



Public Health Services COVID-19 Situation Report & Organizational Update

Board of Health

April 19, 2021

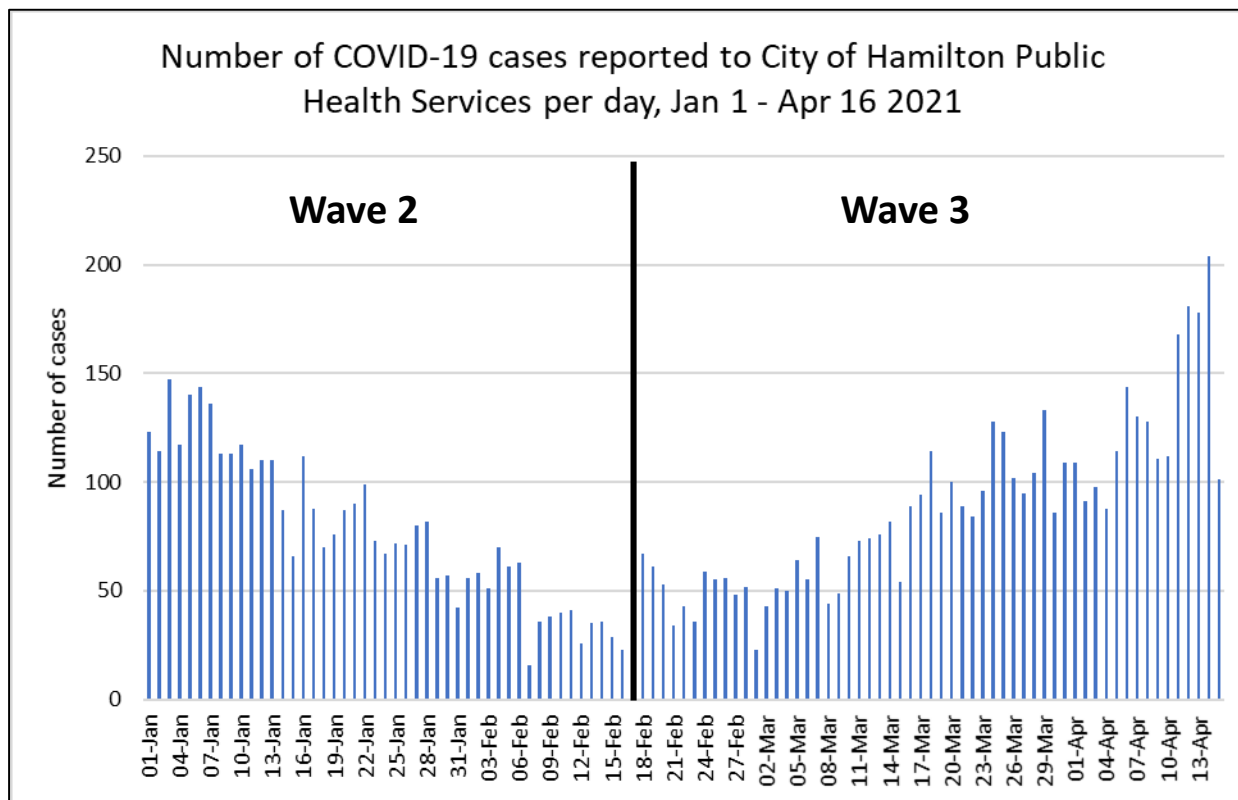
Overview

1. Overall Status Update
2. COVID-19 Situation Report
3. Scarsin Forecasting
4. Provincial Response Framework & Metrics
5. COVID-19 Vaccine Update

Overall Status

- COVID-19 case activity in Hamilton has surpassed the peak of Wave 2 and continues to increase. The percentage of cases that have screened positive for variants also continues to increase: 65% as of April 11, 2021
- Intensive care units are overwhelmed
- Scarsin forecasting predicts peak of Wave 3 in latter part of April / early May, 2021 – could see between 180-230 cases reported per day
- As of April 15, 2021 there were over 145,000 doses administered and 25.4% of eligible population vaccinated
- Rolling out Phase 2 of the provincial framework - incorporates approximately 300,000 Hamiltonians with a goal to have first doses to all in Phase 2 who want one by Summer 2021
- Continuing to follow public health measures is vital, even for those who have been vaccinated

Reported Cases



Key Messages

- COVID-19 case activity continues to increase during the pre-peak phase of wave 3
- Case levels have now surpassed the peak of wave 2
- As of Apr 16, 2021 the average number of cases reported per day to Hamilton Public Health is 155

Phases of COVID-19 in Hamilton

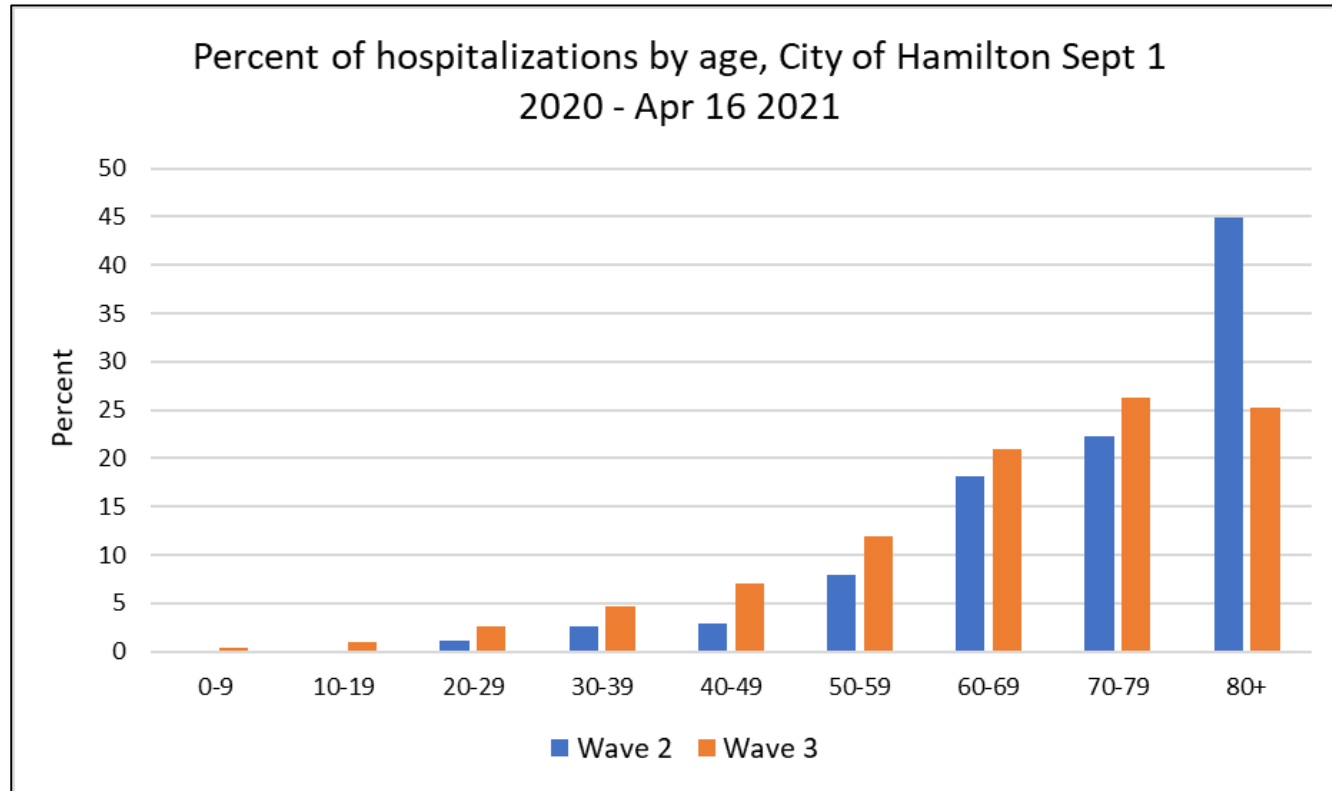
WAVE 2: Pre-Peak Sept 1 – Dec 31 2020

- 5,290 cases reported
- 124 outbreaks
- 294 hospitalizations and 132 deaths
- 115,683 tests completed at Hamilton Assessment Centres
- Early in wave 2, in Sept/Oct 2020, infections were most commonly due to direct contact with other known cases of COVID-19 and undetermined sources
- Closer to the peak of wave 2, in Nov/Dec 2020, infections were most commonly due to direct contact with other known cases as well as outbreak activity

WAVE 3: Pre-Peak Feb 17 – Apr 16 2021

- 5,070 cases reported
- 147 outbreaks
- 322 hospitalizations and 67 deaths
- 65,676 tests completed at Hamilton Assessment Centres
- Thus far in wave 3, infections have been mainly due to direct contact with other cases, undetermined sources & outbreak activity
- Ongoing increase in COVID-19 variant cases throughout wave 3 pre-peak in Hamilton
- Provincial Emergency and Stay-at-Home Order remain in effect in Hamilton

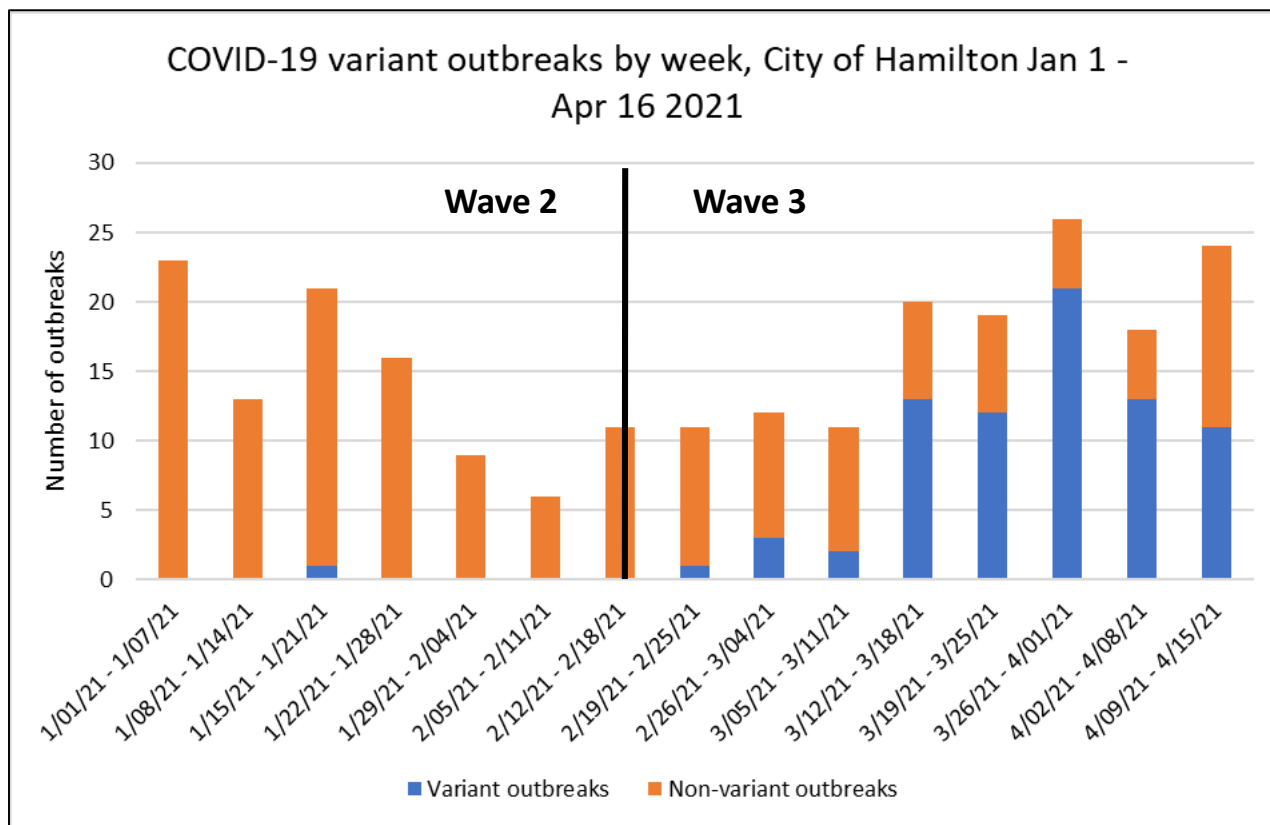
Hospitalized Cases



Key Messages

- There has been a shift in affected age groups hospitalized during waves 2 and 3
- Percent of cases hospitalized has decreased in those aged 80+, increased in younger age groups

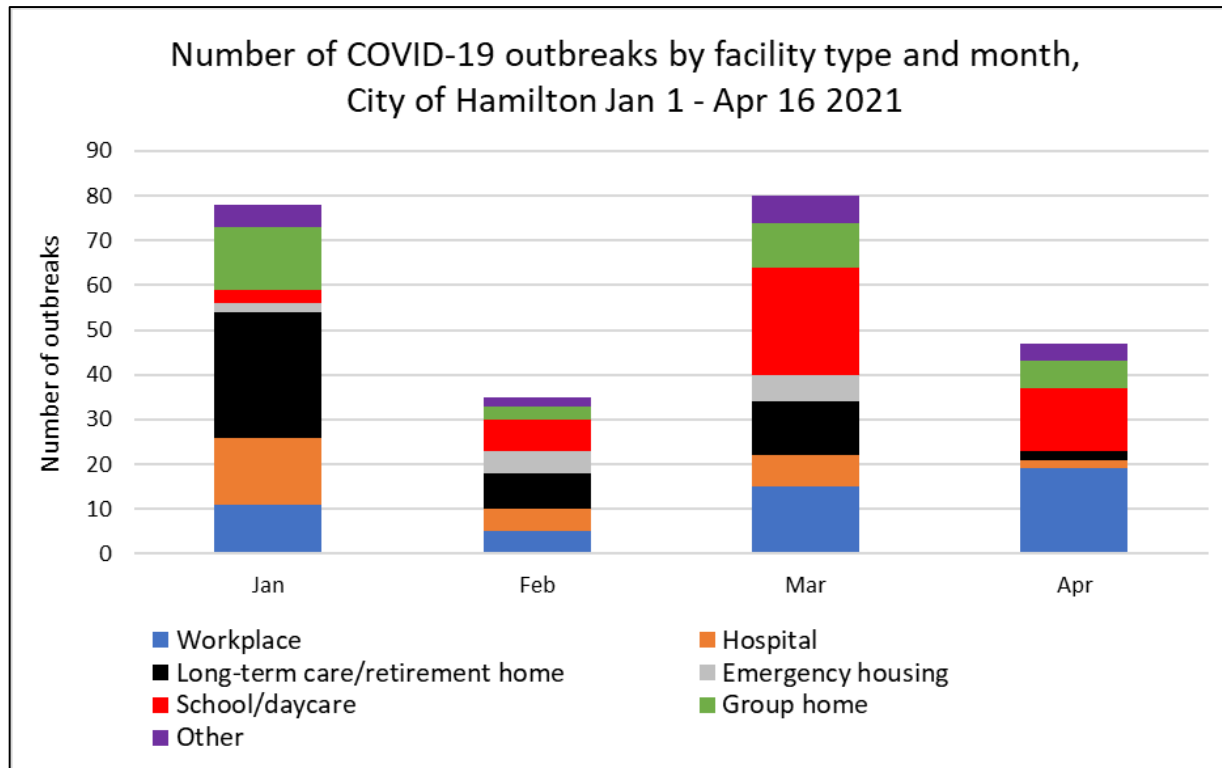
Variant Activity



Key Messages

- More than 60% of outbreaks recently declared in Hamilton are associated with variants
- Approximately 65% of recently reported cases have screened positive for variants
 - There have been cases recently confirmed with the B.1.351 and P.1 variants

Affected Outbreak Facility Types



Key Messages

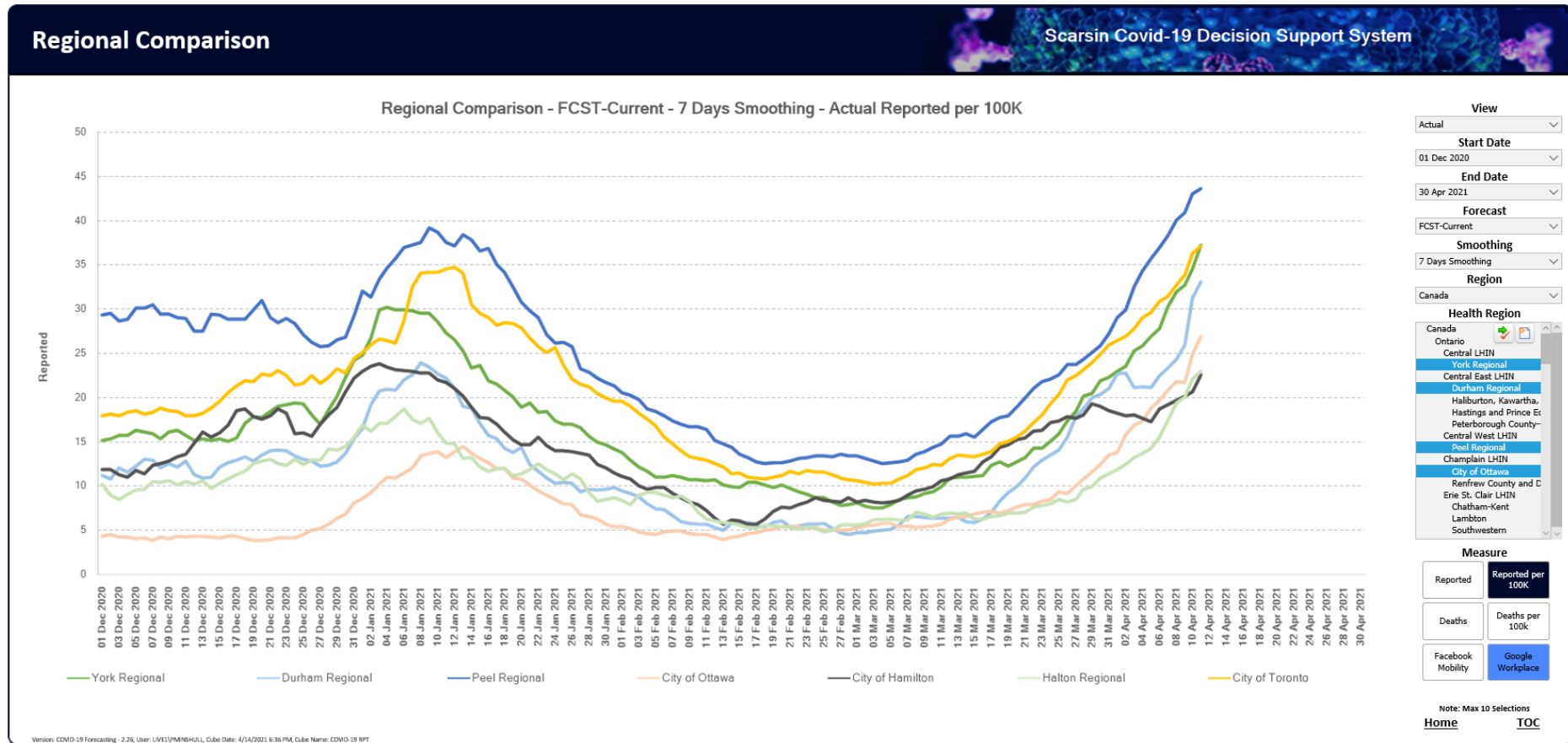
- A shift in outbreak facility types has occurred since the peak of wave 2
- In recent months, there have been fewer long-term care/retirement home and hospital outbreaks, and more school/daycare and workplace outbreaks than the wave 2 peak

Scarsin Forecasting – Background

- Partnership of Public Health, St. Joseph's Healthcare Hamilton, Hamilton Health Sciences and the Hamilton Health Team have been working with Scarsin Corporation since mid-February, 2021
- Canadian corporation with substantial forecasting experience with a number of Fortune 500 companies
- Developed and constantly refining their Decision Support System – robust forecast modelling
- Aids local decision-making on how best to minimize COVID-19 infections, hospital admissions and deaths
- Allows assessment of diverse public health measures, vaccination efforts and policy interventions (e.g., stay-at-home orders, remoted learning for school boards)

Scarsin Forecasting – Regional Comparison

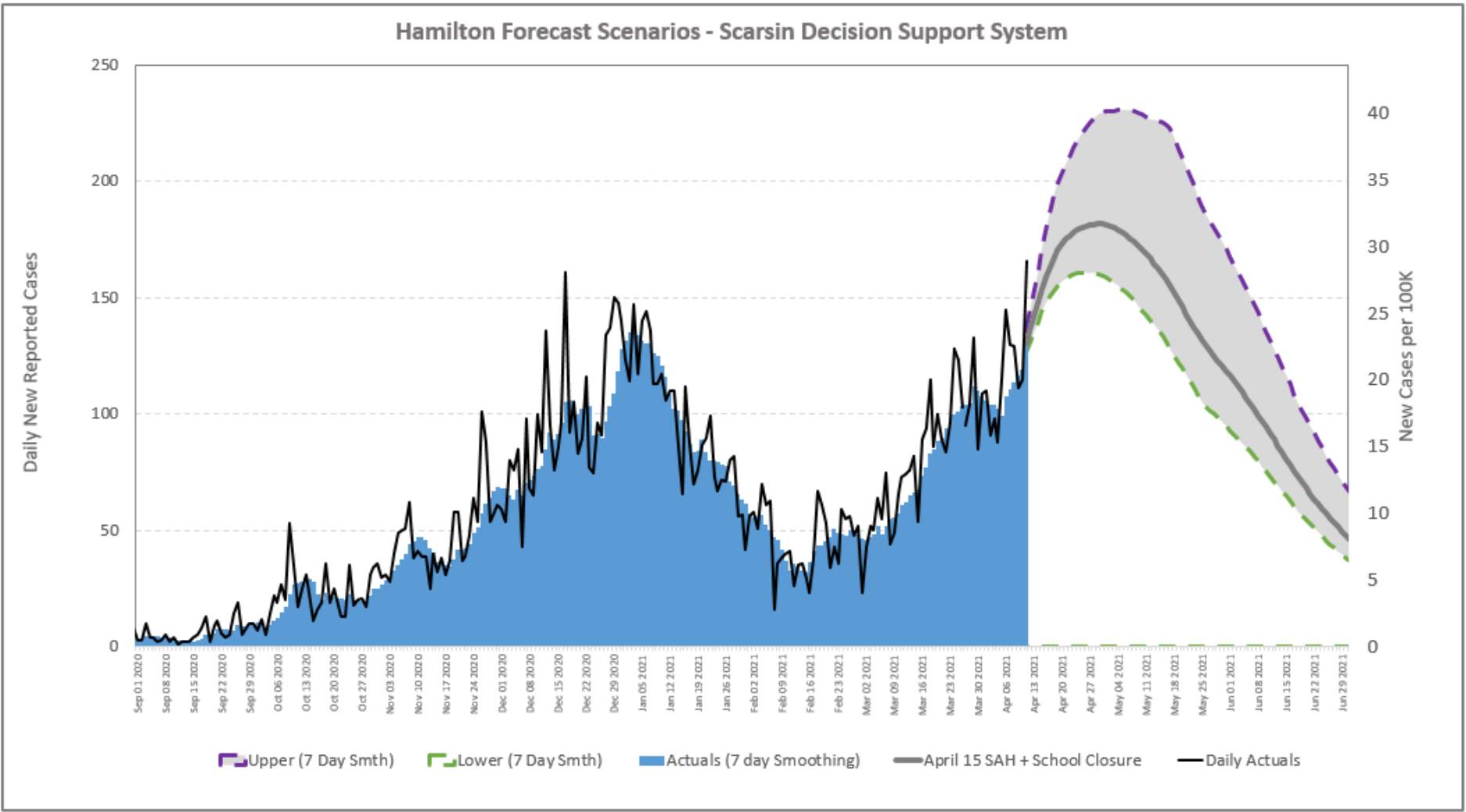
- All major public health units in the greater Toronto area are growing rapidly
- Hamilton cases are accelerating



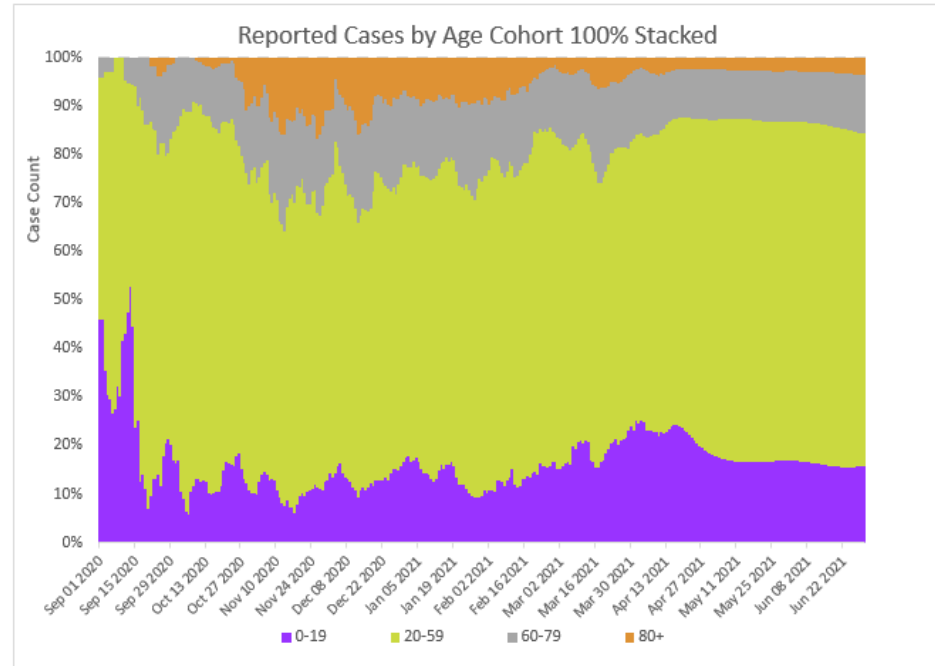
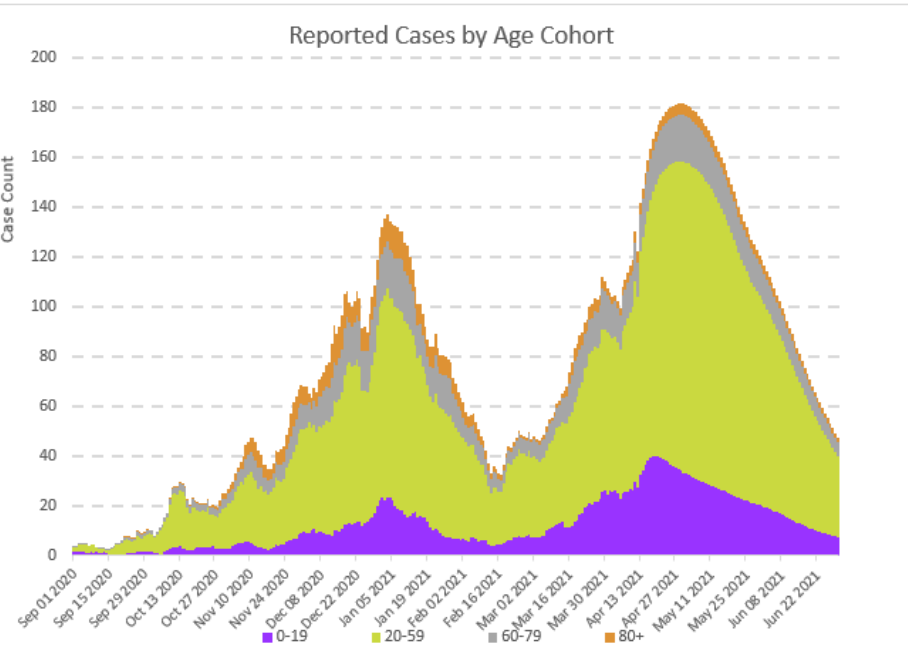
Scarsin Forecasting – Assumptions

- COVID-19 variants of concerns are growing in prevalence, will become the dominant circulating viruses, transmit more readily causing more severe disease, increased rates of hospital admissions and death
- Vaccinations – extent and timing of uptake/coverage for priority populations and age groups
- Provincial emergency declaration with its stay-at-home order – duration of 4 weeks
- Schools continue remote learning until the end of the school year
- Mobility of individuals is decreased by the stay at home order and school measures, but to a lesser extent than occurred following the stay at home order issued Dec 26, 2021

Scarsin Forecasting – Scenarios



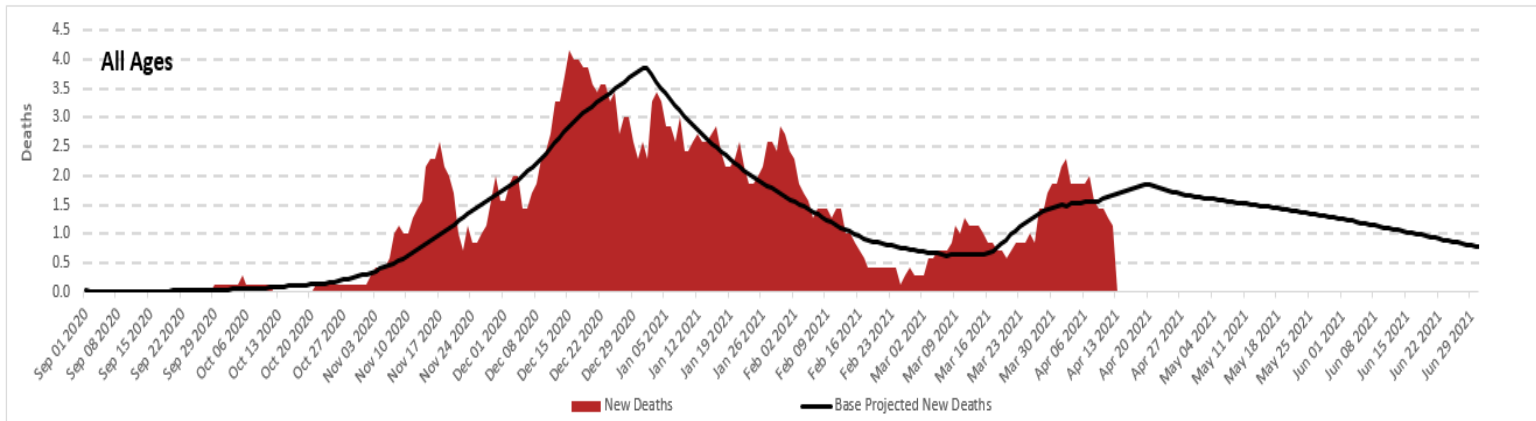
Scarsin Forecasting – Cases by Age Cohort



Scarsin Forecasting – Hospital Admissions / Impacts

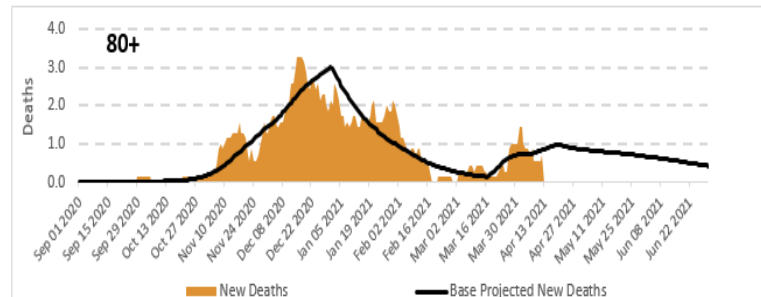
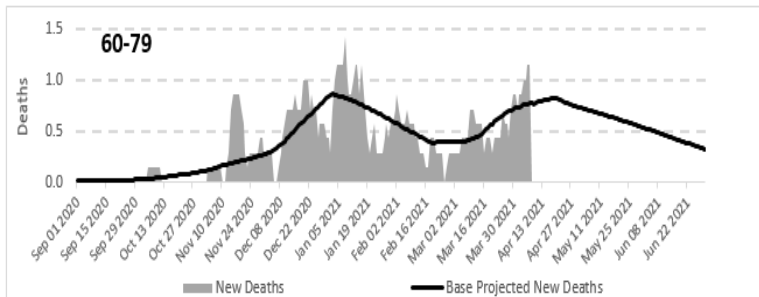
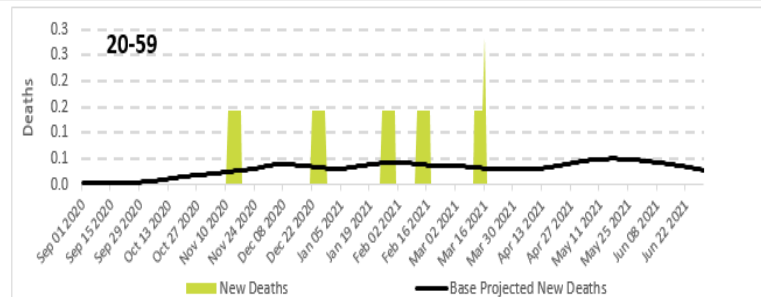
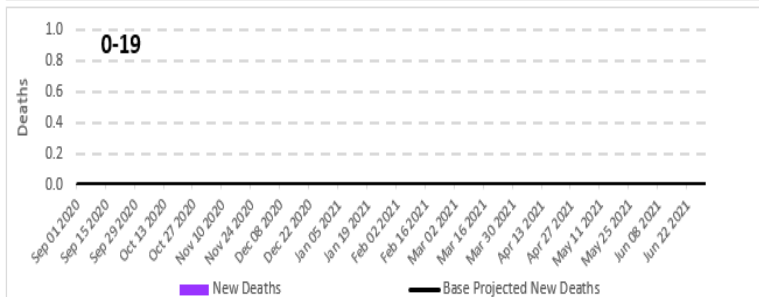
- Hospital bed use is the result of the number of admission and the length-of-stay (influenced by age and comorbidities of the patient and severity of COVID-19 infections, especially those due to variants of concern)
- Scarsin forecasts for hospital admissions are currently based on the age structure of Hamilton’s population
- There are three sources of hospital admissions:
 1. Severe illness in Hamiltonians - currently captured in the forecast based on case data
 2. Severe illness in residents within the St. Joseph’s Healthcare Hamilton/Hamilton Health Sciences catchment areas – NOT currently captured in the forecast
 3. “Load Leveling” from other regions with critical care capacity issues - NOT currently captured in the forecast
- Scarsin currently working with hospitals decision support staff to address the above and assess patient progression forecasts once hospitalized (e.g., demands on Intensive Care Unit beds/ventilators)

Scarsin Forecasting – Deaths in Wave 3



Start **Apr/15/21**
 Stop **Jun/30/21**

Deaths	
0-19	0
20-59	3
60-79	45
80+	55
Total	104



Provincial Response Framework Indicators

Epidemiology

	Previous (Apr 2)	Previous (Apr 9)	CURRENT (Apr 16)	Trend
Weekly incidence rate/100,000	125	129	181	↑
% positivity	4.5%	4.9%	5.6%	↑
Effective reproductive number (R_t)	1.21	0.94	1.28	--
% of community-acquired cases	29.6%	29.5%	31.1%	--

High outbreak activity continues in workplaces, supportive housing, and schools. |
 Total of 37 active outbreaks: 8 outbreaks have ≥ 10 cases; 24 outbreaks have cases screened positive for variants. |

Public Health System Capacity

	Previous (Apr 2)	Previous (Apr 9)	CURRENT (Apr 16)	Trend
% newly reported cases reached within 1 day of reported date	71.3%	72.4%	66.3%	--
% newly identified close contacts reached within 1 day of contact identification date	75.8%	72.0%	82.8%	--

Provincial Response Framework Indicators

Health System Capacity

	Hospital	Previous (Apr 2)	Previous (Apr 9)	CURRENT (Apr 16)
Overall adult acute medicine & surgical hospital occupancy/funded acute beds	SJHH	101%	97%	95%
	HHS	96%	92%	92%
Overall adult acute alternate level of care (ALC) hospital occupancy/funded acute beds	SJHH	20%	19%	20%
	HHS	9%	10%	11%
Overall adult intensive care unit (ICU) occupancy/funded ICU beds	SJHH	100%	93%	94%
	HHS	87%	86%	91%

SJHH: St. Joseph's Healthcare Hamilton

HHS: Hamilton Health Sciences

Additional Local Indicators

	Previous (Apr 2)	Previous (Apr 9)	CURRENT (Apr 16)	Trend
Mental health-related emergency department visits	215	206	206	--
Police response to persons in crisis	134	135	114	--
Substance misuse-related emergency department visits	83	73	95	--
Paramedic incidents for suspected opioid overdose	13	16	12	--
Violence-related emergency department visits	17	3	12	--
Police response to domestic violence	134	120	147	--
Social impacts and environmental exposure-related emergency department visits	16	15	16	--

Trends are based on comparisons to historical data and thresholds.

COVID-19 Vaccine Update

Overall Objectives

1. Prevent deaths
2. Prevent illness, hospitalization and Intensive Care Unit admissions
3. Reduce transmission



COVID-19 Vaccine Update

HAMILTON COVID-19 VACCINATION PLAN: OVERVIEW

TIMING OF VACCINE ROLLOUT (INCLUDING DATES OF EACH PHASE & CLINIC OPERATION) ARE SUBJECT TO CHANGE & ARE DEPENDENT ON PROVINCIAL DIRECTION AND/OR AVAILABLE SUPPLY OF VACCINE

Dec 2020 > Jan 2021 > Feb 2021 > Mar 2021 > Apr 2021 > May 2021 > Jun 2021 > Jul 2021 > Aug 2021 > Beyond

PHASE

Provincial Phase 1: High-Risk Population Vaccination

Provincial Phase 2: Large Scale Delivery of Vaccine

Provincial Phase 3: Steady State

Provincial Priority Populations by Phase

DESCRIPTION

Phase 1 Immediate Priority

- Staff, essential caregivers, residents in long-term care, high-risk retirement homes
- Alternate level of care (ALC) patients in hospitals who have a confirmed admission to long-term care, retirement home or other congregate care home for seniors
- Highest priority followed by very high priority health care workers
- Indigenous adults in high risk communities

Phase 1 Next Priority

- Adults 80 years of age and older
- Staff, residents, caregivers in retirement homes, congregate care settings for seniors
- High priority health care workers
- All Indigenous adults
- Adult recipients of chronic home care

Phase 2 (in Progress)

- Continue Phase 1 priority populations
- Adults 60-79
- Individuals with health conditions, starting with Highest Risk and High-Risk
- Residents, Essential Caregivers and Staff of High-Risk Congregate Settings
- Adults 50+ in priority neighbourhoods (L9C, L8W, L8L, L8N, L9K)
- Individuals with At-Risk Health Conditions
- Essential Workers who cannot work from home (Group 1 & 2)

Phase 3

- Remaining Hamiltonians in the general population who wish to be vaccinated will receive the vaccine
- Adults 16 - 60

Vaccination Approach

TIMING

Large Scale Clinics

Mobile & On-Site Clinics

Primary Care & Pharmacy Clinics (55+)

DESCRIPTION

Large Scale Clinics

Hamilton Health Sciences Large Scale Clinic
St. Joseph's Healthcare Hamilton Large Scale Clinic
Additional Public Health Large Scale Clinics



Anticipated Throughput: 8,400 doses / day at peak
Supports large scale vaccination of the population

Mobile & On-Site Clinics

Mobile Bus Clinics
Pop-Up Facility Clinics
Rolling Clinics



Anticipated Throughput: 750 doses / day at peak
Provides vaccination through accessible channels

Primary Care & Pharmacy Clinics (55+)

Primary care practice-based vaccinations
Pharmacy-based vaccinations



Anticipated Throughput: >1,000 doses / day at peak
Provides vaccination through usual channels

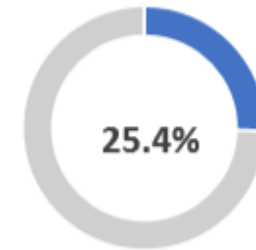
COVID-19 Vaccine Update

Estimated as of End Of Day Apr 15, 2021

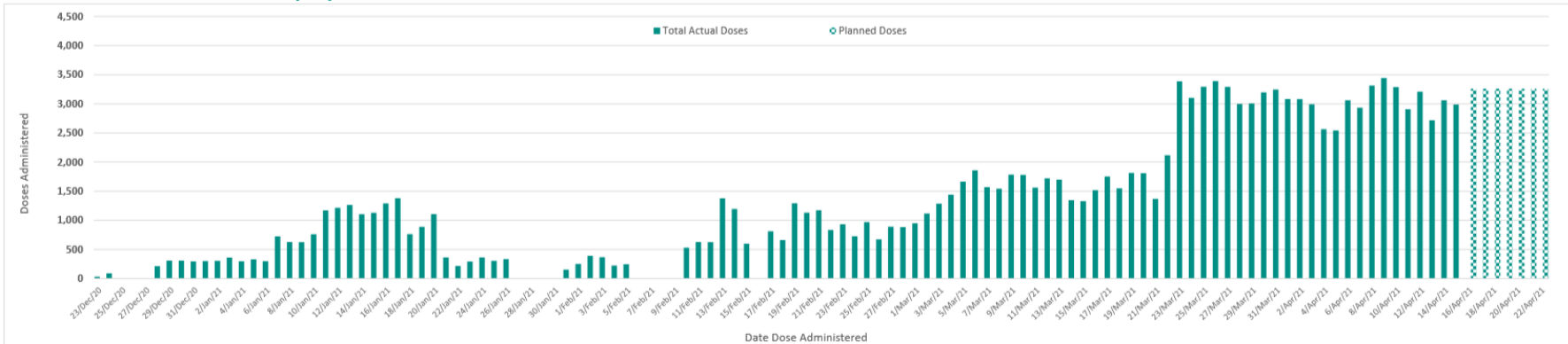
Site	Total doses administered
Hamilton Health Sciences	61,452
St. Joseph's Healthcare Hamilton	32,791
First Ontario Centre	15,614
Mobile Clinics	21,992
Primary Care	5,185
Pharmacies	8,287
Total in Hamilton	145,321

Product	Total doses administered
Pfizer	103,954
Moderna	27,950
AstraZeneca	13,417

% of eligible population* who initiated or completed a vaccine series (at least 1 dose)



Total Doses Administered in Hamilton by Day



Source: IntelliHealth (COVAXon Data Load)

Notes: Planned doses for pharmacies estimated as 40 doses per site per day; Planned doses for primary care are not included.

*Hamilton residents age 16+ (N=501,268). Note: Includes people based on site of vaccine administration and not by place of residency.

COVID-19 Vaccine Update

Estimated Priority Population Vaccine Coverage (End Of Day Apr 15, 2021)			
Age-Based Priority Populations	Est Population Size	Vaccine Series Initiation	% Vaccine Series Initiation
Age - 85+ Years	15,043	12,324	82%
Age - 80 to 84 Years	13,018	10,302	79%
Age - 75 to 79 Years	18,813	13,955	74%
Age - 70 to 74 Years	27,170	20,635	76%
Age - 65 to 69 Years	32,990	13,628	41%
Age - 60 to 64 Years	39,604	14,579	37%

Source for actuals: IntelliHealth (COVAXon Data Load)

Notes:

1. Data are preliminary and subject to change.
2. Age-based populations and non-age-based populations may not be mutually exclusive; individuals within one category may also be counted in another category (e.g. Long Term Care Home residents aged 85+ are counted in both Long Term Care Home Resident and Seniors 85+ populations).
3. Reason for vaccination is a categorical selection in the COVAXon application. This data field is limited to one selection even if an individual may be eligible for multiple categories. This data field may subject to misclassification and may undercount individuals in some categories.
4. This is an estimation of vaccine coverage based on records of where individuals were vaccinated and not by their place of residency.

COVID-19 Vaccine Update

Estimated Priority Population Vaccine Coverage (End Of Day Apr 15, 2021)			
Phase 1 Priority Populations	Est Population Size	Vaccine Series Initiation	% Vaccine Series Initiation
LTCH Residents	3,292	3,350	100%
RH Residents	2,535	2,351	93%
LTCH Staff	4,052	3,482	86%
RH Staff	1,658	765	46%
Essential Caregivers (LTCH/RH)	11,654	2,804	24%
ALC (LTCH/RH)	625	323	52%
Healthcare Workers	48,600	28,932	60%
Urban Indigenous Adults	11,000	N/A	N/A
Adult Chronic Home Care (CHC)	5,005	575	11%
Essential Caregivers (Adult CHC)	10,010	N/A	N/A
Phase 2 Priority Populations	Est Population Size	Vaccine Series Initiation	% Vaccine Series Initiation
High Risk Congregate Settings	9,319	846	9%
Health Conditions & Caregivers	132,744	288	0.2%
Hot Spot FSAs (50+ Years)	50,153	20,738	41%
Cannot-Work-From-Home	81,755	Not started	Not started

Source for actuals: IntelliHealth (COVAXon Data Load)

Notes:

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4. This is an estimation of vaccine coverage based on records of where individuals were vaccinated and not by their place of residency.

COVID-19 Vaccine Update

- With a steady but limited supply working carefully to allocate vaccine to advance program objectives. Eligible Phase 2 population is very large (approximately 300,000).
- Balancing access across sites to most effectively reach our priority populations



Provincial Phase 2 Sequencing

Overview of Phase Two

Projected Phase Two sequencing April to June – updated as of April 9

	Phase 2		
	April	May	June
Older Adults	Over 75 Over 70 Over 65 Over 60		
Health Conditions	Individuals with Health Conditions		
	Highest Risk & Caregivers	High Risk & Certain Caregivers	At-Risk Health Conditions
Congregate Settings	High Risk Congregate Settings		
Hot Spots	COVID-19 Hot Spots Communities		* Peel and Toronto
	Highest Risk Communities *	Remaining Hot Spots Communities	
Other priority*	Special Education Workers Education Workers in hot spots		*contact risk equivalent to HCW
Cannot-Work-From-Home		Workers who cannot work from home	
		Group 1	Group 2



Phase 2 Implementation

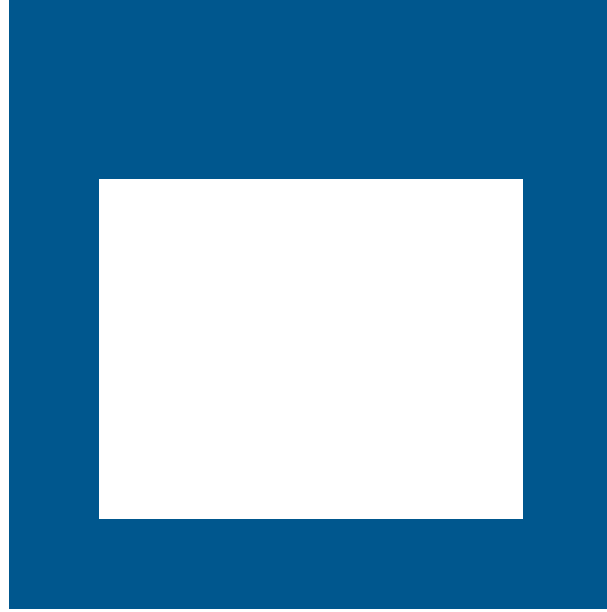
Continue phase 1 implementation

Phase 2 implementation:

- Priority neighbourhoods: L9C, L8W, L8L, L8N, L9K
 - Current eligibility for these clinics is 50+
- Highest and high risk health conditions
- Congregate care settings
- Special Education Workers

Pharmacy Distribution

- Multiple locations in Hamilton offering AstraZeneca vaccinations
- For more information or to book, call or visit websites of participating pharmacies
- List of participating pharmacies also at provincial website



QUESTIONS?