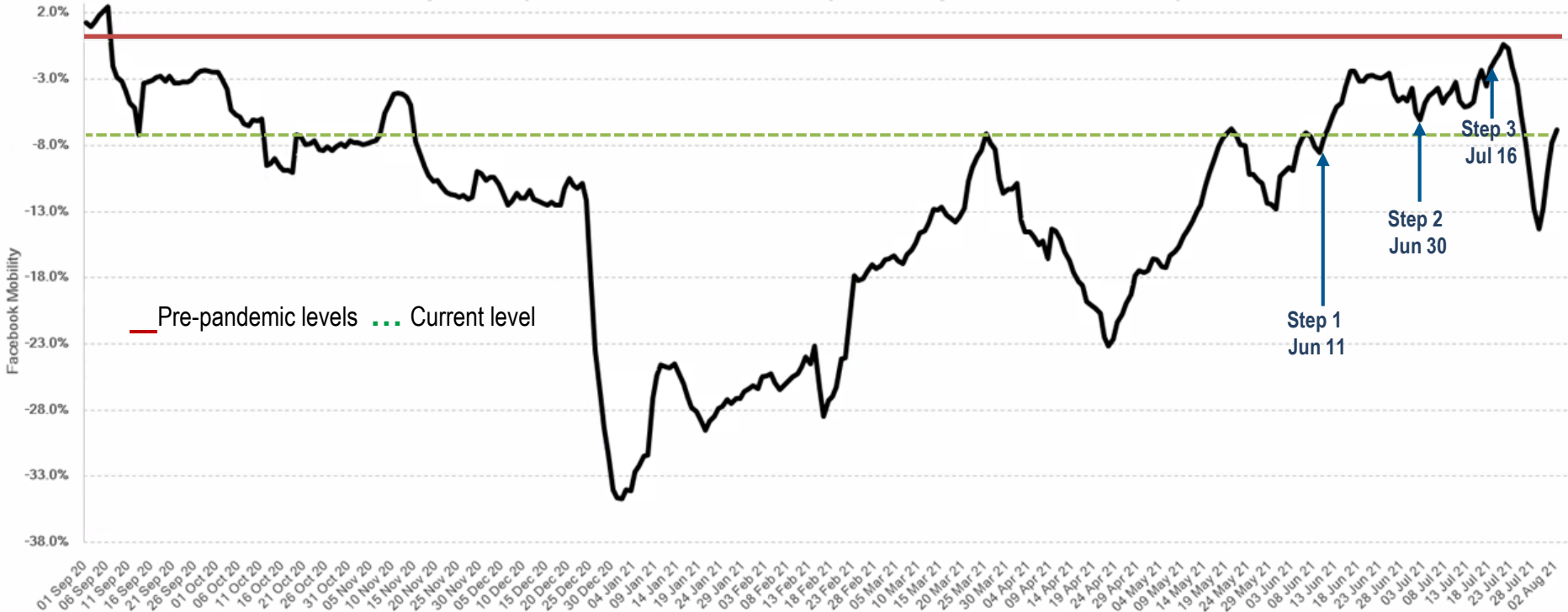
SCARSIN FORECAST

Ruth Sanderson, Epidemiologist

Scarsin Forecast

- Reopening in the fall combined with the highly contagious Delta variant poses an increased risk, particularly for those who are not fully vaccinated
- Anticipate that a fourth wave may occur between now and the end of December 2021
 - severe outcomes such as hospitalization and death may be mitigated by vaccination
 - over 15,000 cases could be avoided in Hamilton with continued public health measures into December 2021 as compared to reducing measures down to zero by December 2021 starting in mid-October 2021 (vaccination levels at current 70% of those 12+)
 - over 10,000 cases could be avoided in Hamilton with increased vaccination rates to 80% in October above current 70% of those 12yrs+

Scarsin Forecast – Overall Mobility in Hamilton

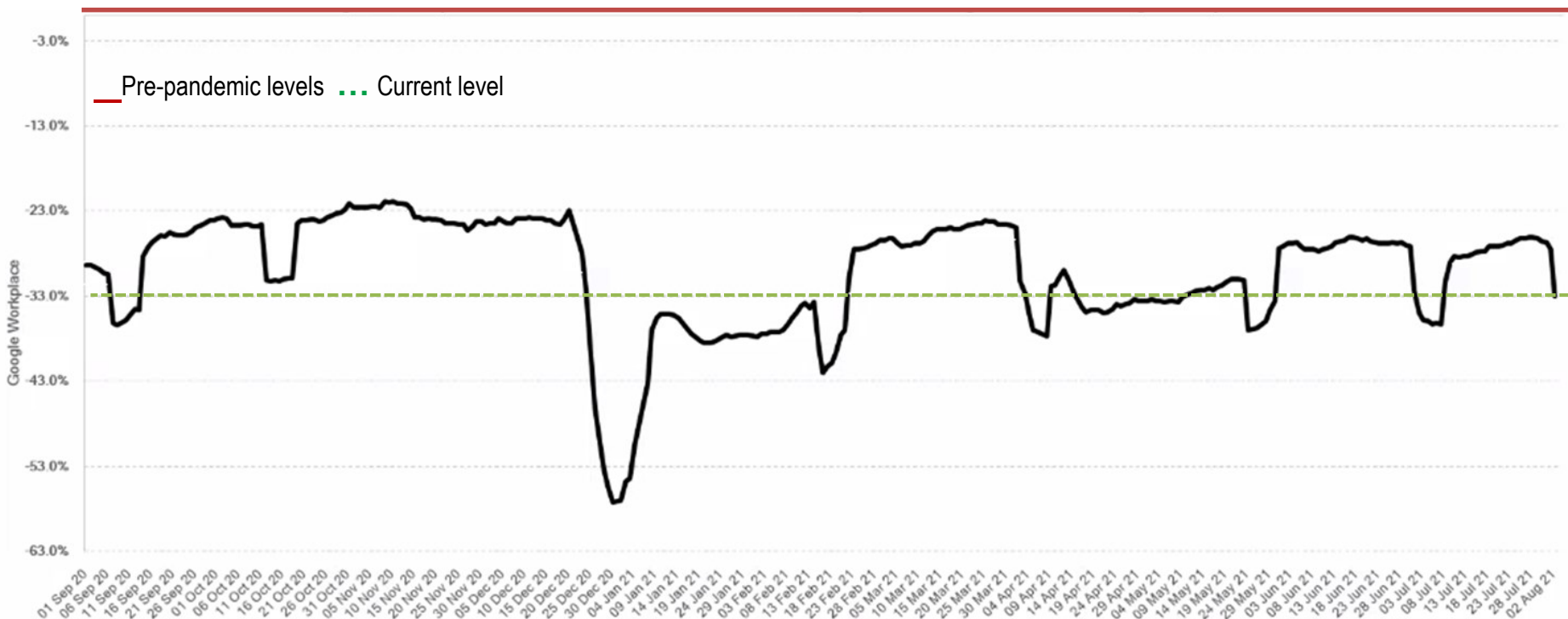


Data Source: Scarsin Decision Support System retrieved Aug 8, 2021

Key Messages:

- Mobility levels have generally continued upward with re-opening. As with other holidays, mobility decreased just before the August 2021 long week-end and is now rebounding back up towards pre-pandemic levels.

Scarsin Forecast – Workplace Mobility in Hamilton



Data Source: Scarsin Decision Support System retrieved Aug 9, 2021

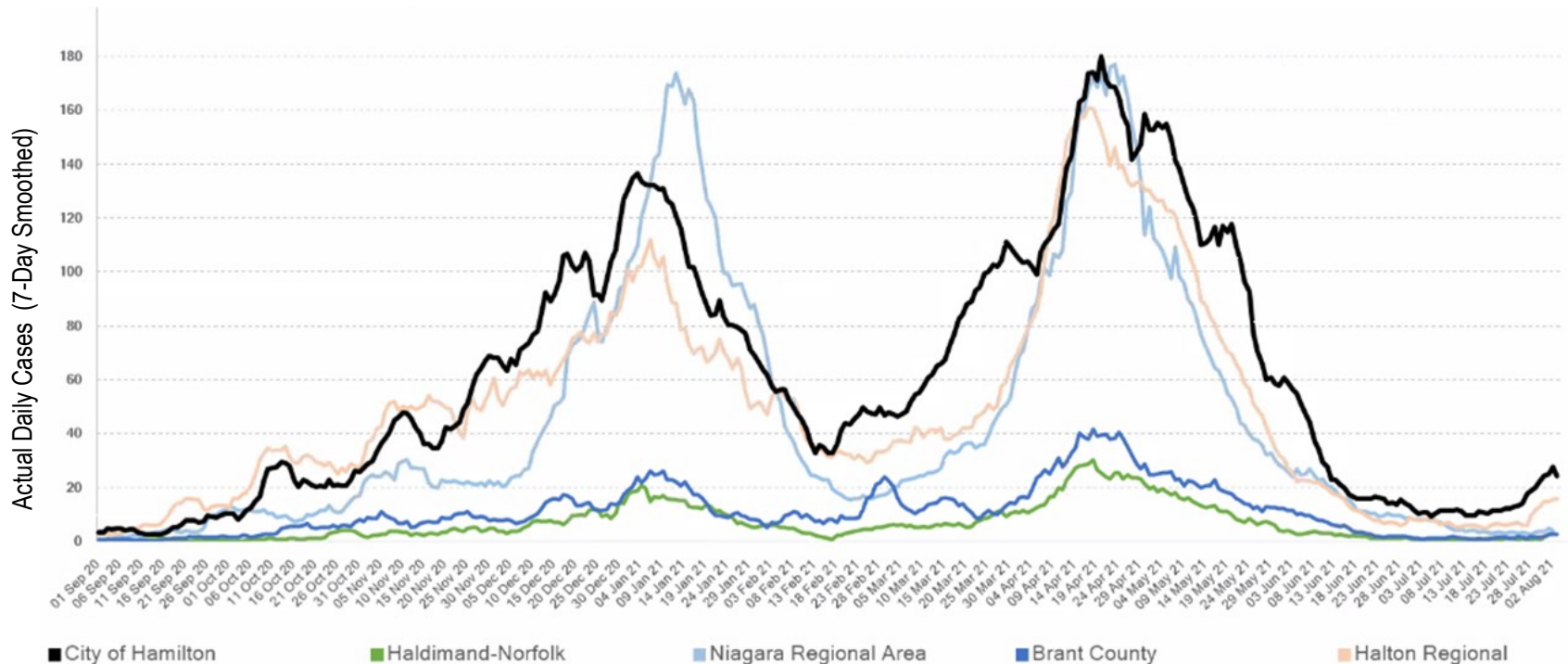
Key Messages:

- Workplace mobility has remained relatively stable since the end of May 2021 at approximately -25% with a recent dip down to -33% that likely reflects the August 2021 long weekend.

Scarsin Forecast

COVID-19 Daily Cases

Regional Comparison Public Health Units to Hamilton



Data Source: Scarsin Decision Support System retrieved Aug 9, 2021

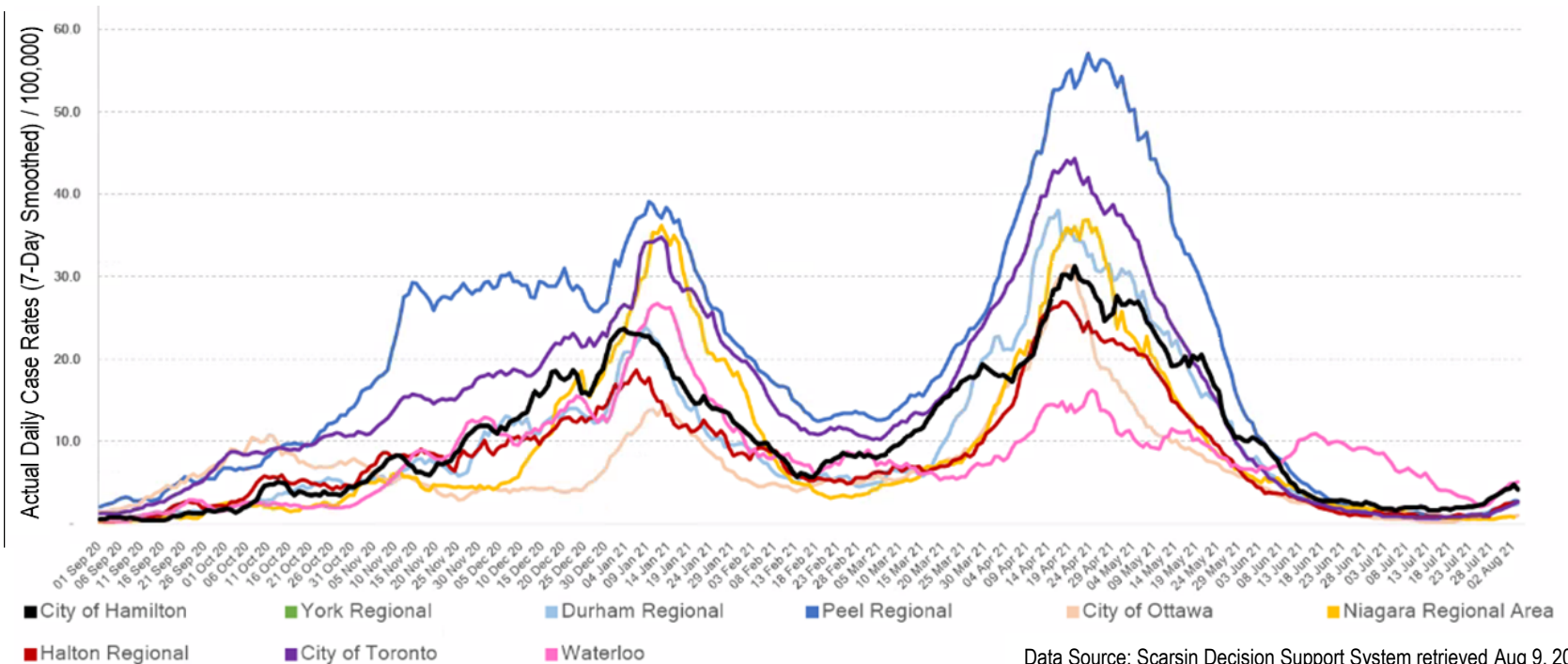
Key Messages:

- Hamilton currently contributes the highest cases in the health services catchment area. Hamilton and Halton cases are increasing while others in the catchment area remain steady or decline.

Scarsin Forecast

COVID-19 Daily Case Rates (per 100,000)

Selected Comparison Public Health Units to Hamilton



Key Messages:

- Rates are increasing in Hamilton and other major health unit areas. Waterloo converged to levels of other areas from their Delta variant related increase and are now increasing at rates similar to Hamilton.

Scarsin Forecast – Overview of Scenarios

Scenario 1

70% vaccination of 12yrs+ and reduced public health measures in mid-October 2021 down to zero by mid-December 2021

Scenario 2

80% vaccination of 12yrs+ and reduced public health measures in mid-October 2021 down to zero by mid-December 2021

Scenario 3

70% vaccination of 12yrs+ and maintaining public health measures with gradual reductions in fall

Scenario 4

80% vaccination of 12yrs+ and maintaining public health measures with gradual reductions in fall

All scenarios assume:

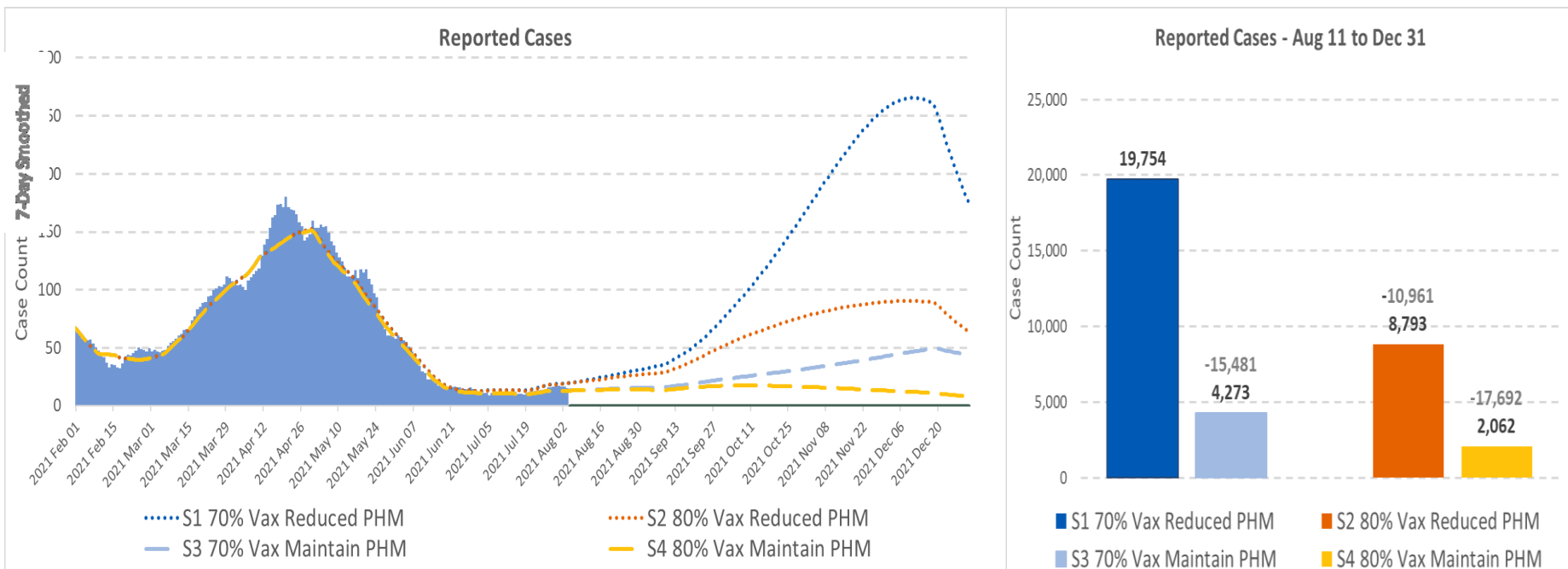
- Delta variant circulating at 95% of cases in Aug 2021
- Reduced case severity probability of
 - hospitalization or death given vaccination
- Immunity curves adjusted for vaccine type
- First dose immunity adjusted for Delta
- Reduced dosing interval to 4 weeks in July 2021
- Increased contact transmission in Aug/Sep 2021
- Mobility increases in late summer/fall
- Fall in-class learning schools/ universities
- Schools will require masking at least initially
- 70% vaccination rate reachable in 12yrs+

-Updated data:

- Case data retrieved Thursday, August 5, 2021
- Updated mobility data
- Vaccination data retrieved Wednesday, August 4, 2021

Scarsin Forecast

COVID-19 Cases, Scenario Comparisons among Hamiltonians



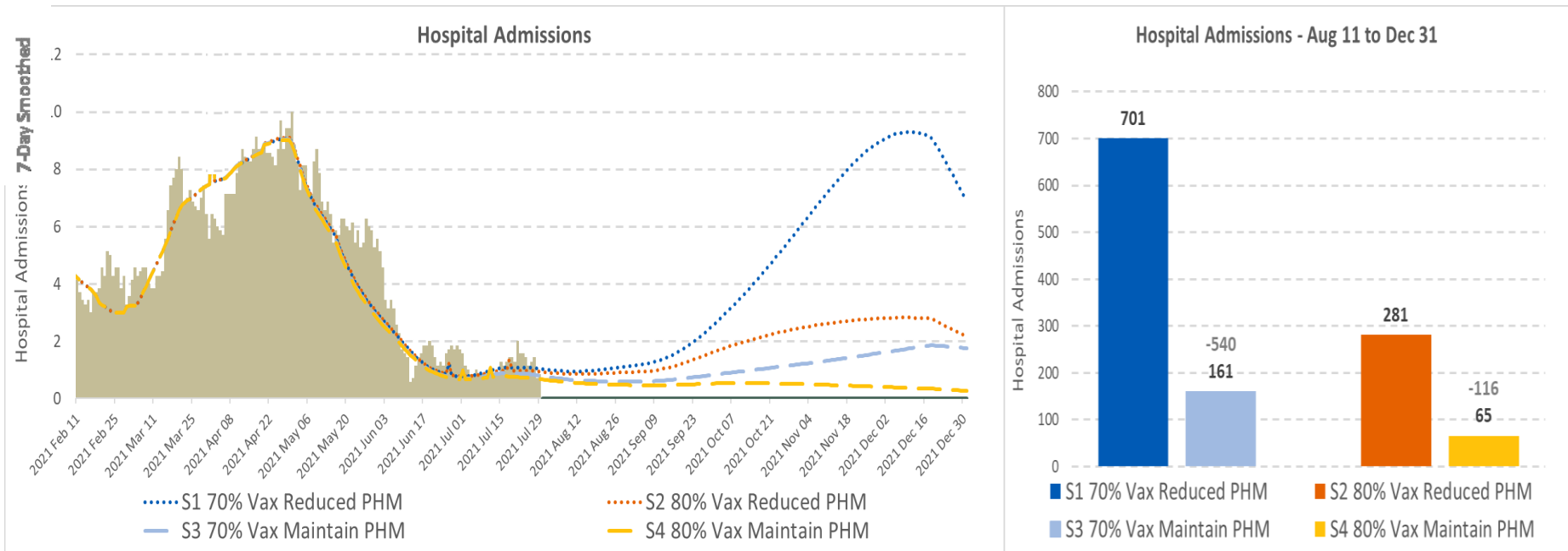
Data Source: Scarsin Decision Support System, scenarios created Aug 7, 2021

Key Messages:

Maintaining public health measures (dash lines) and increasing vaccination levels (orange/yellow lines) can reduce fourth wave cases. At 70% vaccination, over 15,000 cases could be prevented by maintaining public health measures and reduce the fourth wave below third wave levels.

Scarsin Forecast

COVID-19 Hospital Admissions, Scenario Comparisons among Hamiltonians



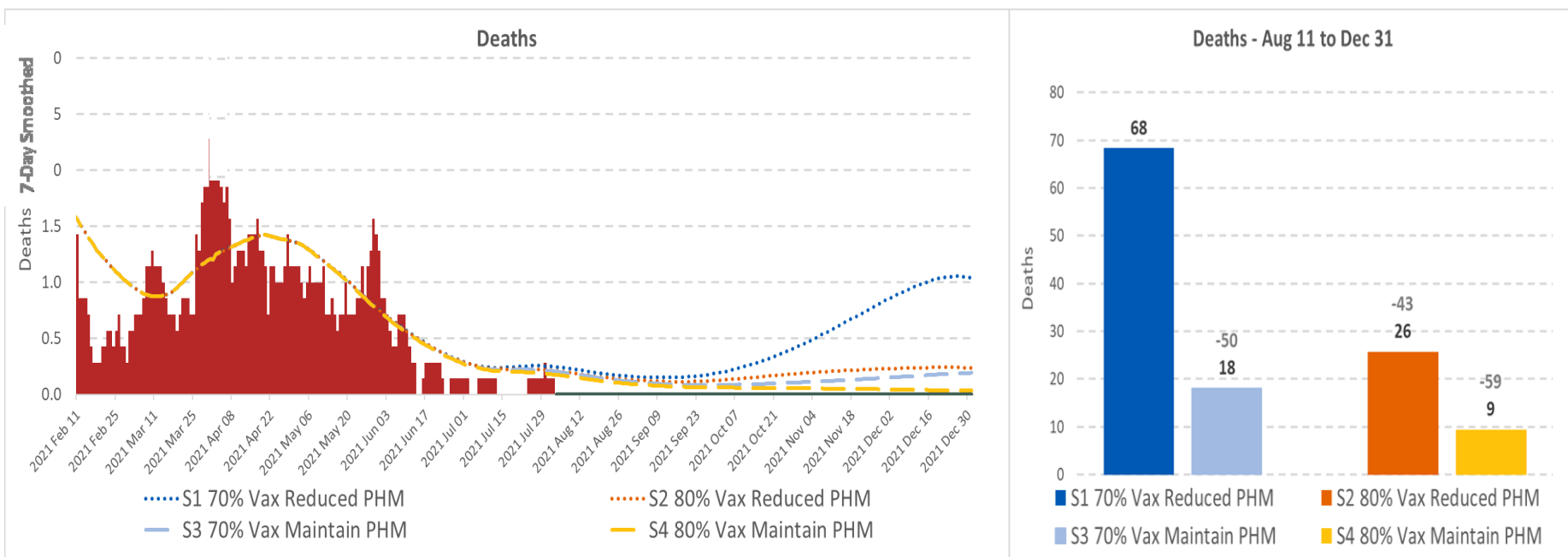
Data Source: Scarsin Decision Support System, scenarios created Aug 7, 2021

Key Messages:

Maintaining public health measures (dash lines) and increasing vaccination levels (orange lines) is predicted to also reduce hospitalizations. At 70% vaccination, over 500 hospitalizations could be prevented by maintaining public health measures.

Scarsin Forecast

COVID-19 Deaths, Scenario Comparisons among Hamiltonians



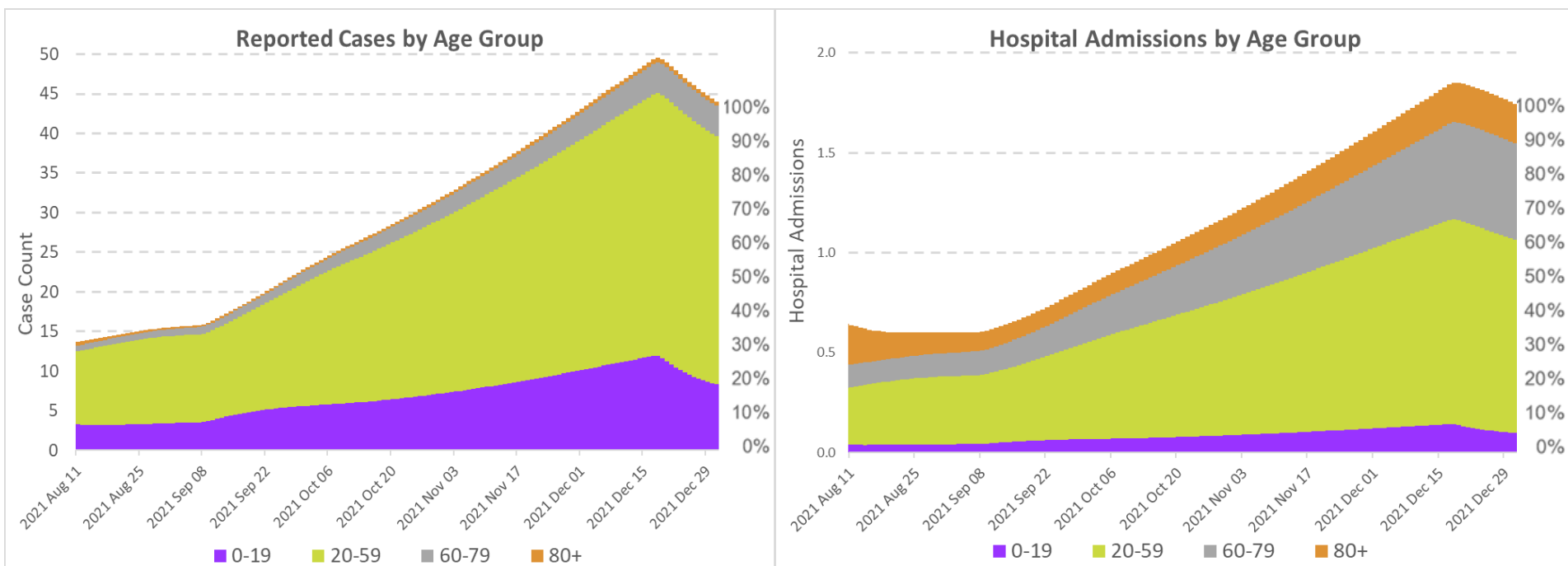
Data Source: Scarsin Decision Support System, scenarios created Aug 7, 2021

Key Messages:

Maintaining public health measures (dash lines) and increasing vaccination levels (orange lines) is predicted to also reduce deaths. At 70% vaccination, 50 deaths could be prevented by maintaining public health measures.

Scarsin Forecast

Age Group Difference for COVID-19 Cases and Hospital Admissions S3 – 70% Vaccination & Maintain Public Health Measures, Hamiltonians



Data Source: Scarsin Decision Support System, scenarios created Aug 7, 2021

Key Messages:

- Cases will primarily be among those 20-59 yrs and under 19 years old, whereas hospital admissions will be primarily among those 20-59yrs and older age groups.

Scarsin Forecast Summary

- Continued public health measures combined with increasing vaccination rates may mitigate a potential fourth wave in Fall 2021.

COVID PERFORMANCE METRICS

Michelle Baird,
Director – Epidemiology, Wellness, and
Communicable Disease Control Division

Performance Metrics

Epidemiology

	Previous (July 26)	Previous (August 2)	CURRENT (August 9)	Trend
Weekly incidence rate/100,000	15	20	25	↑
% positivity	2.0%	2.3%	3.3%	↑
Effective reproductive number (R_t)	1.22	1.26	0.97	--
% of community-acquired cases	32.5%	32.4%	35.8%	--
7 active COVID-19 outbreaks in the City of Hamilton as of Monday, August 9, 2021.				

Public Health System Capacity

	Previous (July 26)	Previous (August 2)	CURRENT (August 9)	Trend
% newly reported cases reached within 1 day of reported date	91.1%	89.9%	94.6%	--
% all newly identified high-risk contacts reached within 1 day of contact identification date	84.9%	80.2%	82.0%	--

Performance Metrics

Health System Capacity

	Hospital	Previous (July 26)	Previous (August 2)	CURRENT (August 9)
Overall adult acute medicine & surgical hospital occupancy/funded acute beds	SJHH	90%	81%	80%
	HHS	109%	103%	99%
Overall adult acute alternate level of care (ALC) hospital occupancy/funded acute beds	SJHH	14%	14%	12%
	HHS	9%	9%	10%
Overall adult intensive care unit (ICU) occupancy/funded ICU beds	SJHH	68%	59%	50%
	HHS	88%	80%	83%

SJHH: St. Joseph's Healthcare Hamilton

HHS: Hamilton Health Sciences

Surveillance Metrics

Vulnerable Populations

	Median (Past Year)	95 th Percentile (Past Year)	CURRENT (4-Week Average)	Trend
Mental health-related ED visits	168	204	162	
Substance misuse-related ED visits	80	92	94	
Violence-related ED visits	8	11	11	
Paramedic incidents for suspected opioid overdose	13	21	17	
Police response to persons in crisis	121	139	126	
Police response to domestic violence	132	148	133	

ED: Emergency Department

2021 Actual Values

2021 4-Week Moving Average

2020 Actual Values

COVID VACCINE UPDATE

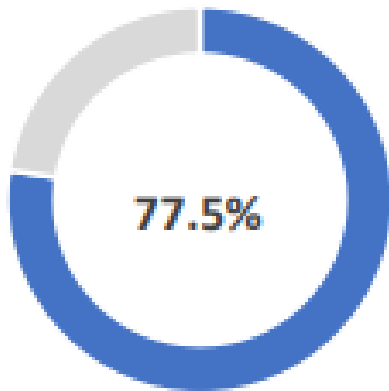
Melissa Biksa, Manager – COVID-19 Vaccine

COVID-19 Vaccine – Overall Coverage

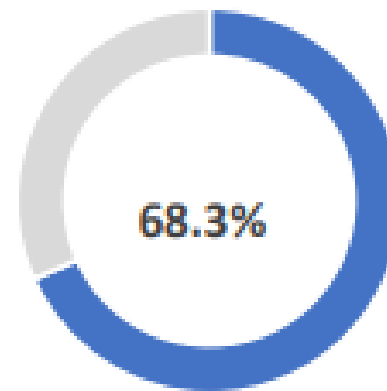
Estimated as of End Of Day August 9, 2021

Eligible Population (Age 12+)

At least 1 dose:
% who initiated or completed a vaccine series



Two Doses:
% who completed a vaccine series



Hamilton residents age 12yrs+ (n=519,560); Population Projections, 2021 (IntelliHealth)

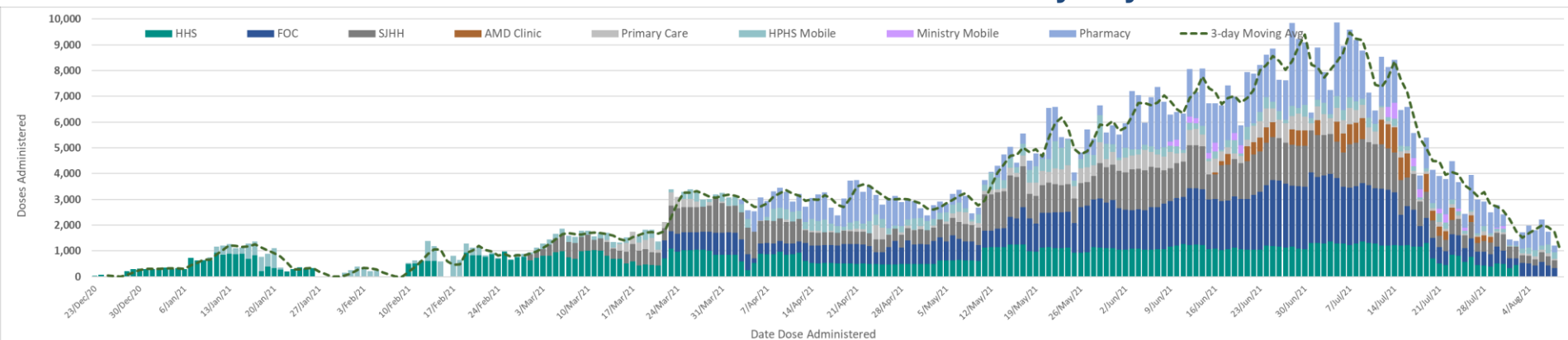
Note: Includes Hamilton residents and individuals vaccinated in Hamilton who cannot be assigned to a health unit region.

COVID-19 Vaccine – Distribution Over Time

Estimated as of End Of Day August 9, 2021

Product	Total doses administered
Pfizer	512,126
Moderna	191,423
AstraZeneca	42,986

Total Doses Administered in Hamilton by Day



Source: IntelliHealth (COVAXon Data Load)

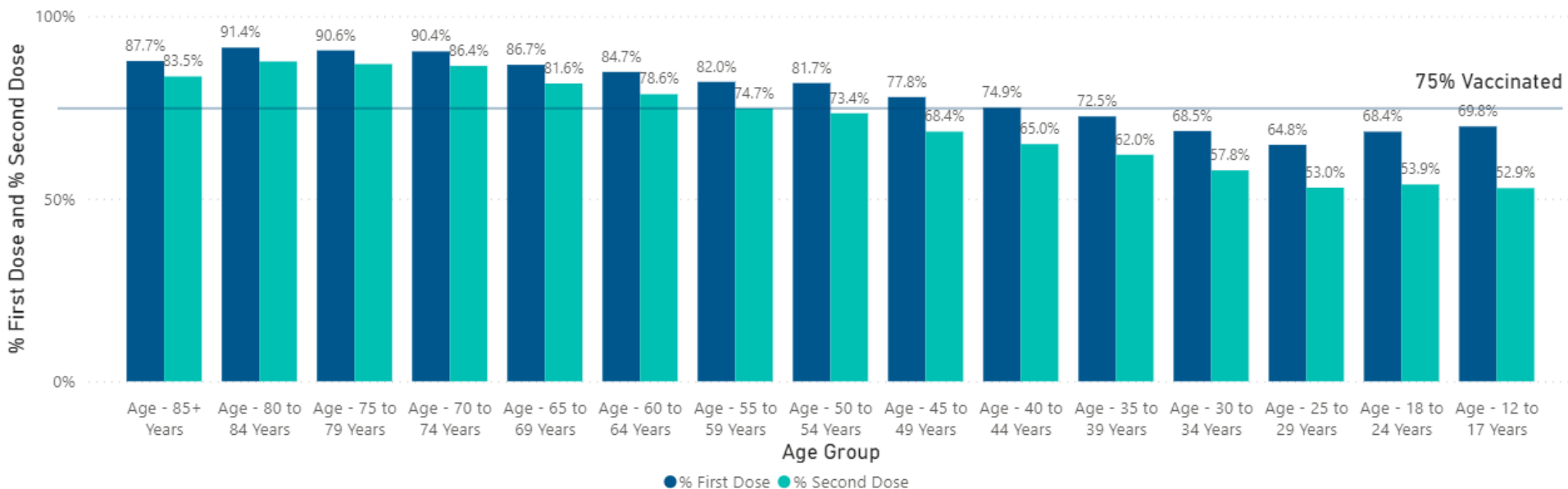
COVID-19 Vaccine – Coverage by Age

Estimated as of End Of Day August 9, 2021

Estimated COVID-19 Vaccine Coverage by Age Groups in Hamilton

The chart below describes vaccination progress by age group in Hamilton.

% Vaccinated by Age Group



Sources: IntelliHealth (COVAXon Data Load); Population Projections, 2021 IntelliHealth.

COVID-19 Vaccine – Coverage by Age

Hamilton & Comparators

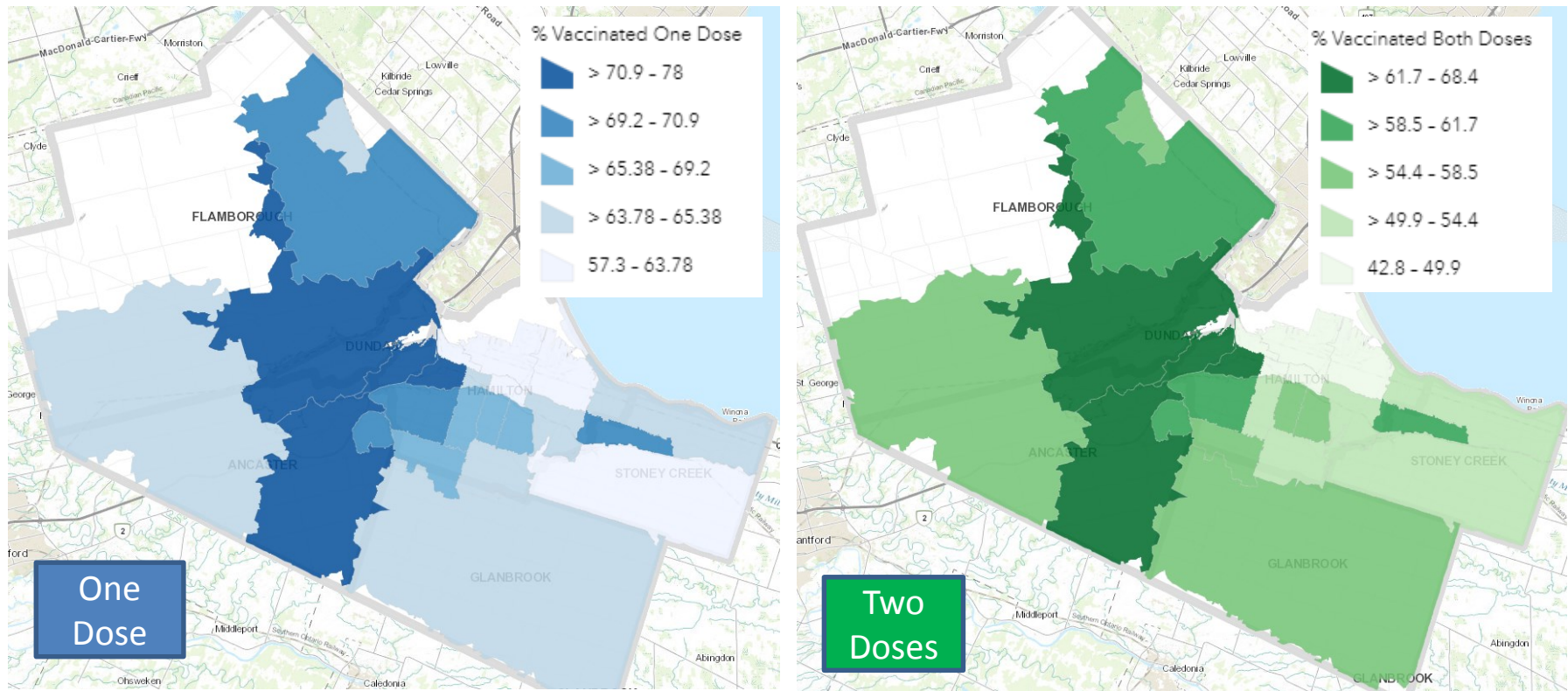
Key Message: Hamilton's vaccination rates for seniors are comparable to other health units but Hamilton's vaccination rates are lagging for adults and youth.

Age group (years)	% vaccinated with at least 1 dose – as of August 4, 2021							
	Hamilton	Ottawa	Niagara	Waterloo	London	Toronto	Peel	Ontario
12 to 17	66.7	81.3	65.0	74.0	75.9	76.5	75.0	74.0
18 to 29	66.9	70.4	62.6	71.2	69.8	71.8	77.0	71.8
30 to 39	70.5	76.6	72.5	75.5	73.2	73.0	72.9	75.5
40 to 49	75.5	84.2	76.9	79.3	79.6	78.8	79.4	80.5
50 to 59	81.1	88.0	80.7	82.7	81.8	85.4	85.7	84.5
60 to 64	85.9	90.5	88.0	86.6	87.9	89.6	87.6	89.6
65 to 69	88.2	93.1	90.9	88.1	90.6	88.5	87.3	91.0
70 to 74	92.1	95.0	92.5	91.7	93.9	90.2	88.8	93.3
75 to 79	90.9	97.2	91.4	92.4	92.6	88.5	88.9	92.9
80+	90.7	96.5	91.8	94.7	83.5	82.3	87.6	92.1
Total (all ages)	67.5	72.9	69.5	69.0	69.3	70.7	69.8	71.3

Source: Ontario's COVID-19 Data Tool, Public Health Ontario [Extracted 6 Aug 2021].
Ottawa, Niagara, Waterloo and London are considered Peer health units by Statistics Canada

COVID-19 Vaccine – Coverage by Forward Sortation Area

Estimated Vaccine Coverage by Forward Sortation Area (All Ages) (up to July 24, 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 adult (18+) 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.

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

Areas requiring greater focus:

Lower Central Hamilton:

- 1st dose coverage: 55-65%
- >12,000 unvaccinated

Flamborough:

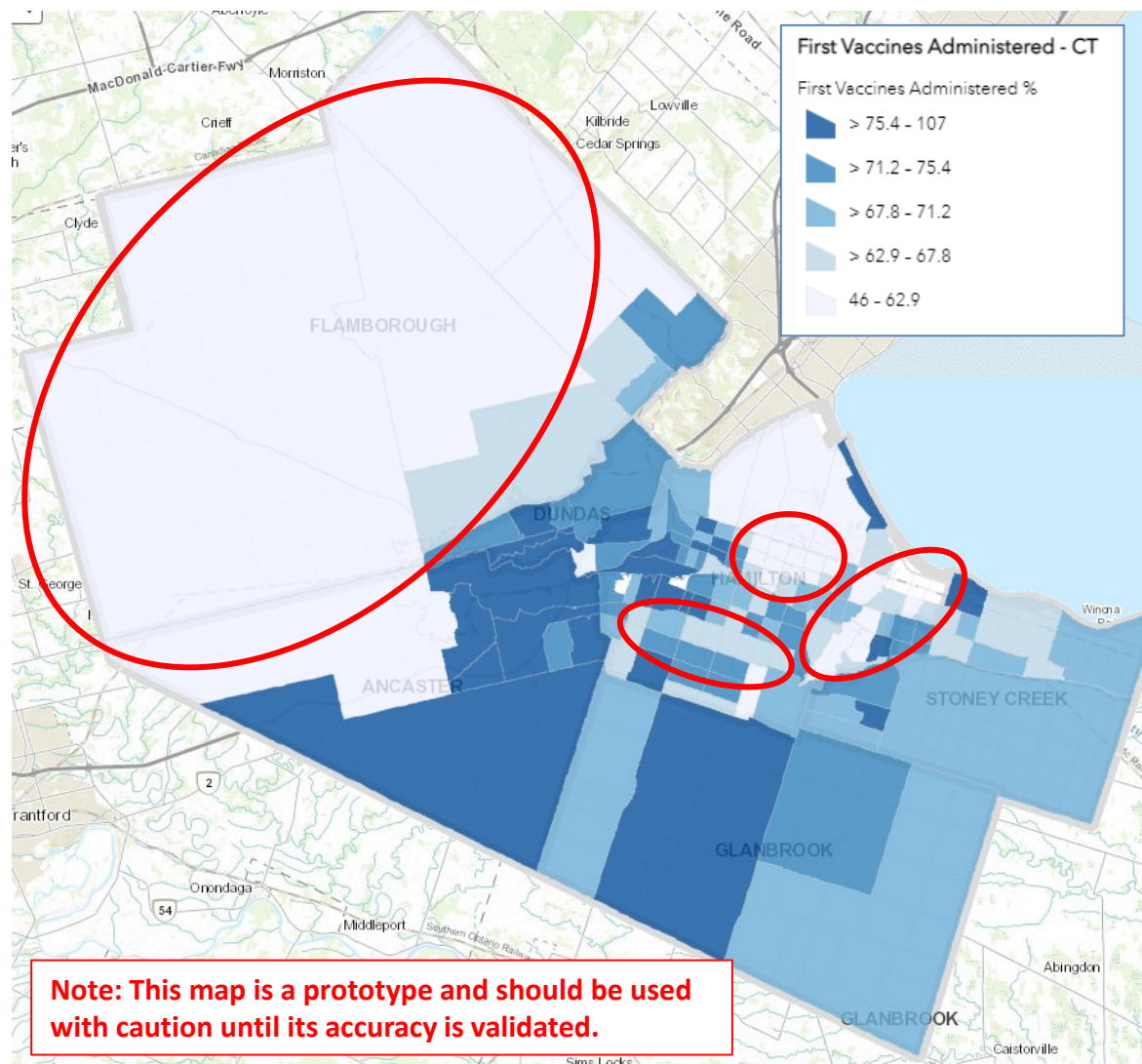
- 1st dose coverage: 55-65%
- >8,500 unvaccinated

Red Hill Valley / East End:

- 1st dose coverage: 60-70%
- >9,000 unvaccinated

Mountain Pockets around the Linc:

- 1st dose coverage: 60-70%
- >11,000 unvaccinated



COVID-19 Vaccination – Equity Trends

- **Poverty:** Hamilton neighbourhoods with higher poverty have significantly lower vaccine coverage and this gap has persisted over time.
- **Racialization:** The most racialized neighbourhoods in Hamilton have slightly lower vaccine coverage compared to least racialized neighbourhoods – this gap has narrowed from 9.2% (May 29, 2021) to 4.8% (July 31, 2021).
- **Immigration:** Hamilton refugees have lower vaccine coverage compared to other immigrant and Canadian-born Hamiltonians.

LAST MILE STRATEGY

Melissa Biksa, Manager – COVID-19 Vaccine

LAST MILE STRATEGY: Vaccination Coverage Goals

GOAL #1: 80% first dose / 75% second dose coverage *(age 12yrs+)*

- Number to vaccinate to achieve 80% first dose coverage
= **14,788 people** (as of August 9, 2021)
- Number to vaccinate to achieve 75% second dose coverage
= **37,399 people** (as of August 9, 2021)

GOAL #2: 80% first dose / 75% second dose coverage (age 12yrs+) in each Forward Sortation Area*

- 8 of 21 Forward Sortation Areas's have $\geq 80\%$ first dose coverage
- 3 FSAs have $\geq 75\%$ second dose coverage (as of August 2, 2021)
- Number to vaccinate to achieve 80% first dose coverage (age 12yrs+) in each Forward Sortation Area = **16,180** (as of August 2, 2021)*

*Excludes shared Forward Sortation Areas (LOR, NOB, N1R, and LOP).

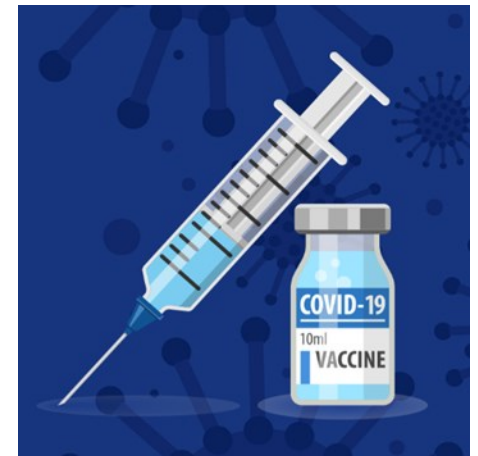
LAST MILE STRATEGY

Key to remember:

1st dose + 2nd dose + time to full immunity
= 6 weeks

Don't wait to vaccinate

“Call for arms....now”



LAST MILE STRATEGY

What Continues

- Second dose acceleration
- Multiple vaccination sites
 - 100+ pharmacies
 - Primary care hubs
 - Mobile pop-ups
 - Ministry of Health Outdoor Clinics
 - 1st & 2nd dose walk-ins
 - Community-led initiatives
 - Onboarding various providers
- Coordinated community outreach



LAST MILE STRATEGY

Vaccine Confidence

- Hyper-localized outreach near clinics in lower coverage neighbourhoods
- Coordinated community outreach
 - Led and supported by Vaccine Ambassadors, healthcare providers, and social influencers
 - Through one-on-one interactions, leveraging community partners, and tailored materials for priority populations
 - Community outreach funding opportunity

LAST MILE STRATEGY

Access

- Focus on opportunistic vaccination
 - going to places where people are and partnerships with community agencies
- Transition Public Health Services mobile clinics to smaller “hyper local” clinics
 - Located in lowest coverage neighbourhoods in high traffic areas
 - Bring to community events, rural locations
 - Explore within the school context including primary, secondary, post-secondary)
- Amplify existing tactics, including:
 - Transportation
 - Translation services
 - Evening hours

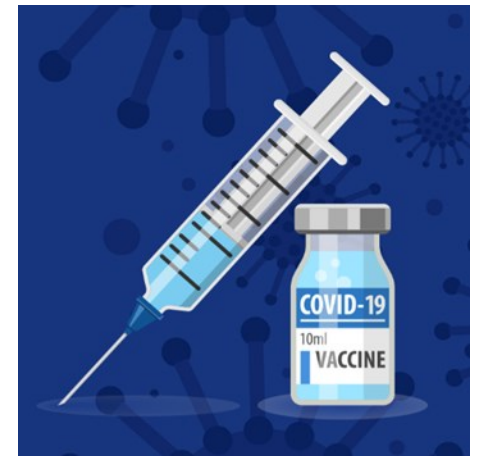
LAST MILE STRATEGY

Key to remember:

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= 6 weeks

Don't wait to vaccinate

“Call for arms....now”



Large-Scale Clinic Demobilization

- Large Scale Mass Immunization Clinics are currently winding down in Hamilton
 - Arcelor-Mittal Dofasco – Closed as of July 30, 2021
 - Hamilton Health Sciences Clinic (Wellington St) – Closed as of August 3, 2021
 - St Josephs Healthcare Hamilton Clinic (West 5th) – Closing as of August 17, 2021
 - First Ontario Centre Clinic – Closing as of August 29, 2021

COVID-19 Vaccination – Key Operational Highlights

- 1st and 2nd dose uptake has plateaued
- What's being done?
 - All clinics offering 1st and 2nd dose walk-ins
 - 2nd dose acceleration communication
 - Creative mobile clinics
 - Onboarding of various providers
 - Coordinated community outreach



QUESTIONS?