CorHealth Ontario

Advancing cardiac, stroke and vascular care

CorHealth COVID-19 Cardiac Stakeholder Forum Meeting #10

May 21, 2020 | 8:00-9:00 am

Teleconference: (647) 951-8467 or Long Distance: 1 (844) 304 -7743

Conference ID: 986393473

Agenda

Time	Description	Presenter / Facilitator
08:00	**1. Welcome** • COVID-19 System Planning Updates • Meeting Objective	Sheila Jarvis
08:05	**2. eCTAS Cardiac Data**	Joy McCarron *Clinical Lead for eCTAS Program at Ontario Health*
08:15	**3. STEMI Activity in Ontario During the COVID-19 Pandemic**	Garth Oakes
08:35	**4. Heart Failure Update** • COVID-19 Update on Current Data • HF Data: Modelling Data • Ambulatory HF Activity: Planning & Resuming Care	Dr. Heather Ross *MD, MHSc, FRCP (C), FACC, Professor of Medicine, Loretta Rogers Chair in Heart Function, University Health Network*
08:55	**5. Other Updates and Next Steps** • Cardiac activity report	Jana Jeffrey

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Welcome

SHEILA JARVIS

COVID-19 System Planning Updates

- Ontario moved into Stage One of the gradual reopening of the Province

  - Focus of Stage One is opening businesses that can immediately meet or modify operations to meet public health guidance and occupational health and safety requirements

  - Specific for the health system:

    - Non-emergency diagnostic imaging and surgeries in public hospitals, private hospitals and independent health facilities, clinics, and private practices to resume based on ability to meet specified pre-conditions including the framework (developed by Ontario Health led by Dr. Chris Simpson): A Measured Approach to Planning for Surgeries and Procedures During the COVID-19 Pandemic, which contains clear criteria that must be met before hospitals can resume scheduled surgeries

    - Non-emergency in-person services can only resume once "Directive #2 for Health Care Providers (Regulated Health Professionals or Persons who operate a Group Practice of Regulated Health Professionals)" is amended or revoked.

    - Certain health and medical services to resume, such as in-person counselling and in-person services, in addition to ongoing virtual services, delivered by health professionals, all based on the ability to meet pre-specified conditions.

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Meeting Objectives

1. To share Cardiac Data from eCTAS, Ontario's electronic decision support and documentation tool for triage

2. To provide an update on STEMI activity in Ontario during COVID-19

3. To share an overview of the current global and provincial landscape of COVID-19

4. To share a Heart Failure update regarding:
    *   Heart Failure Modelling Data
    *   Ambulatory Heart Failure Activity & Planning for Resuming Care

CorHealth
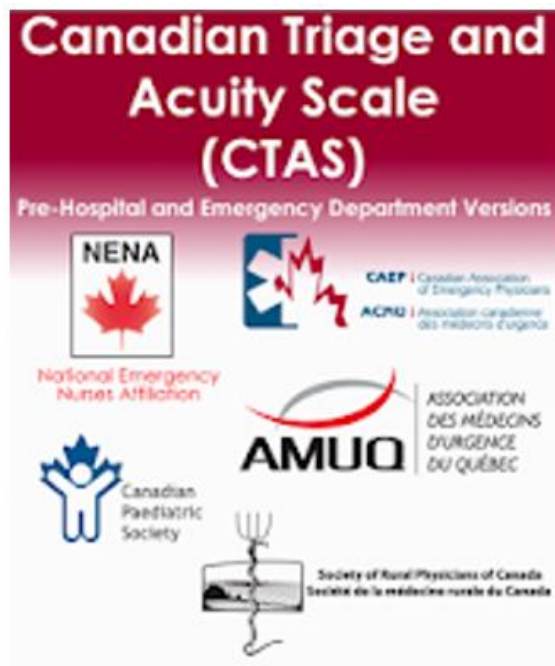Ontario

eCTAS
A GLIMPSE INTO THE EMERGENCY DEPARTMENTS

JOY MCCARRON, CLINICAL LEAD ECTAS

TAMER AHMED, MANAGER ECTAS

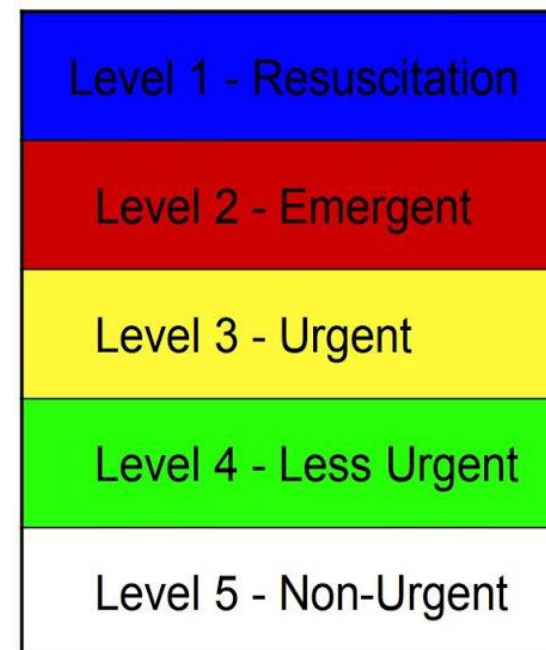**Ontario Health**
Cancer Care Ontario

CTAS : Triage Standard in Canada

Canadian Triage and Acuity Scale (CTAS)
Pre-Hospital and Emergency Department Versions

NENA — National Emergency Nurses Affiliation
CAEP | Canadian Association of Emergency Physicians / ACMU | Association canadienne des médecins d'urgence
AMUQ — ASSOCIATION DES MÉDECINS D'URGENCE DU QUÉBEC
Canadian Paediatric Society
Society of Rural Physicians of Canada / Société de la médecine rurale du Canada

+

- Patient Stated Complaint
- CEDIS
- Vital Signs
- Subjective and Objective Assessments
- Medical History, Medication and Allergies
- Modifiers

=

Level 1 - Resuscitation
Level 2 - Emergent
Level 3 - Urgent
Level 4 - Less Urgent
Level 5 - Non-Urgent

Ontario Health
Cancer Care Ontario

eCTAS Application

eCTAS Highlights

8.5 Million patients triaged!

Infection control
screening

- 115 hospitals sites are live with eCTAS!
- 3 Integration Options in place
- 10 updates to Infection Control Alerts since Jan 1
- 1st Live Data Connection with KFL&A – Apr 20
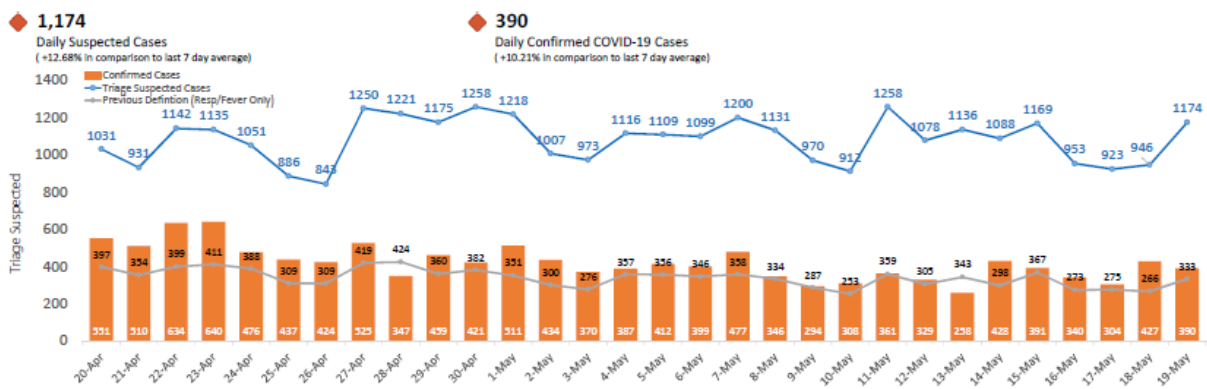- Updated COVID19 Screening questions – May 19

Ontario Health
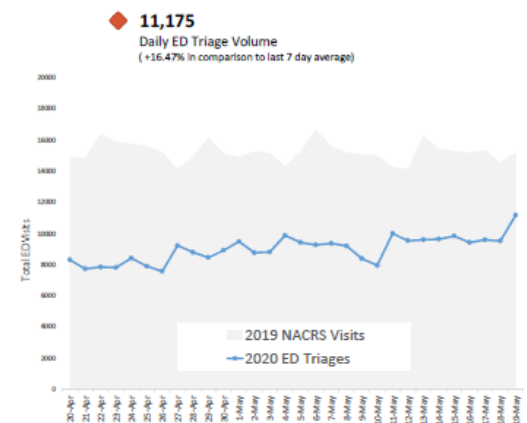Cancer Care Ontario

The Power of the DATA

Suspected COVID Lead Indicator
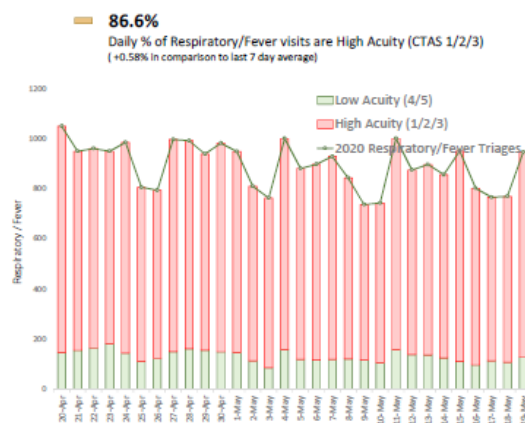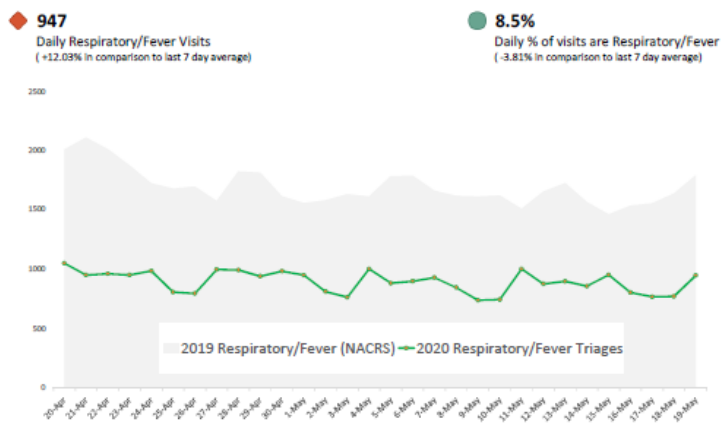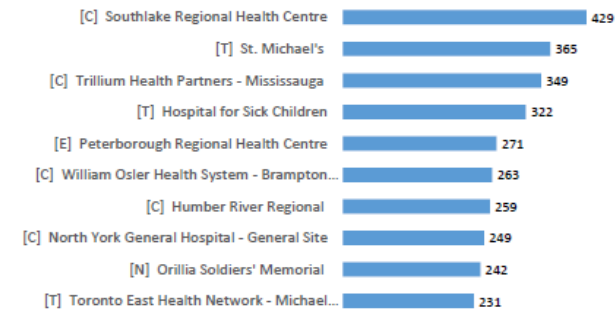
Cardiovascular Presentations

Provincial: December 1 - May 16, 2020 (Weekly Data)
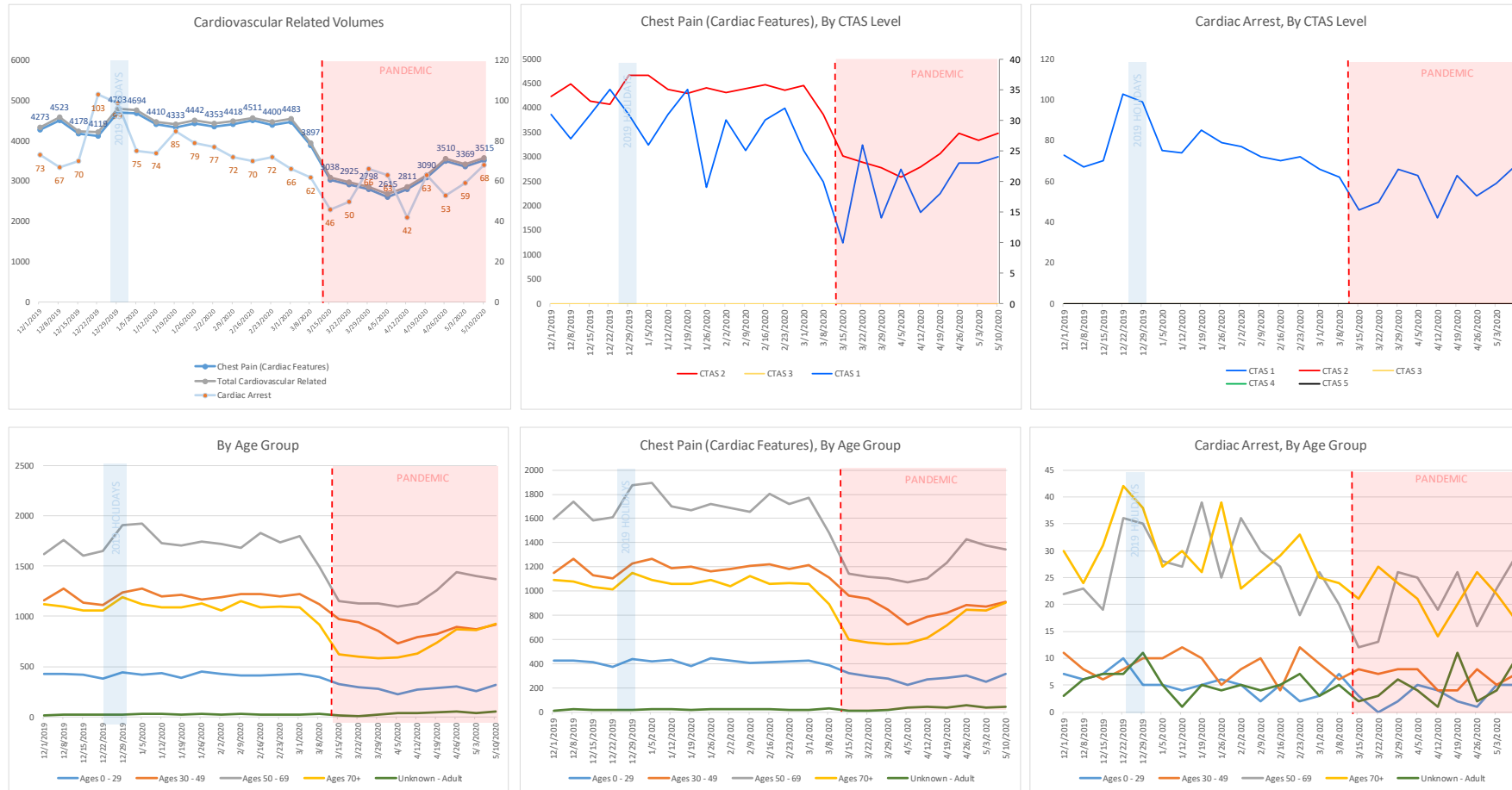
Cardiovascular Presentations by Region

Regions: December 1 - May 16, 2020 (Weekly Data)
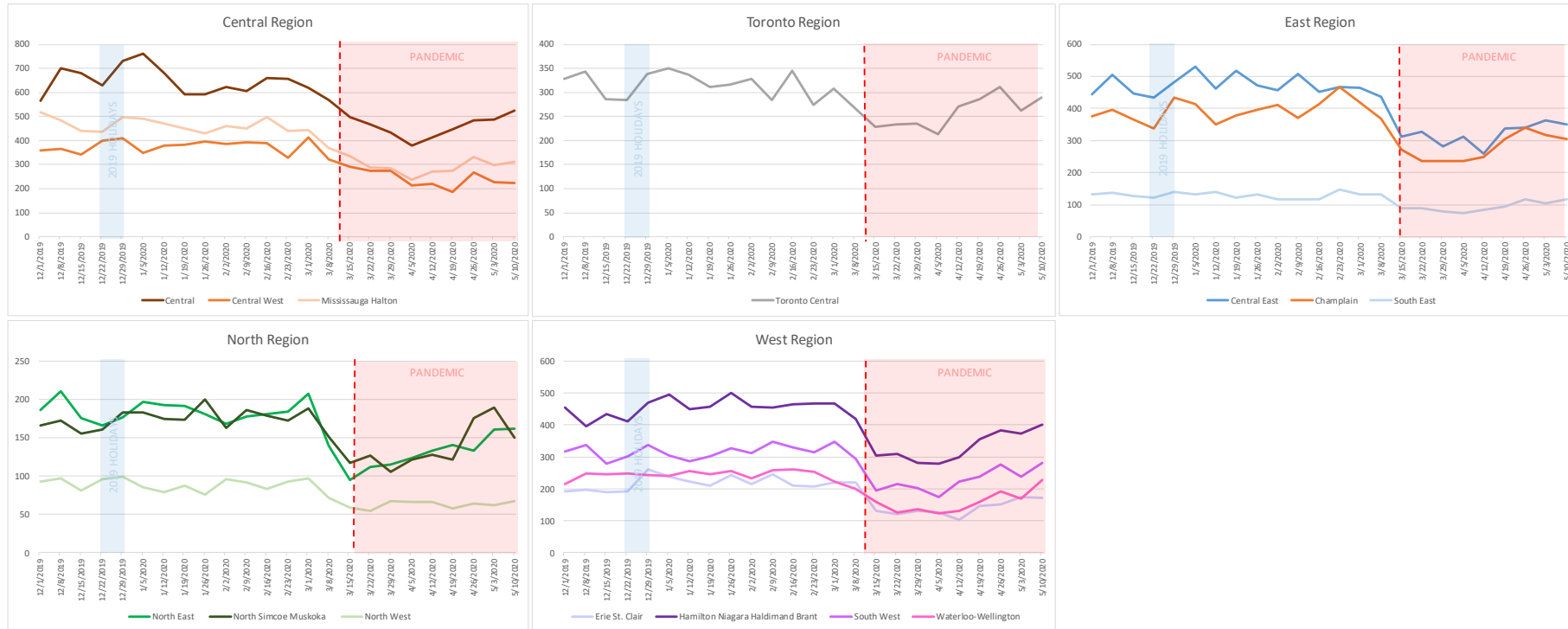
STEMI Activity in Ontario During the COVID-19 Pandemic

GARTH OAKES

Number of STEMIs in 2020 as Compared to 2019
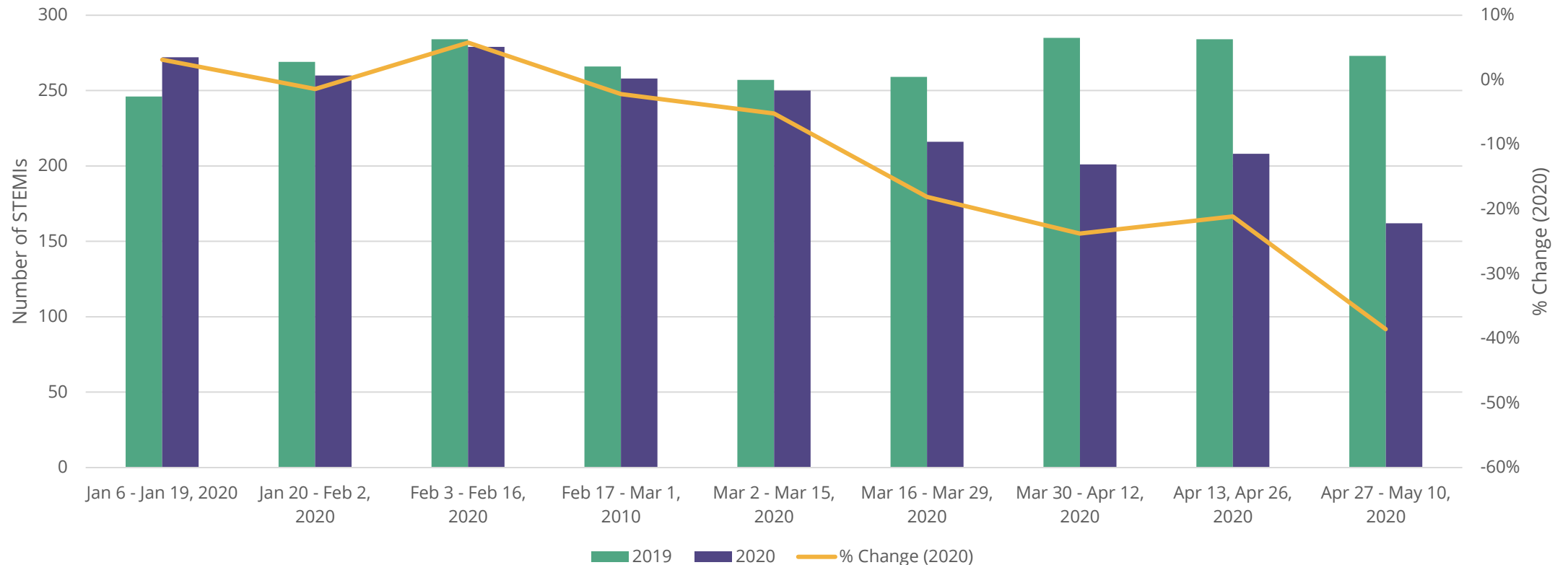
Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; % Change is calculated for the 2020 data set as compared to the average biweekly STEMI volumes from January 6th to March 15th 2020 .

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Percentage STEMIs Receiving Fibrinolysis in 2020 as Compared to 2019

Volume of STEMIs Receiving Fibrinolysis									
2019	25	29	30	26	32	34	22	23	30
2020	28	34	30	36	35	19	28	11	21

Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; % Change is calculated for the 2020 data set as compared to the average biweekly Lytic Percentage from January 6th[17] to March 15th 2020 .

Stratification of STEMIs that Receive a PCI by PCI Type
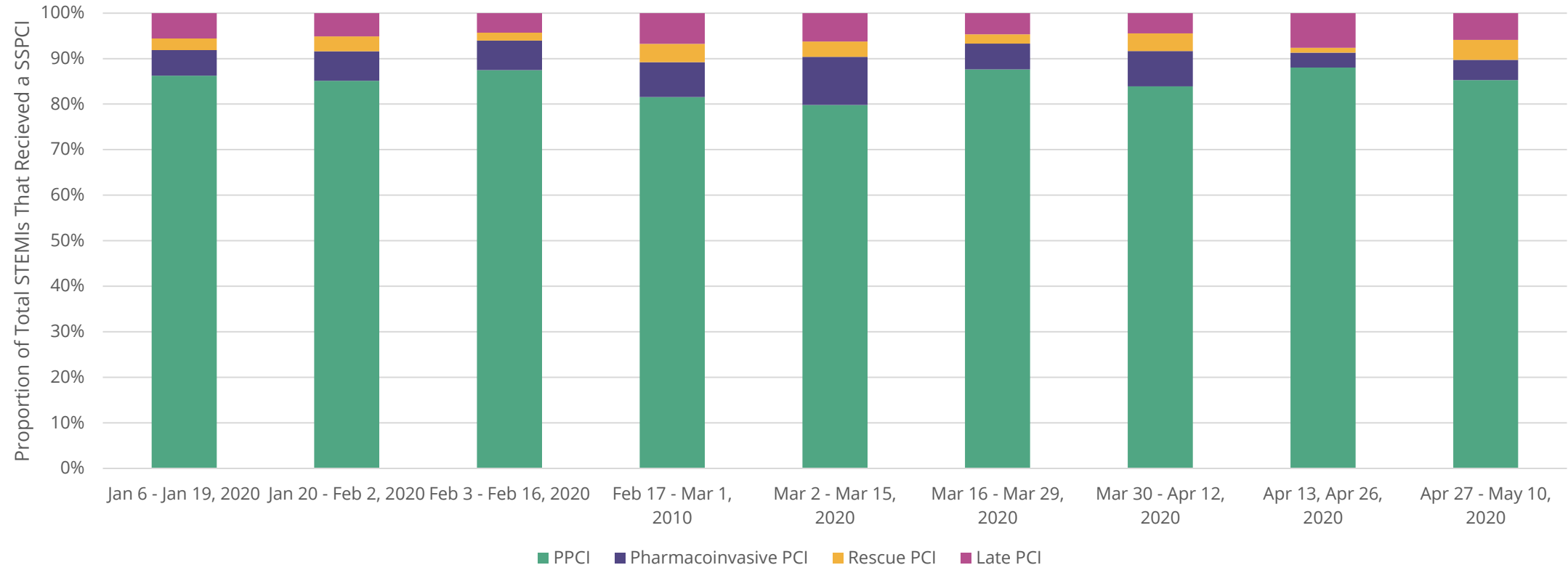
Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; These data only include STEMIs that went on to receive a same sitting PCI.

Percentage of STEMIs Arriving to Hospital by Ambulance
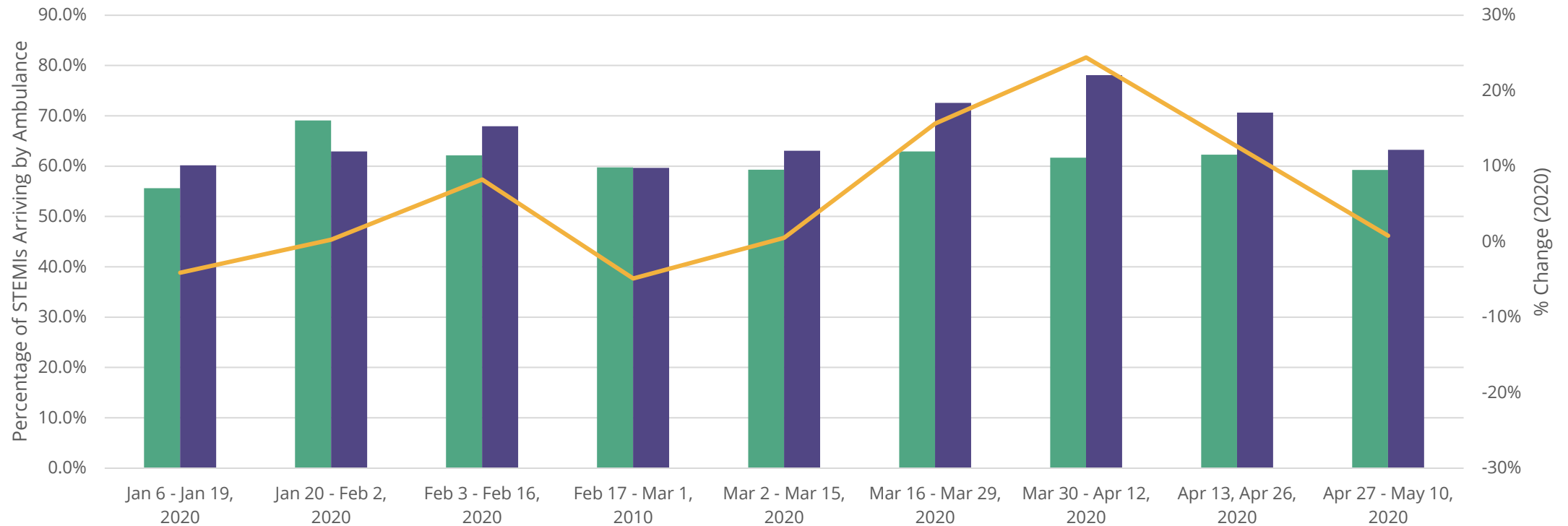
Volume of STEMIs Arriving to Hospital by Ambulance

	Jan 6 - Jan 19, 2020	Jan 20 - Feb 2, 2020	Feb 3 - Feb 16, 2020	Feb 17 - Mar 1, 2010	Mar 2 - Mar 15, 2020	Mar 16 - Mar 29, 2020	Mar 30 - Apr 12, 2020	Apr 13, Apr 26, 2020	Apr 27 - May 10, 2020
2019	134	172	169	153	147	156	169	170	154
2020	157	156	182	148	152	148	153	142	98

Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; % Change is calculated for the 2020 data set as compared to the average biweekly percentage of cases arriving by[19] ambulance from January 6th to March 15th 2020 .

Time Delays for Patients Presenting Directly to a PCI Centre

Patients Who Present Directly to PCI Hospital and Achieve time ≤90 min FMC to Device

Legend: 2019, 2020, % Change (2020)
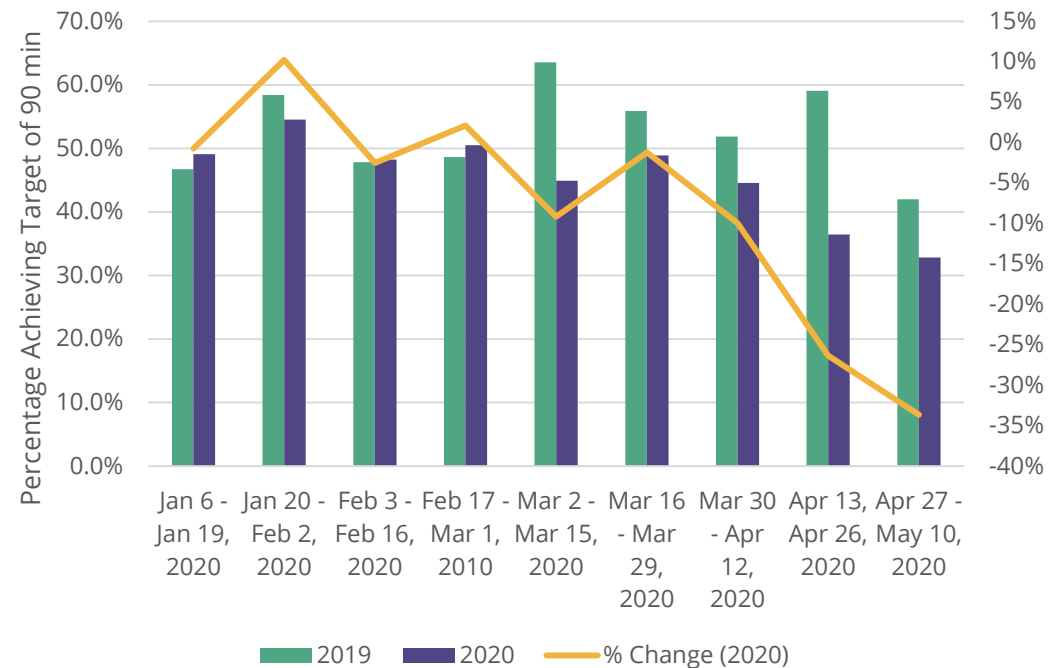
Patients Presenting Directly to a PCI Hospital – FMC to Device

Volume of STEMIs Presenting Directly to a PPCI Centre

|									
2019	92	113	117	111	107	102	106	132	100
2020	114	99	114	95	89	90	101	96	67

Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; % Change is calculated for the 2020 data set as compared to the average biweekly percentage of cases achieving 90 min target from January 6th to March 15th 2020; Time delay graphs illustrate 10th, 25th, 50th, 75th and 90th percentile time in minutes respectively.

Time Delays for Patients Presenting Directly to a PCI Centre

Patients Presenting Directly to PCI Centre – Onset of Symptoms to Device

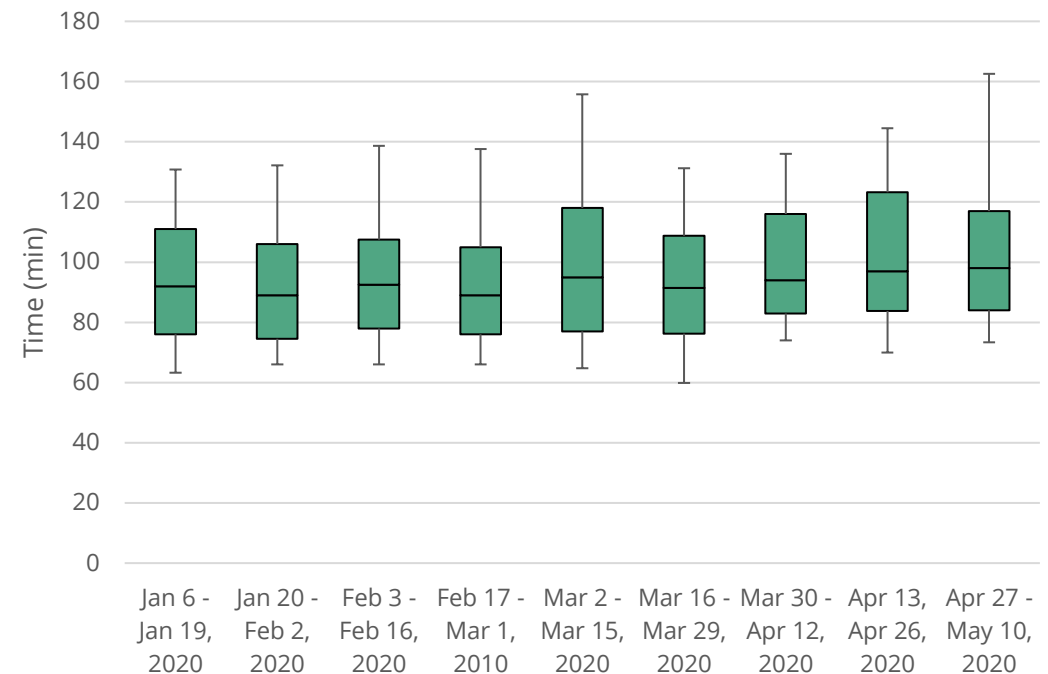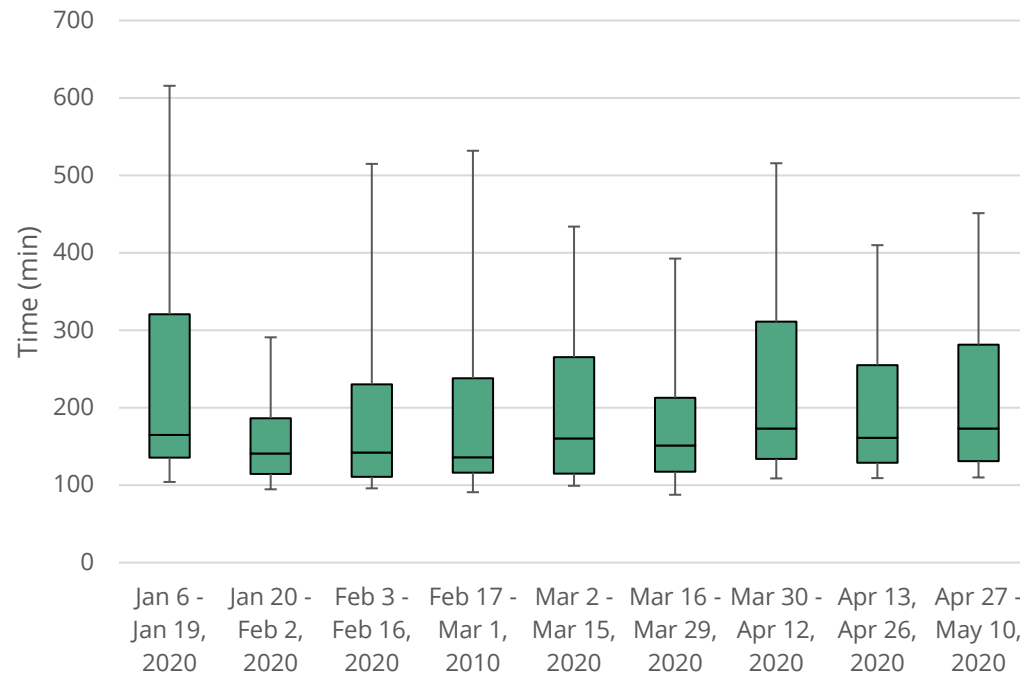**Patients Presenting Directly to PCI Centre – Onset of Symptoms to FMC**

Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; Time delay graphs illustrate 10th, 25th, 50th, 75th and 90th percentile time in minutes respectively.

Time Delays for Patients Transferred from a non-PCI Centre

Patients Transferred from a non-PCI Hospital and Achieve time ≤120 min FMC to Device

Percentage Achieving Target of 120 min

Legend: 2019, 2020, % Change (2020)

X-axis: Jan 6 - Jan 19, 2020 | Jan 20 - Feb 2, 2020 | Feb 3 - Feb 16, 2020 | Feb 17 - Mar 1, 2010 | Mar 2 - Mar 15, 2020 | Mar 16 - Mar 29, 2020 | Mar 30 - Apr 12, 2020 | Apr 13 - Apr 26, 2020 | Apr 27 - May 10, 2020

Patients Transferring From a non-PCI Hospital – FMC to Device

Time (min)

X-axis: Jan 6 - Jan 19, 2020 | Jan 20 - Feb 2, 2020 | Feb 3 - Feb 16, 2020 | Feb 17 - Mar 1, 2010 | Mar 2 - Mar 15, 2020 | Mar 16 - Mar 29, 2020 | Mar 30 - Apr 12, 2020 | Apr 13 - Apr 26, 2020 | Apr 27 - May 10, 2020

Volume of STEMIs Presenting Directly to a PPCI Centre

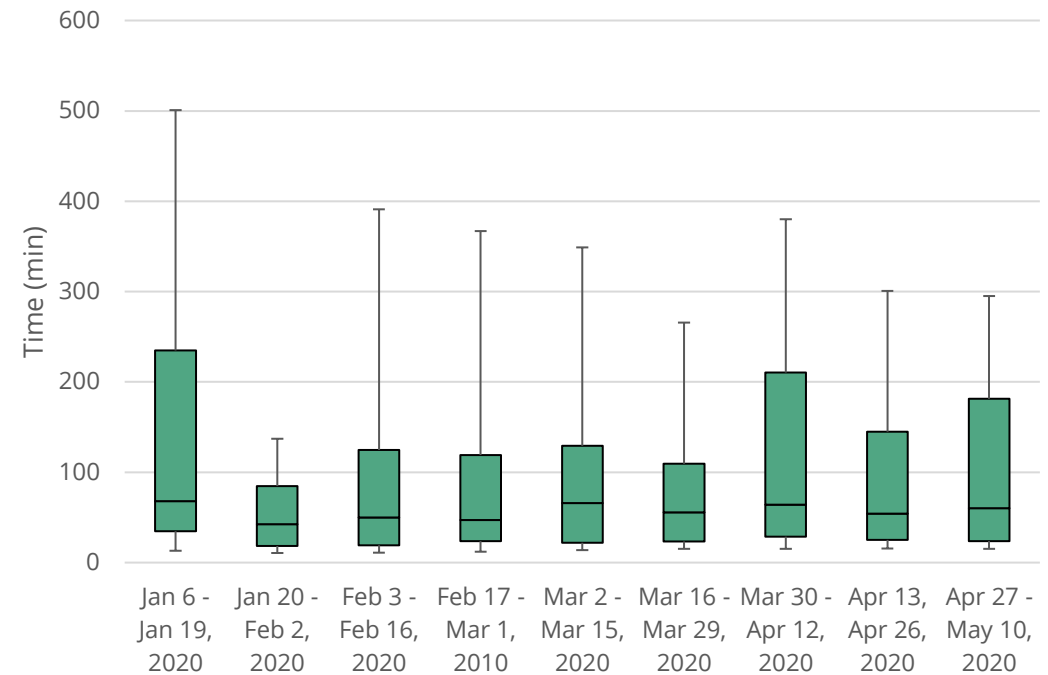|									
2019	57	58	67	58	58	62	82	59	64
2020	70	65	57	61	55	49	27	48	18

Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; % Change is calculated for the 2020 data set as compared to the average biweekly percentage of cases achieving 90 min target from January 6th to March 15th 2020; Time delay graphs illustrate 10th, 25th, 50th, 75th and 90th percentile time in minutes respectively.

Time Delays for Patients Transferred from a non-PCI Centre

Patients Transferring From a non-PCI Hospital – Onset of Symptoms to Device

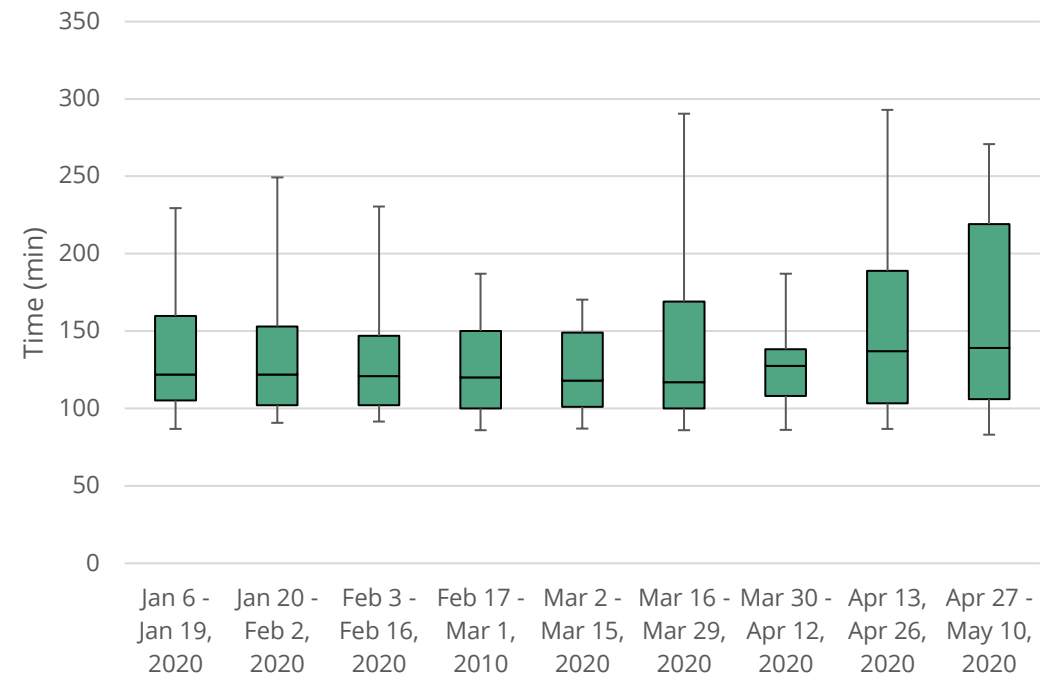## Patients Transferring From a non-PCI Hospital – Onset of Symptoms to FMC
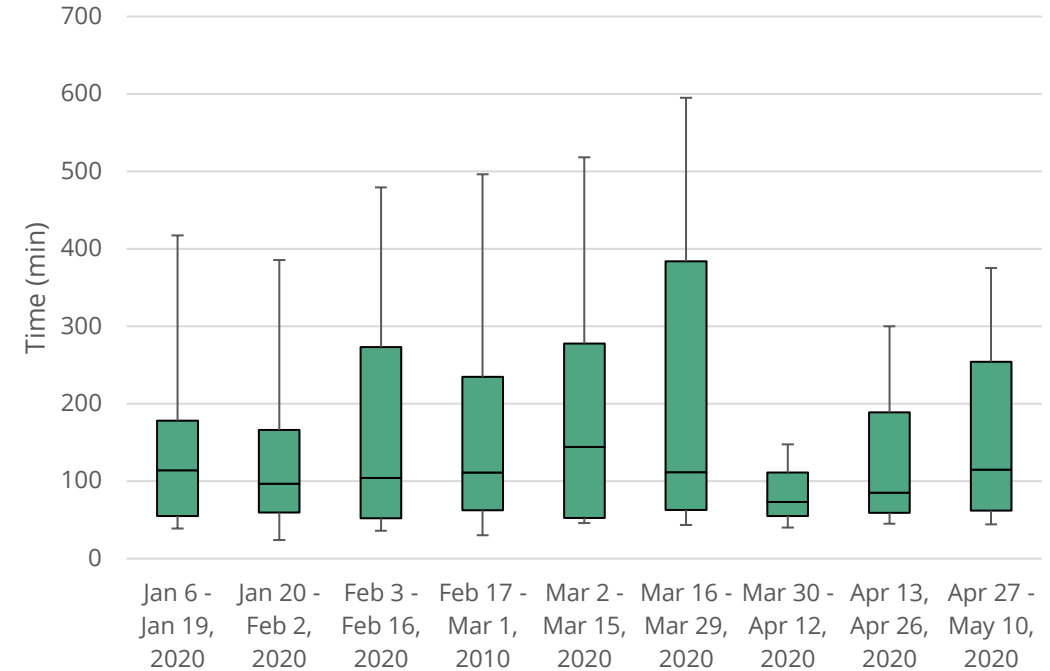
Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; Time delay graphs illustrate 10th, 25th, 50th, 75th and 90th percentile time in minutes respectively.

Summary

- Number of STEMIs presenting to Ontario CATH labs have dropped over the course of the COVID-19 pandemic

- Proportion of STEMIs receiving primary PCI has remained consistent

- Proportion of STEMIs Achieving FMC to Device target times has decreased for both patients presenting directly to PCI centres (90 min target) and for patients transferred from non-PCI centres (120 min target)

- FMC to device time delays have increased slightly over the course of the COVID-19 pandemic however we have not observed a corresponding increase in Onset of Symptoms to FMC or Onset of Symptoms to Device time delays

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Heart Failure Update

DR. HEATHER ROSS

COVID-19: Update on Current Data

DR. HEATHER ROSS

COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

Total Confirmed

4,966,006

Confirmed Cases by Country/Region/Sovereignty

1,547,353	US
308,705	Russia
271,628	Brazil
249,616	United Kingdom
232,555	Spain
227,364	Italy
181,700	France
178,473	Germany
152,587	Turkey
126,949	Iran
112,028	India
104,020	Peru
84,063	China
81,495	Canada
62,545	Saudi Arabia
55,983	Belgium
54,346	Mexico

◁ Admin0 ▷

Last Updated at (M/D/YYYY)
5/20/2020, 3:32:46 PM
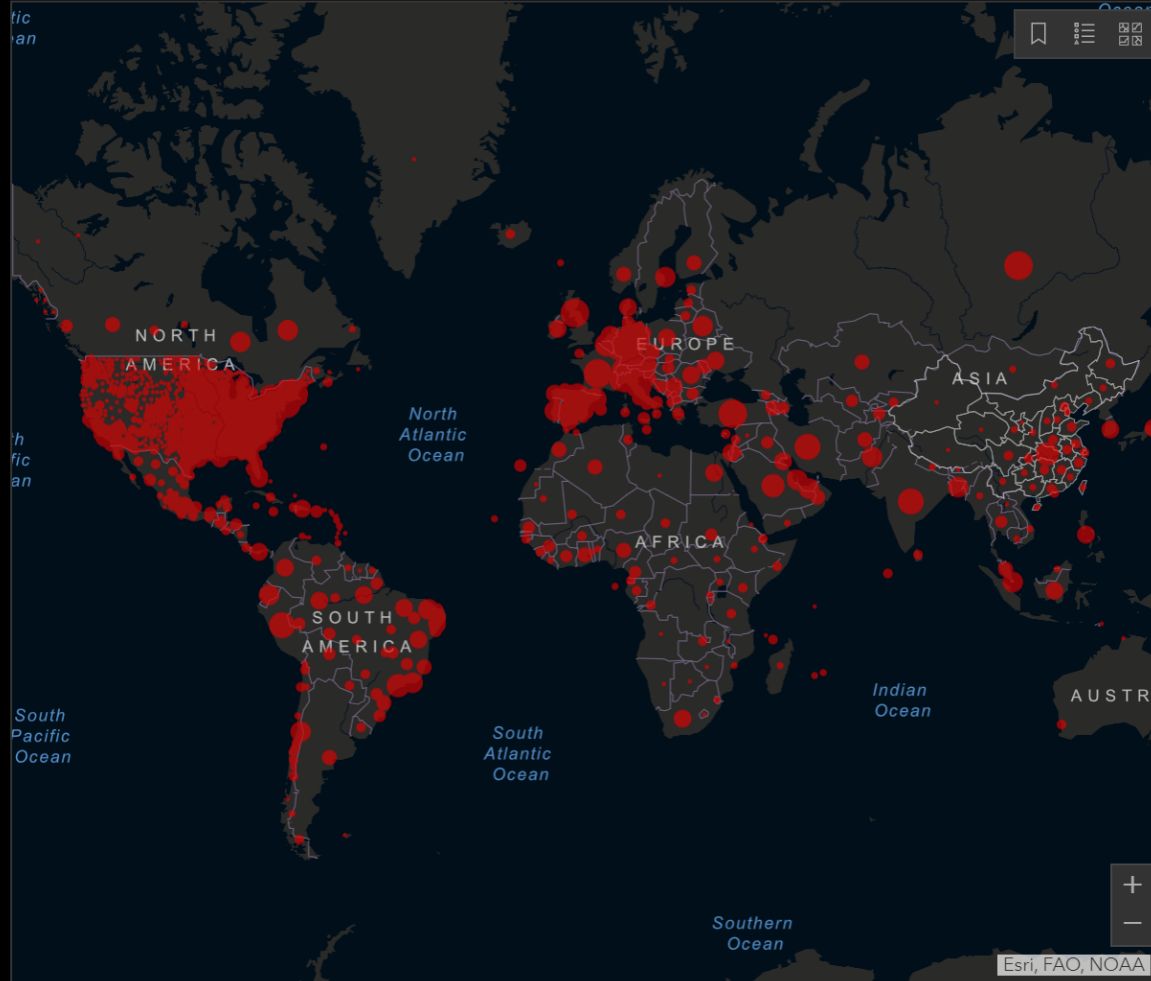
Cumulative Confirmed Cases | Active Cases | Incidence Rate | Case-Fatality Ratio | Testing Rate | Hospitalization Rate

188
countries/regions

Lancet Inf Dis Article: Here. Mobile Version: Here.
Lead by JHU CSSE. Automation Support: Esri Living Atlas team and JHU APL. Contact US. FAQ. Read more in this blog.

Data sources: WHO, CDC, ECDC, NHC, DXY, 1point3acres, Worldometers.info, the COVID Tracking

Global Deaths

325,810

93,119 deaths	US
35,785 deaths	United Kingdom
32,330 deaths	Italy
28,135 deaths	France
27,888 deaths	Spain
17,971 deaths	Brazil
9,150 deaths	Belgium
8,144 deaths	Germany

◁ Global Deaths ▷

US State Level
Deaths, Recovered

28,636 deaths, 61,886 recovered	New York US
10,749 deaths, 23,657 recovered	New Jersey US
5,938 deaths, recovered	Massachusetts US
5,060 deaths, 28,234 recovered	Michigan US
4,628 deaths, recovered	Pennsylvania US
4,379 deaths, recovered	Illinois US
3,472 deaths, 6,264 recovered	

◁ US Deaths, Reco... ▷

5M
4M
3M
2M
1M
0
Feb   Mar   Apr   May
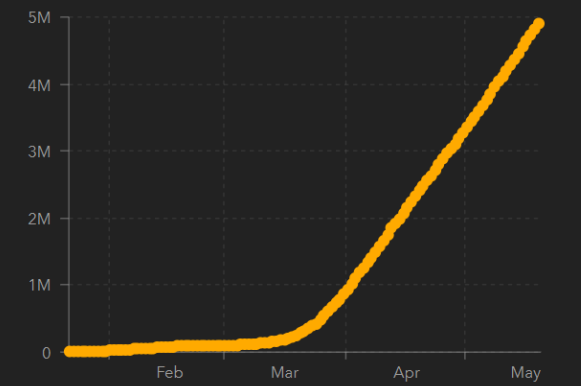
Confirmed | Logarithmic | Daily Cases

Esri, FAO, NOAA

Testing coverage

The chart here shows a measure of testing coverage – tests per thousand people.

Countries are reporting testing data in different ways: some report the number of tests, others report the number of people tested. This distinction is important – people may be tested many times, and the number of tests a person has is likely to vary across countries.[1]

Across different countries, we see an enormous range in testing coverage. In Iceland there have been more than 100 tests per thousand people – far more than in any other country. In Indonesia, testing coverage is very low – only 0.1 tests per thousand people.[2]

Generally, we would expect that more testing means more reliable data on confirmed cases, for two reasons.

Firstly, a greater degree of testing provides us with a larger 'sample' of people for which their infection status is known. If everybody was tested, we would know the true number of people who are infected.

Secondly, it may be the case that countries with a high capacity for testing do not need to ration tests as much. Where the capacity for testing is low, tests may b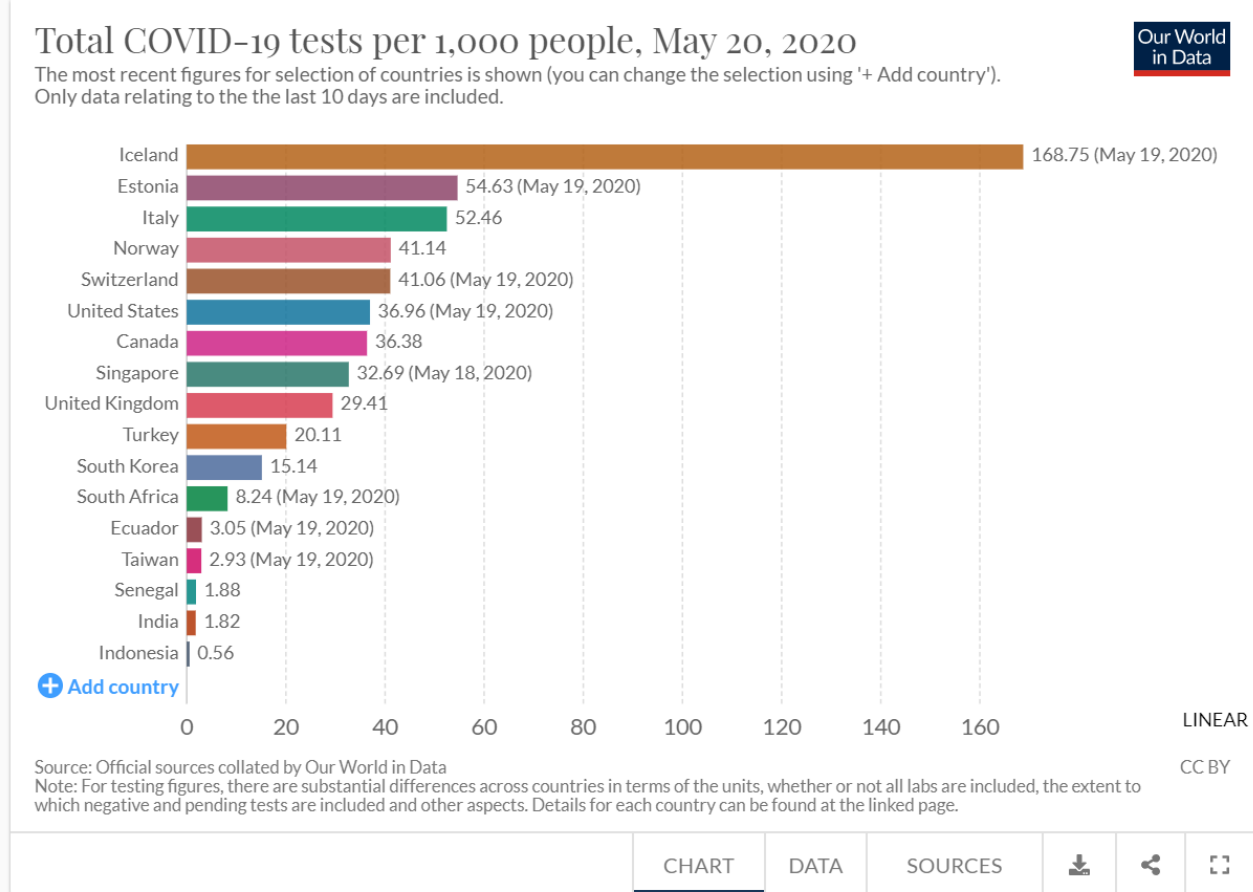e reserved (or 'rationed') for particularly high-risk groups. Such rationing is one of the reasons that tested people are not representative of the wider population.

As such, where testing coverage is higher, the 'sample' of tested people may provide a less biased idea of the true prevalence of the virus.[3]

Download the data: we make our full testing dataset, alongside detailed source descriptions, available on GitHub.

Total COVID-19 tests per 1,000 people, May 20, 2020

The most recent figures for selection of countries is shown (you can change the selection using '+ Add country').
Only data relating to the the last 10 days are included.

Country	Value
Iceland	168.75 (May 19, 2020)
Estonia	54.63 (May 19, 2020)
Italy	52.46
Norway	41.14
Switzerland	41.06 (May 19, 2020)
United States	36.96 (May 19, 2020)
Canada	36.38
Singapore	32.69 (May 18, 2020)
United Kingdom	29.41
Turkey	20.11
South Korea	15.14
South Africa	8.24 (May 19, 2020)
Ecuador	3.05 (May 19, 2020)
Taiwan	2.93 (May 19, 2020)
Senegal	1.88
India	1.82
Indonesia	0.56

+ Add country

LINEAR

CC BY

Source: Official sources collated by Our World in Data
Note: For testing figures, there are substantial differences across countries in terms of the units, whether or not all labs are included, the extent to which negative and pending tests are included and other aspects. Details for each country can be found at the linked page.
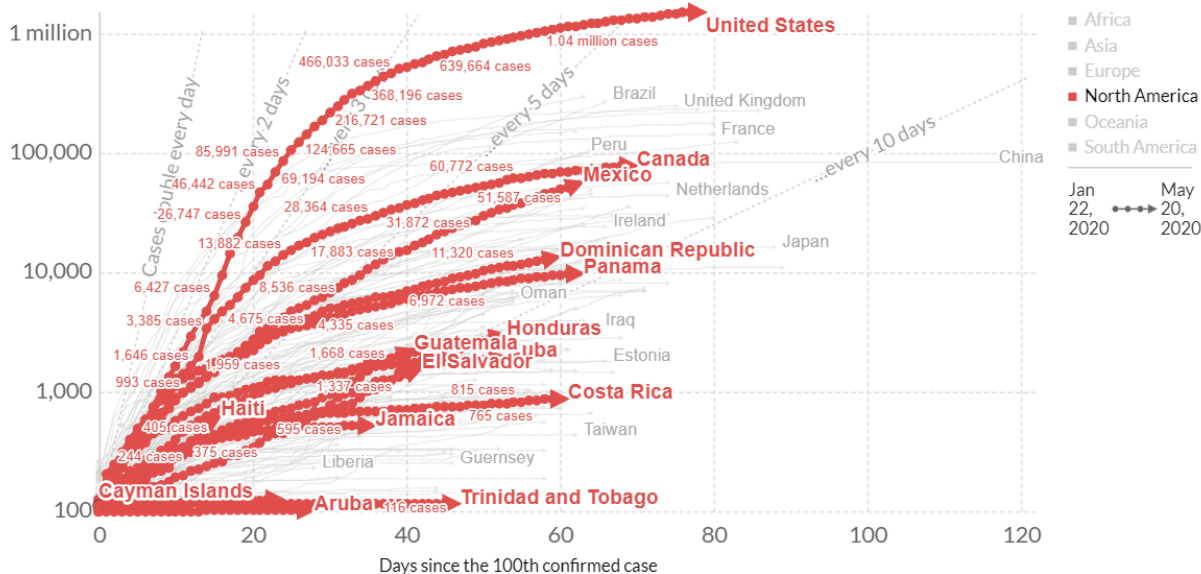
CHART   DATA   SOURCES

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Total confirmed cases: how rapidly have they increased compared to other countries?

Total confirmed COVID-19 cases: how rapidly are they increasing?
The number of confirmed COVID-19 cases is lower than the number of total cases. The main reason for this is limited testing.

Source: European CDC – Situation Update Worldwide – Last updated 20th May, 16:30 (London time)

Jan 21, 2020 ———————————— May 20, 2020

The trajectory for every country begins on the day when that country had 100 confirmed cases. This allows you to make comparisons of how quickly the number of confirmed cases has grown in different countries.

Keep in mind that in countries that do very little testing the total number of cases can be much higher than the number of confirmed cases shown here.

💡 How you can interact with this chart

Clicking on any country in the chart highlights that country. If you click on several countries you can create a view in which you can compare several countries.

Any country you might not see immediately you can find via the 'Select Countries' in the bottom left. Just type the name in the search box there.

CHART | DATA | SOURCES

Related chart:

How do rates compare when we **adjust for population**?
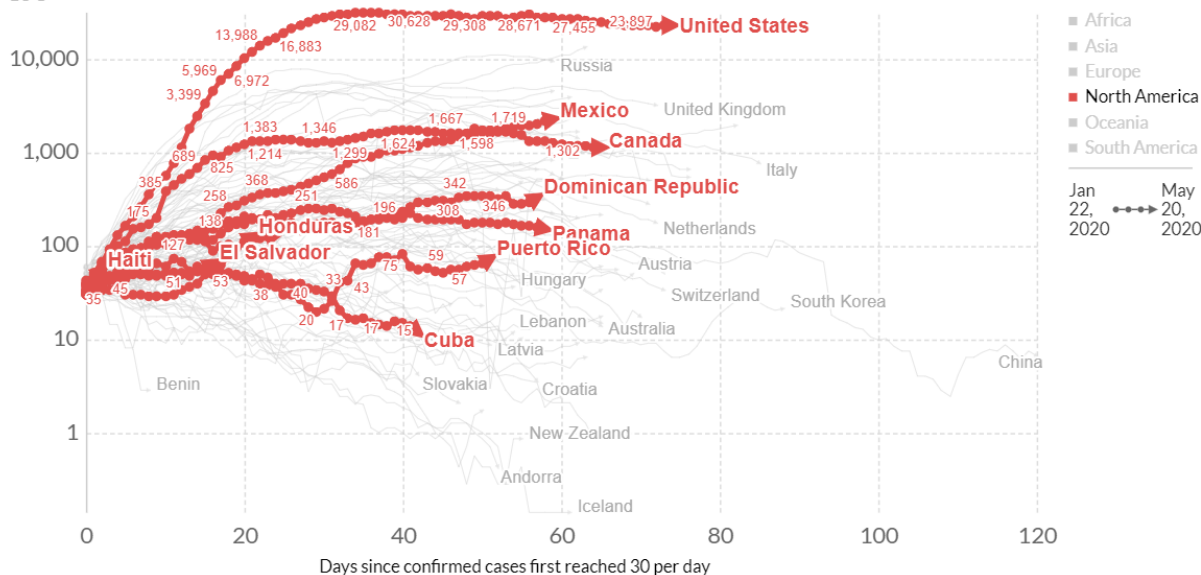
29

Add a country to all charts...

Select countries to show on all charts

Daily confirmed cases: are we bending the curve?

Daily confirmed COVID-19 cases: are we bending the curve?

Our World in Data

Because not everyone is tested the total number of cases is not known. Shown is the 7-day rolling average of confirmed cases.

Source: European CDC – Situation Update Worldwide – Last updated 20th May, 16:30 (London time)

CC BY

▶ Jan 21, 2020 ━━━━━━━━━━━━━━━ May 20, 2020

✏ Select countries

CHART   DATA   SOURCES

To bring the pandemic to an end, **every country has to bring the curve of daily cases down to zero.**

This chart allows you to track whether countries are achieving this or not.

This chart shows the same data as before, but now adjusted for the size of the population – it shows **daily confirmed cases per million people.**

💡 How you can interact with this chart

The default log view is helpful to compare the growth rates between countries: on a logarithmic scale the steepness of the line corresponds to the growth rate.

But in this chart, as in many of our charts, you can switch to a linear axis. Just click on 'LOG'.

Here is an explanation for how to read logarithmic axes.

Related chart:

Subscribe to receive updates   💬 Feedback

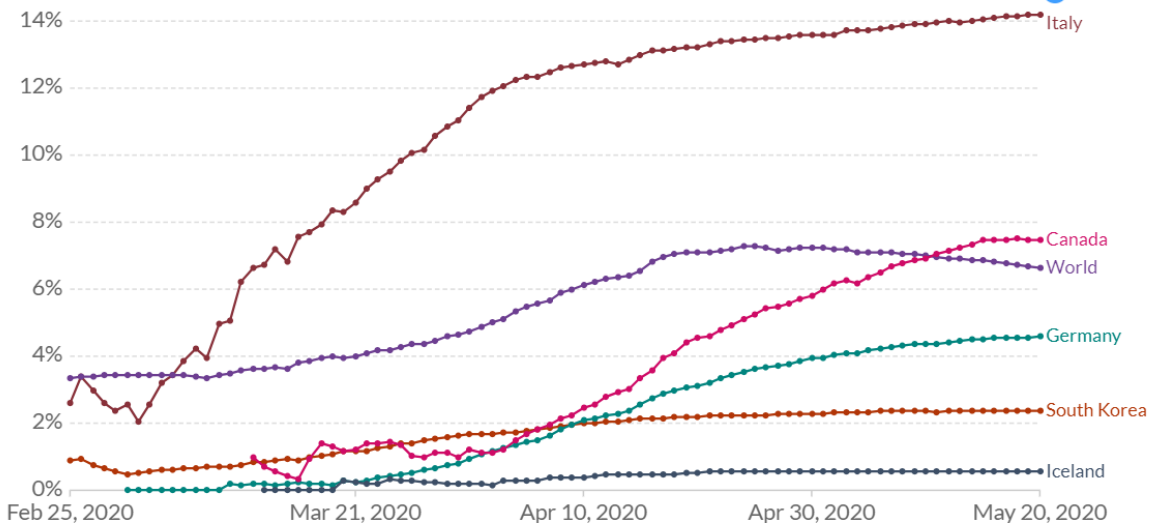Add a country to all charts...

Select countries to show on all charts

The case fatality rate

Case fatality rate of the ongoing COVID-19 pandemic

Our World in Data

The Case Fatality Rate (CFR) is the ratio between confirmed deaths and confirmed cases.
During an outbreak of a pandemic the CFR is a poor measure of the mortality risk of the disease. We explain this in detail at OurWorldInData.org/Coronavirus

⊕ **Add country**

14% .... Italy

12%

10%

8% .... Canada

6% .... World

4% .... Germany

2% .... South Korea

0% .... Iceland
Feb 25, 2020   Mar 21, 2020   Apr 10, 2020   Apr 30, 2020   May 20, 2020

Source: European CDC – Situation Update Worldwide – Last updated 20th May, 16:30 (London time)   CC BY
Note: Only countries with more than 100 confirmed cases are included.

▶ Jan 19, 2020 ————————————————————————————— May 20, 2020

CHART   MAP   DATA   SOURCES

Related chart:

How do the total number of confirmed deaths and cases compare? See them plotted against each other.

The case fatality rate is simply the ratio of the two metrics shown in the chart above.

The case fatality rate is the number of confirmed deaths divided by the number of confirmed cases.

This chart here plots the CFR calculated in just that way.

During an outbreak – and especially when the total number of cases is not known – **one has to be very careful in interpreting the CFR**. We wrote a detailed explainer on what can and can not be said based on current CFR figures.

⊕ Subscribe to receive updates   💬 Feedback

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Estimating the burden of SARS-CoV-2 in France

- **BAD** even after a major surge in Covid19 (~100K hospitalizations and >15K deaths), the estimated penetrance of Covid19 in France **is <5%**;
  - based on these numbers, **a "second wave" of Covid19 is essentially inevitable** - with >95% of the population remaining vulnerable.
- '**GOOD**' population-wide estimated risk of requiring hospitalization was **3.6% with an overall mortality of <1%.**
  - Both numbers were age- and sex-dependent. In males age >80y, hospitalization ~45% of the time with a mortality of ~38%, CFR 10%
- Big picture:
  - Despite a major surge only brought under control by a very strict and prolonged lockdown, 95% of France still hasn't been exposed. **Scary**.
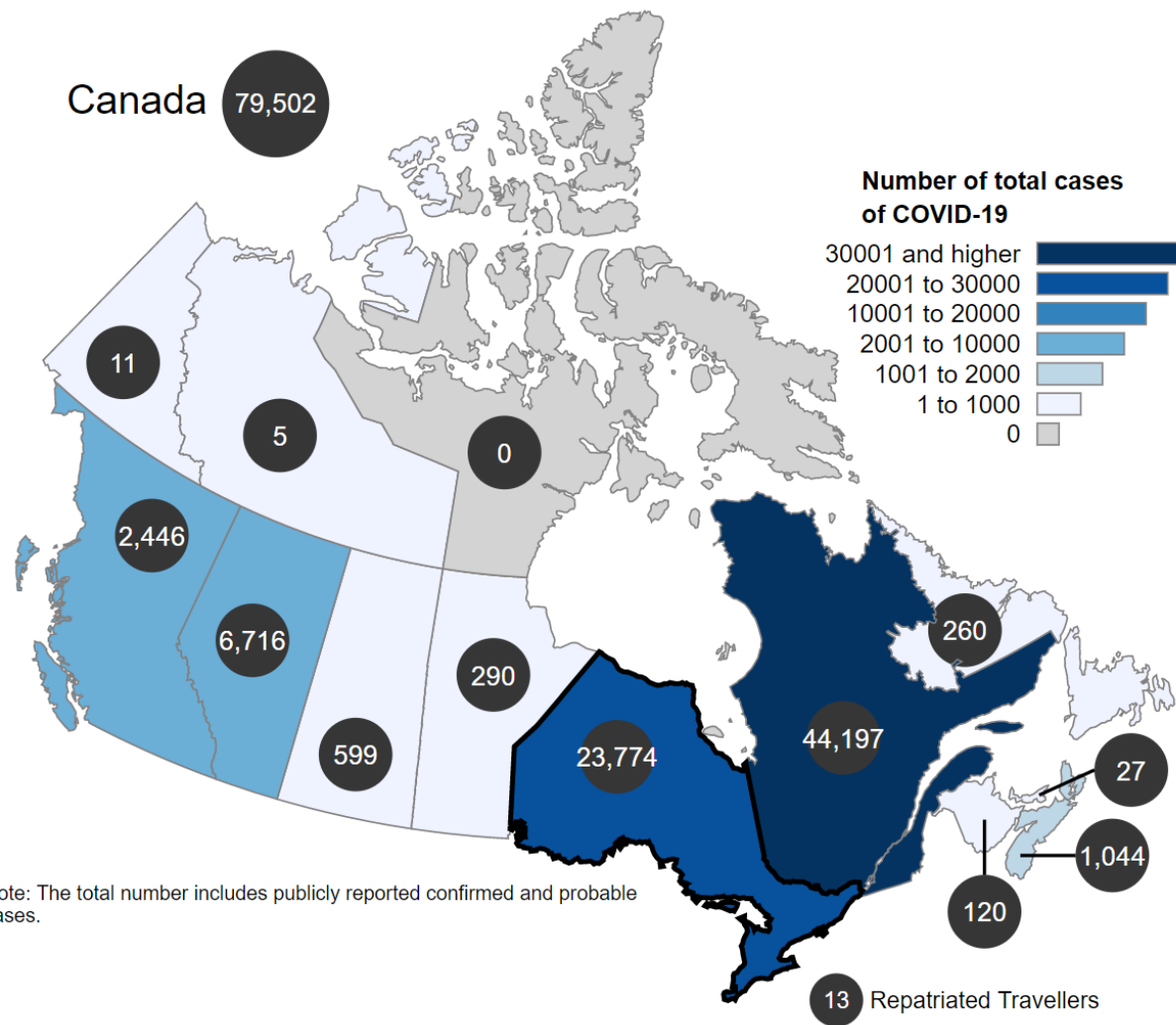
Seroprevalence of SARS-CoV-2–Specific Antibodies Among Adults in Los Angeles County, California, on April 10-11, 2020

Table. Unweighted Characteristics of Study Participants and Proportion With IgM or IgG for SARS-CoV-2

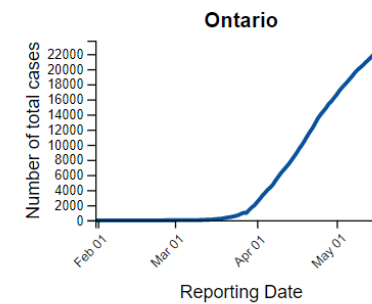| Characteristics	Sample size	Proportion of sample, % (95% CI)[a]	No. positive	Unweighted proportion positive for IgM or IgG, % (95% CI)[a]
Entire sample	863	100	35	4.06 (2.84-5.60)
Sex				
Male	347	40.21 (36.92-43.57)	18	5.18 (3.10-8.07)
Female	514	59.56 (56.19-62.85)	17	3.31 (1.94-5.24)

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ⓘ Hover over, tap, or tab to provinces and territories to see cases over time or hit the play button to animate the map.

Canada 79,502

**Number of total cases
of COVID-19**

30001 and higher	▇▇▇▇
20001 to 30000	▇▇▇
10001 to 20000	▇▇
2001 to 10000	▇
1001 to 2000	▪
1 to 1000	▫
0	▪

11

5

0

2,446

6,716

290

260

599

23,774

44,197

27

1,044

120

13 Repatriated Travellers

Note: The total number includes publicly reported confirmed and probable cases.

The number of total cases of COVID-19 in **Ontario** was **23,774** as of May 20, 2020.

Ontario

Number of total cases: 22000, 20000, 18000, 16000, 14000, 12000, 10000, 8000, 6000, 4000, 2000, 0

Reporting Date: Feb 01, Mar 01, Apr 01, May 01

▶ Play   ⬇ .csv

▶ Map - Total Number of COVID-19 Cases in Canada - Text Description

Additional COVID-19 case information:

- epidemiological summary
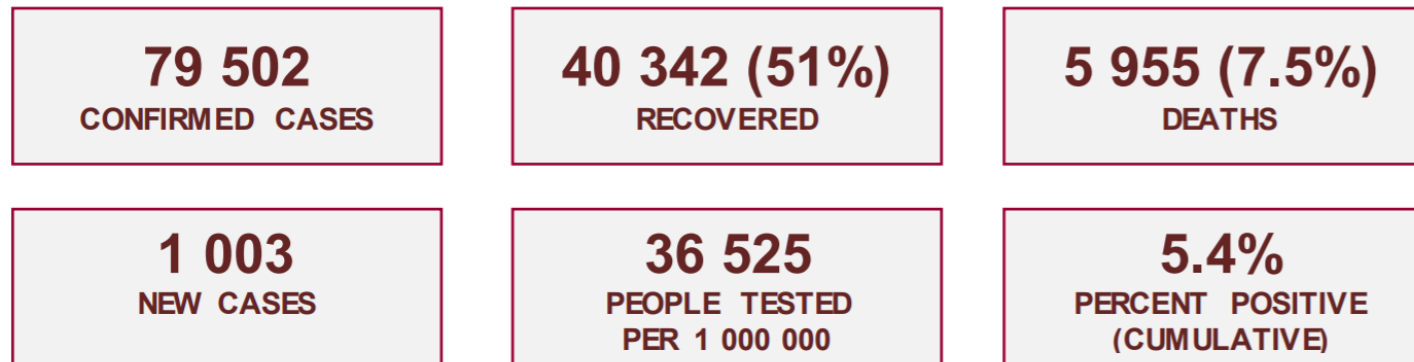
✕ COVID-19 Virtual
Assistant

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COVID-19 IN CANADA

# CORONAVIRUS DISEASE 2019 (COVID-19)

DAILY EPIDEMIOLOGY UPDATE

Updated: 20 May 2020, 11:00 ET

79 502 CONFIRMED CASES	**40 342 (51%)** RECOVERED	**5 955 (7.5%)** DEATHS
1 003 NEW CASES	**36 525** PEOPLE TESTED PER 1 000 000	**5.4%** PERCENT POSITIVE (CUMULATIVE)

KEY UPDATES

- New cases continue to be reported across the country, however with a decreasing trend in daily reported cases observed.
- The majority of cases (85%) and deaths (94%) continue to be reported from Quebec and Ontario.
- No new cases have been reported in six jurisdictions within the past seven days.
- No new deaths have been reported in nine jurisdictions within the past 24 hours.

35

Figure 4. Proportion of COVID-19 cases hospitalized, admitted to ICU and deaths in Canada, by age group, as of 20 May 2020

■ Cases in hospital ■ Cases in ICU ■ Deaths

positive over that same period was 4.1% (Figure 3).
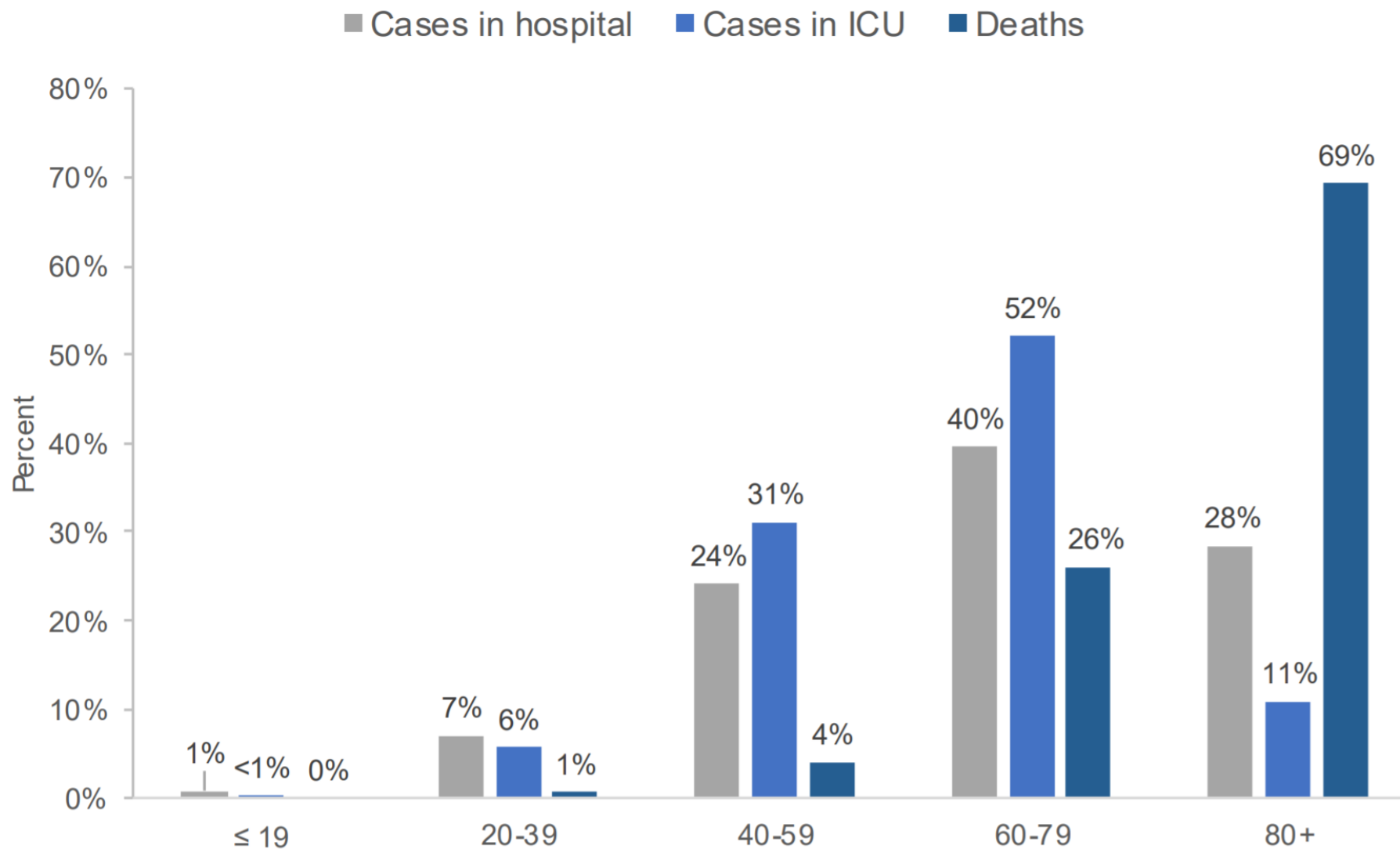
Figure 3: Number of persons tested for COVID-19 and percent positive by week in Canada

Data source: Provided by the NML, who receive lab testing data from provincial labs

Summary of cases of COVID-19: Ontario, January 15, 2020 to May 19, 2020

	Number	Percentage
Number of cases[1]	23,774	N/A
Change from previous report (new cases)	390	1.7% increase
Resolved[2]	18,190	76.5
Subset of all cases that are reported to be long-term care residents[3,4,5]	4,518	19.0
Subset of all cases that are reported as a health care worker[4,5,6] associated with long-term care outbreaks	1,573	6.6
Total number of deaths[7]	1,962	8.3
Deaths[7] reported for residents in long-term care homes[4,5,6]	1,224	62.4
Deaths[7] reported for health care workers[5,6,2] in long-term care homes	4	0.2

Testing

Total tests completed[8]	567,176	N/A
Total tests completed in the previous day[9]	7,382	N/A
Currently under investigation[10]	4,444	N/A

Hospitalizations

Number of patients currently hospitalized with COVID-19[11]	991	N/A
Number of patients currently in ICU[12] with COVID-19	160	N/A
Number of patients currently in ICU[12] on a ventilator with COVID-19	120	N/A

MA EPR - Profile

COVID-19 Cases by Public Health Unit - as of May 18, 2020

Thunder Bay District Health Unit

Porcupine Health Unit

Timiskaming Health Unit

The District of Algoma Health Unit

Ottawa

apolis

Wisconsin

Michigan

Detroit

New York

Chicago

Windsor-Essex County Health Unit

500 km

© 2020 Mapbox © OpenStreetMap

Provincial Overview

1.20

1.0

0.5

0.0

0.80

Week-over-Week Rate

Mar 27   Apr 11   Apr 26   May 11

Number of New Cases:

Decreasing   Constant   Increasing

0.0   2.0

Choose Date Range

3/15/2020   5/18/2020

Trend of COVID-19 Cases by Public Health Unit (Week-over-Week Growth of New Cases)

Choose Metric

COVID-19 Growth

Brant County   Chatham-Kent   City of Hamilon

Critical Care Census
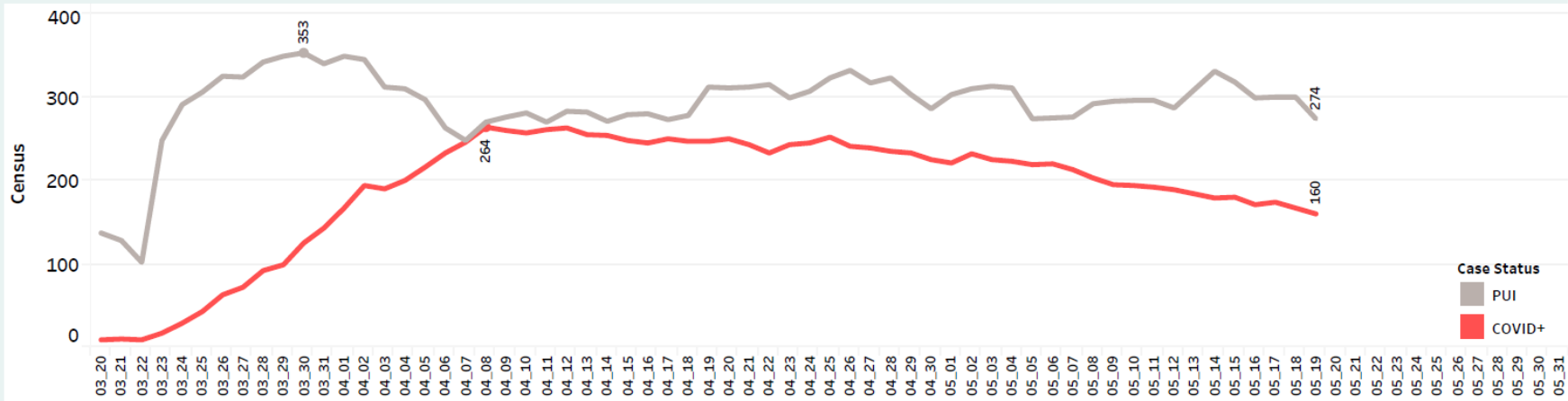
1,466

Critical Care COVID+ Census

160

Critical Care PUI Census

274

Daily Trend of Critical Care COVID+ and PUI Census

Case Status
- PUI (gray)
- COVID+ (red)

Critical Care Bed Occupancy Rate for Baseline Capacity and Expanded ICU Capacity

Region	Sub-region	Baseline	Expanded
West	L1: ESC	54%	35%
West	L2: SW	76%	41%
West	L3: WW	80%	49%
West	L4: HNHB	67%	37%
Central	L5: CW	81%	62%
Central	L6: MH	78%	53%
Central	L8: Central	84%	46%
Central	L12: NSM	63%	28%
Toronto	L7: Toronto	80%	57%
East	L9: CE	74%	43%
East	L10: SE	76%	48%
East	L11: Champlain	70%	36%
North	L13: NE	56%	31%
North	L14: NW	33%	18%
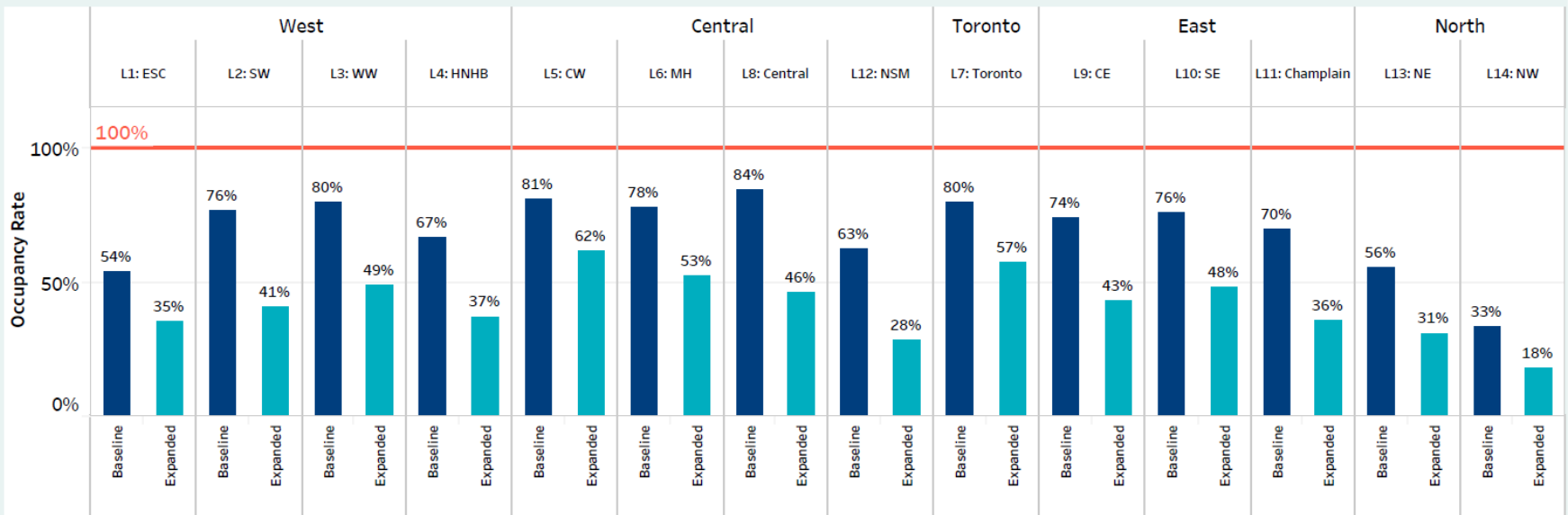
Select a public health unit (only displaying health units reporting at least 1 week with cumulative cases >5)

Health Unit

Toronto

[Download Health Unit Projections]

[Download Ontario Projections]

Daily fits to reported case count data are presented for health units reporting substantial COVID-19 activity. Forecasts are based on reported case data collected by the COVID-19 Canada Open Data Working Group.

Projected cases are shown for 30 days into the future. Lines represent best-fit estimates to the data. Shaded areas represent 95% prediction intervals and are a measure of the uncertainty associated with the projections.

Projections should be interpreted with caution. Note that the projections are subject to change as additional case data become available and are particularly unstable for health units with small numbers of cases or fewer days with reported cases. Any changes in testing/reporting will also make these estimates unstable.

Model projections for the entire province of Ontario are shown for comparison.
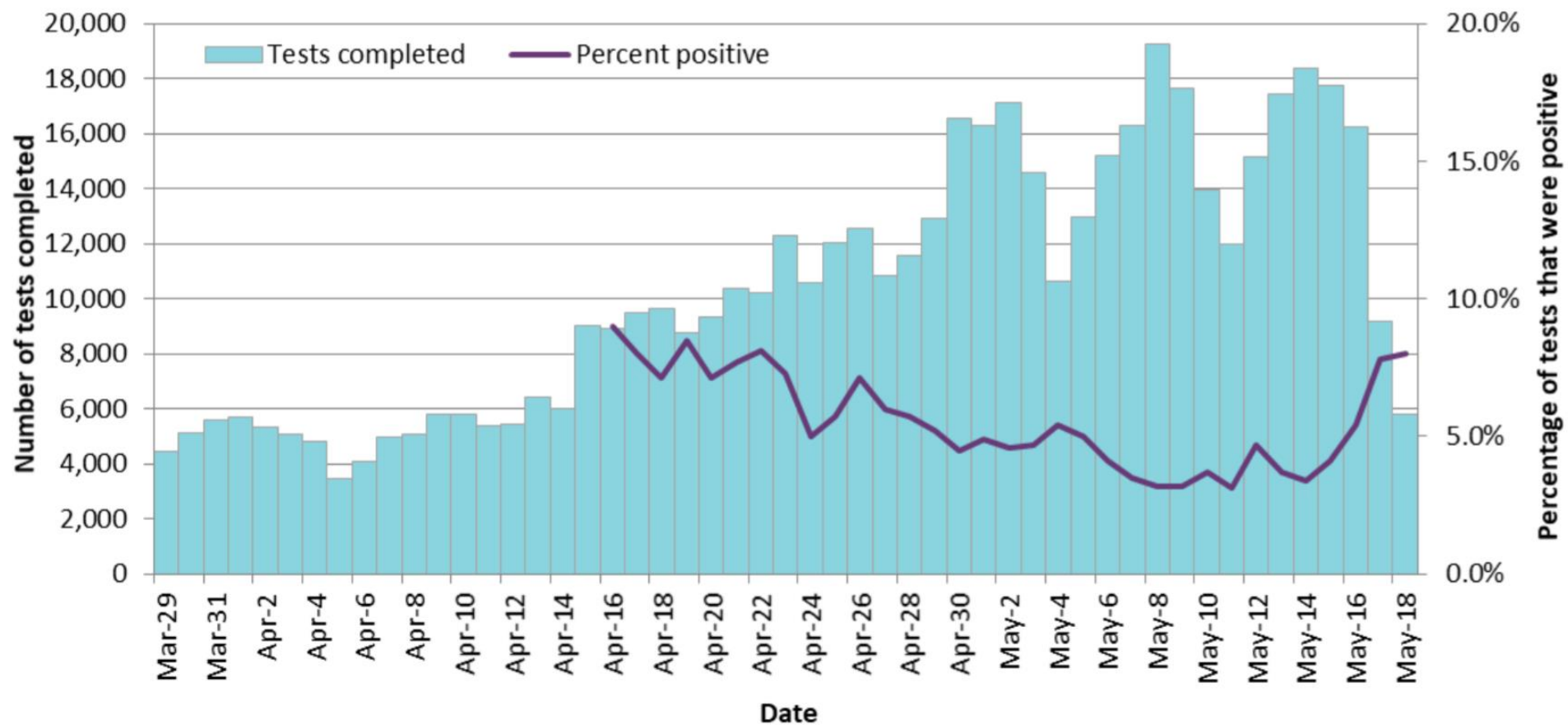
Refer to the Details tab for additional information.

Ontario

CCSO COVID-19 D....pdf

Show all
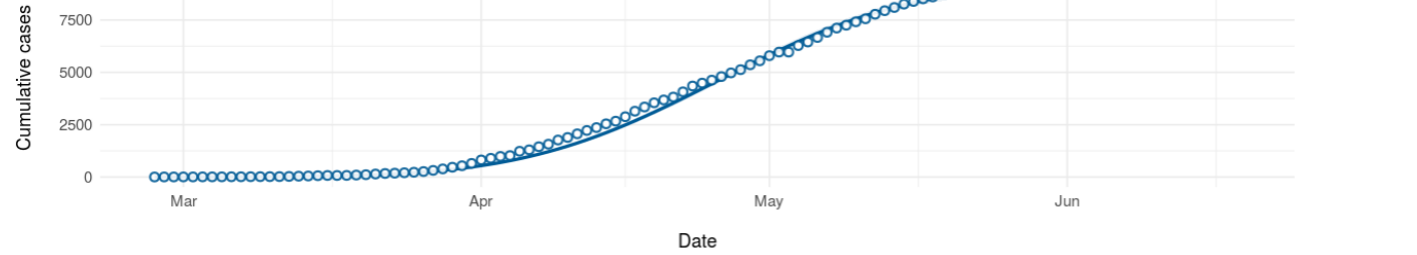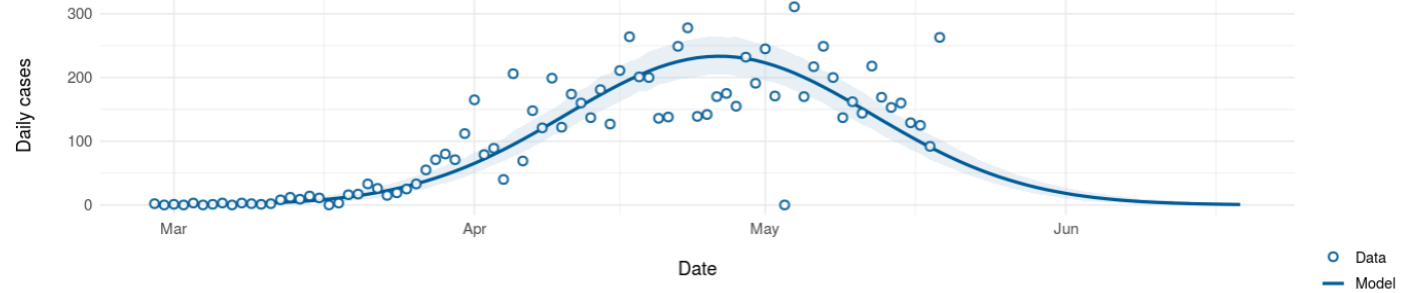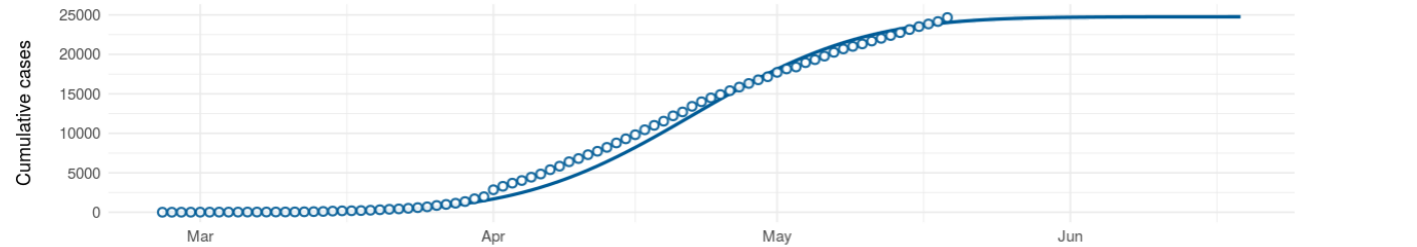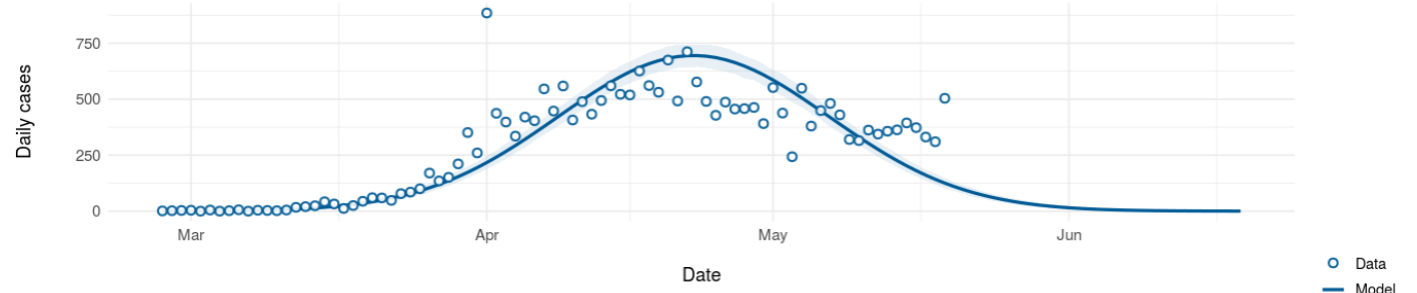
Figure 3. Number of COVID-19 tests completed[1] and percent positivity: Ontario, March 29, 2020 to May 18, 2020

SCARY – Heart Failure Data

DR. HEATHER ROSS

These are the prevalent and incident patients at a provincial level up to March 31st2019. (ICES)

CONFIDENTIAL- available in presentation only and not for wider distribution

UHN real time data 2019 vs 2020

CONFIDENTIAL- available in presentation only and not for wider distribution
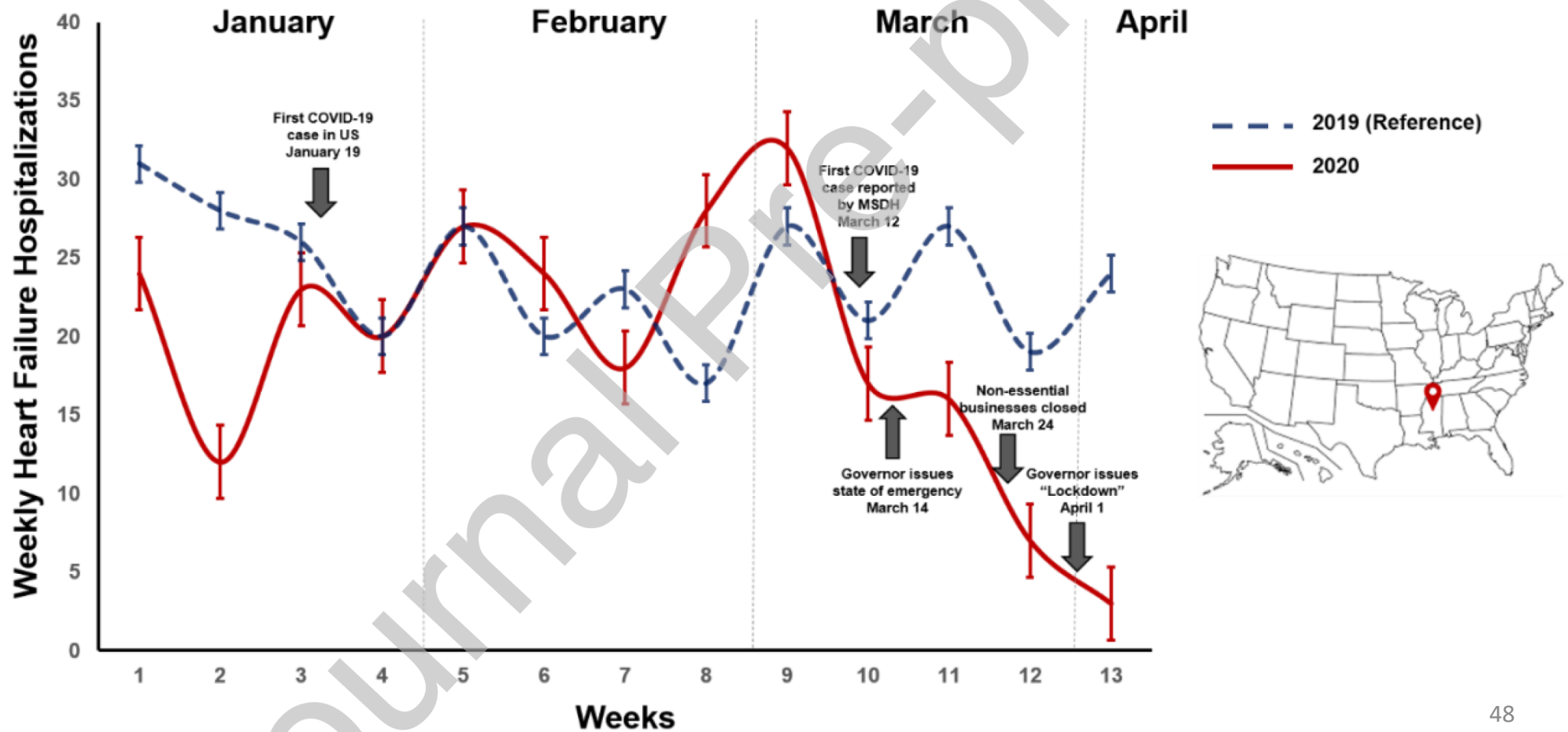
UHN real time data - 2019 vs 2020

CONFIDENTIAL- available in presentation only and not for wider distribution
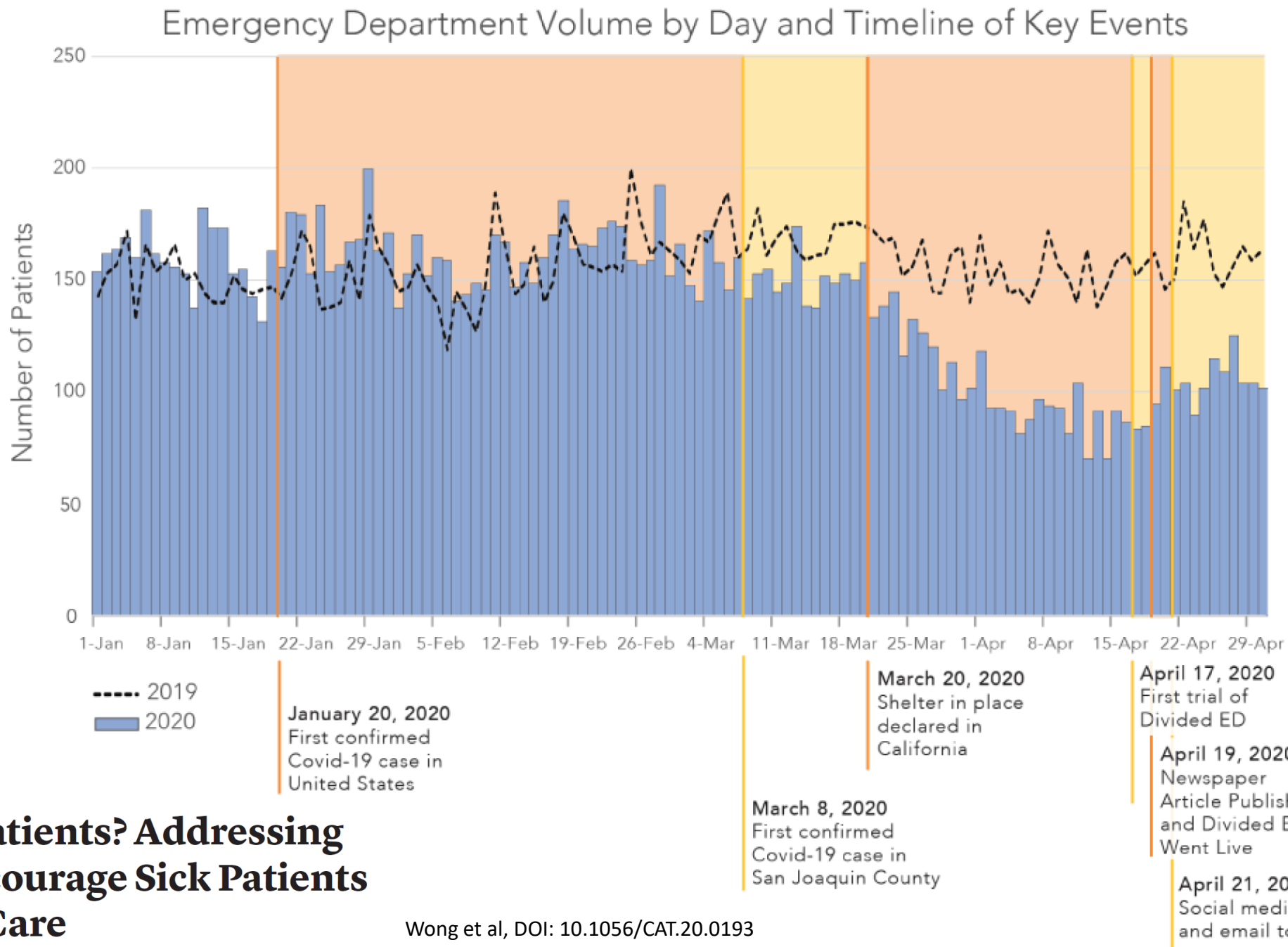
Reductions in Heart Failure Hospitalizations During the COVID-19 Pandemic

Decline in Heart Failure Hospitalizations During the COVID-19 Pandemic

Hall et al, JCF 2020

Emergency Department Volume by Day and Timeline of Key Events

Where Are All the Patients? Addressing Covid-19 Fear to Encourage Sick Patients to Seek Emergency Care

Where are we???

- In 2010, with CCN, Wijesundera did an environmental scan of HF clinics.
    - Identified 30 self-identified HF clinics.
    - Based on that data, capacity was 31,295 visits per year – that was the capacity a decade ago (we sampled in 2010) of annual visits.
- Translating that into a **1-month capacity is ~3000 visits**.

- Alba did an update of this in 2020 including MD and NP-led clinics and identified 36 clinics.
- 22 clinics reported their annual visit volume totalizing **~41,000 visits/year.**

Ambulatory Heart Failure Activity: Planning for Resuming Care

DR. HEATHER ROSS

Overview of Recovery Phases

Recovery Phase	Pandemic Period: as of Mar 13, 2020	Recovery Phase 1	Recovery Phase 2	Recovery Phase 3	Future State: "New Normal"
Recovery Phase	Essential Care Only	Time sensitive procedure if delayed more than 90 days; or priority program (e.g. UHN only provider in Ontario)[1]	Prioritize activity where UHN is one of a few providers of specialty care in Ontario[1]	Prioritize based on impact on quality of life and disease outcomes[1,2]	New baseline activity level established

[1] May also include procedures at low risk for admission to hospital (e.g. Endoscopy, Cystoscopy, Arthroscopy, Diagnostic Cardiac Cath, Ophthalmology).

[2] This may require adjudication of proposed increases in activity by the Clinical Activities Working Group in each program, as available Hospital resources may limit the ability for all increases in activity to proceed simultaneously.

UHN
Toronto General
Toronto Western
Princess Margaret
Toronto Rehab
Michener Institute

Resumption of care – summary of our detailed doc that went to the clinical activity working group

Program	Baseline Weekly Activity	Recovery Phase 1	Recovery Phase 2	Recovery Phase 3	Future State "New Normal"
Peter Munk Cardiac	2,696	5% - 30%	5% - 30%	10% - 100%+	25% - 100%+
Cardiology	**850**	**10%**	**25%**	**50%**	**60-70**
Vascular Surgery		25 – 30%	25 – 30%	> 100%	> 100%
Cardiovascular Surgery		5%	5%	30%	30%
Cardiac Rehab		0%	0%	10 – 25%	25 – 50%

Ambulatory

Program	Baseline Weekly Activity	Recovery Phase 1	Recovery Phase 2	Recovery Phase 3	Future State "New Normal"
Peter Munk Cardiac					
Cardiology	33-37/d Approx. 170 per week	40%	60%	100-120%	100-120% till waitlist is appropriate

Procedural

Program		Recovery Phase 1	Recovery Phase 2	Recovery Phase 3	Future State "New Normal"
Peter Munk Cardiac		90	75	50	70
Cardiology		**90%**	**75%**	**50%**	**30-40%**
Vascular Surgery		TBC	TBC	TBC	TBC
Cardiovascular Surgery		TBC	TBC	TBC	TBC
Cardiac Rehab		100%	100%	≥ 75%	≥ 50%

Virtual

Summary of UHN IPAC Guidelines on Resuming Ambulatory Care

• Install Plexiglas barriers at reception area if possible; where not possible, PFC or receptionist to wear mask and face shield

• Use floor tape to clearly mark where patients should wait, should a queue develop at check-in

• Additional hand hygiene dispensers various clinics

• Shut down water coolers

• Move unnecessary equipment out of clinic rooms or bag/cover it so as to signify non-use

• Patients screened by phone prior to the appointment, upon arrival using the symptom screening tool. During the phone screening, patients will be directed to call ahead if they develop any symptoms

• No accompanying persons are to be allowed to limit in-hospital traffic. The exceptions are:

  • The patient has a physical or cognitive impairment and needs support from a caregiver or caregivers

  • The test or procedure requires the patient to bring an escort

  • The patient needs interpretation (and interpretation services not available)

• Upon arrival, patients are given masks at entrance to building and asked to perform hand hygiene

• Patient waiting time **should be minimized** as much as possible if not eliminated.

• Patients in waiting area must socially distance by 2 metres minimum; managers must coordinate to determine schedule/number

• Have signage to close off washrooms if a symptomatic patient uses it. Signage something along the lines of *'do not use - needs terminal cleaning'*, while awaiting HK terminal cleaning

• Ensure diligent clinic room turnover/disinfection (BP cuffs, exam tables, etc.)

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Ontario

Other Updates and Next Steps

JANA JEFFREY

Other Updates and Next Steps

- CorHealth COVID-19 Forum Meeting Evaluation (Survey) circulated to all Forum members (open until May 29th, 2020)

- Next COVID-19 Cardiac Forum Meeting: Thursday, May 28, 2020; 8:00-9:00 am

  - Discussion to focus on CORE Cardiac Submodule: Recovery Scenarios; and guidance for standards of practice

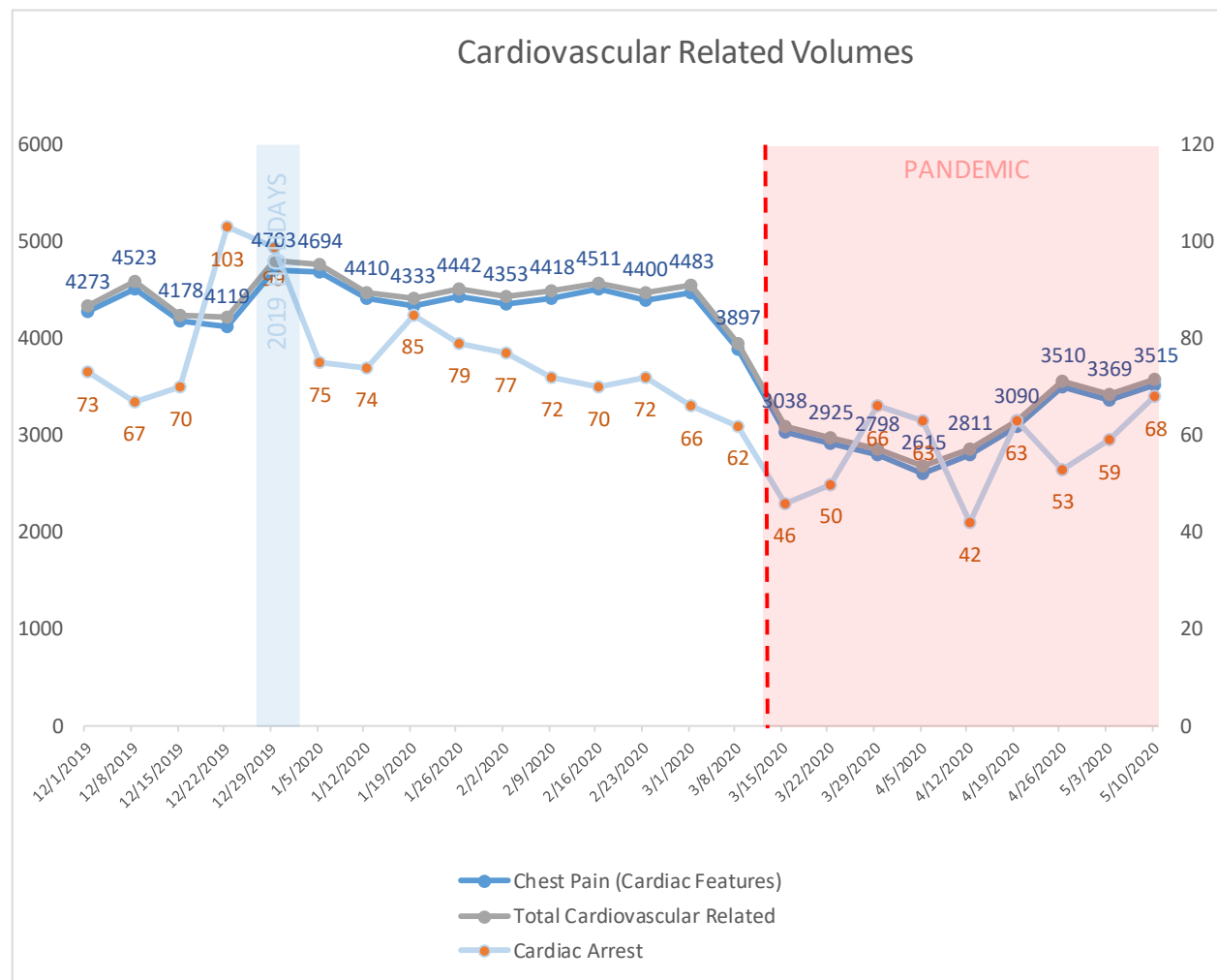- CorHealth COVID-19 Cardiovascular Rehab Stakeholder Forum #2: May 22, 8:30-9:30 am.

Appendix

Cardiac Workstreams

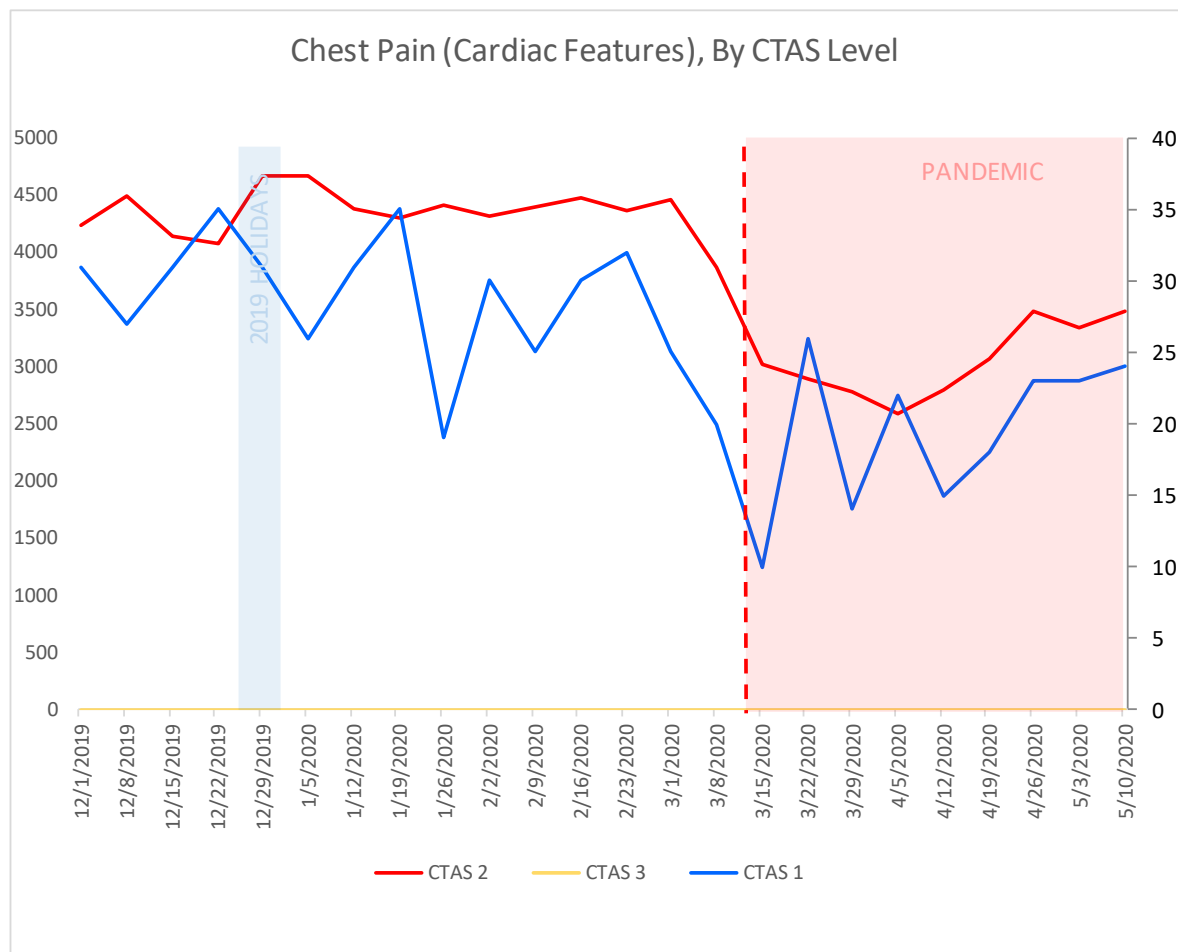| Cardiac Workstream	Moderator(s)
Echocardiography	Dr. Tony Sanfilippo Dr. Howard Leong-Poi
Rehab	Dr. Paul Oh Dr. Mark Bayley
Cardiac Surgery Cath/PCI	Dr. Chris Feindel Dr. Eric Cohen
Heart Failure	Dr. Heather Ross
STEMI	Dr. Steve Miner
Cardiac Electrophysiology	Dr. Atul Verma
Structural Heart (TAVI, Mitral Clip)	Dr. Sam Radhakrishnan
Managing Referrals	Dr. Chris Feindel Dr. Eric Cohen

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Appendix A: eCTAS

Cardiovascular Presentations

Cardiovascular Related Volumes

Cardiovascular Presentations

Chest Pain (Cardiac Features), By CTAS Level

Cardiovascular Presentations

Cardiac Arrest, By CTAS Level

Cardiovascular Presentations

Cardiovascular Presentations

Chest Pain (Cardiac Features), By Age Group

Cardiovascular Presentations

Cardiac Arrest, By Age Group
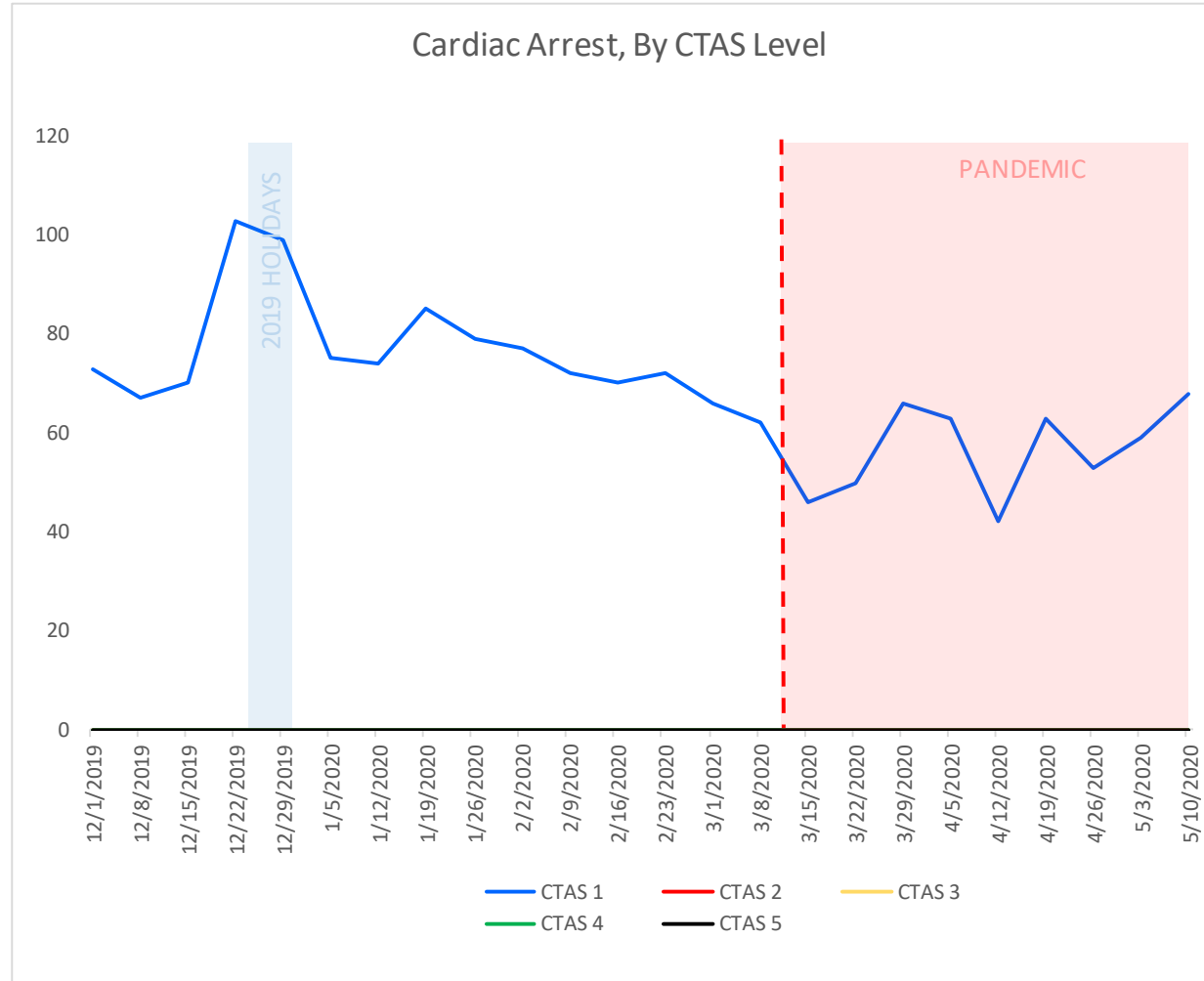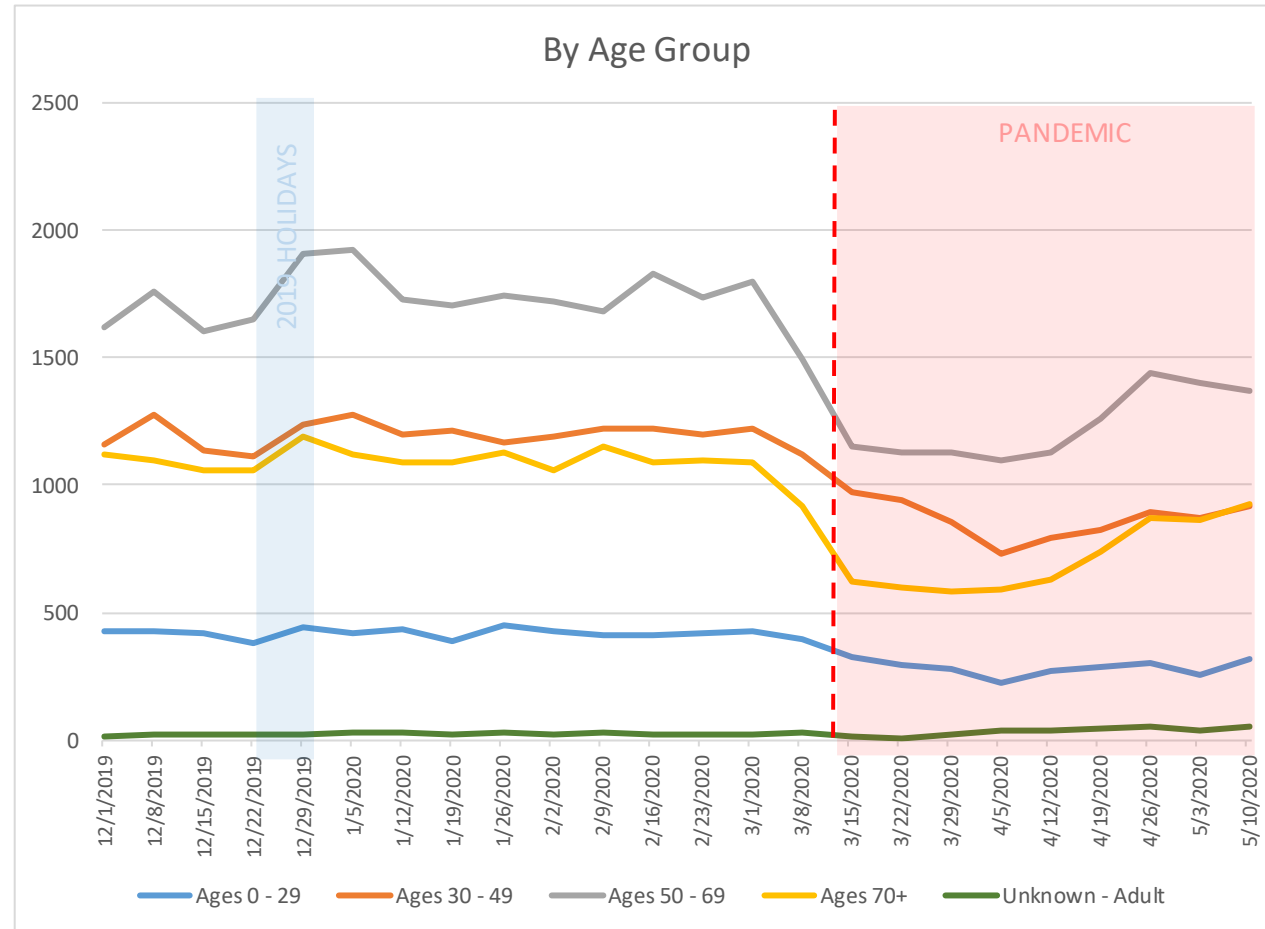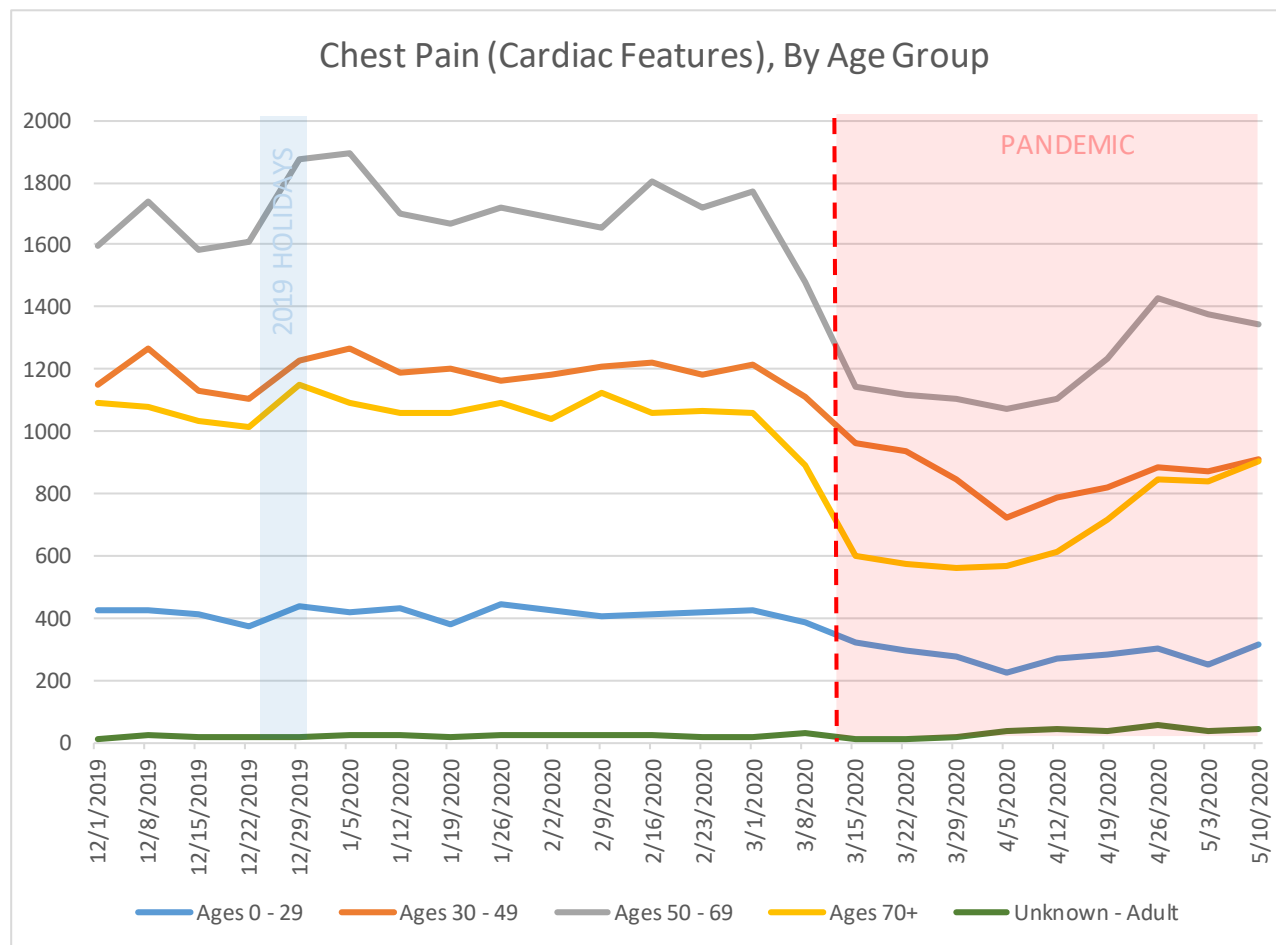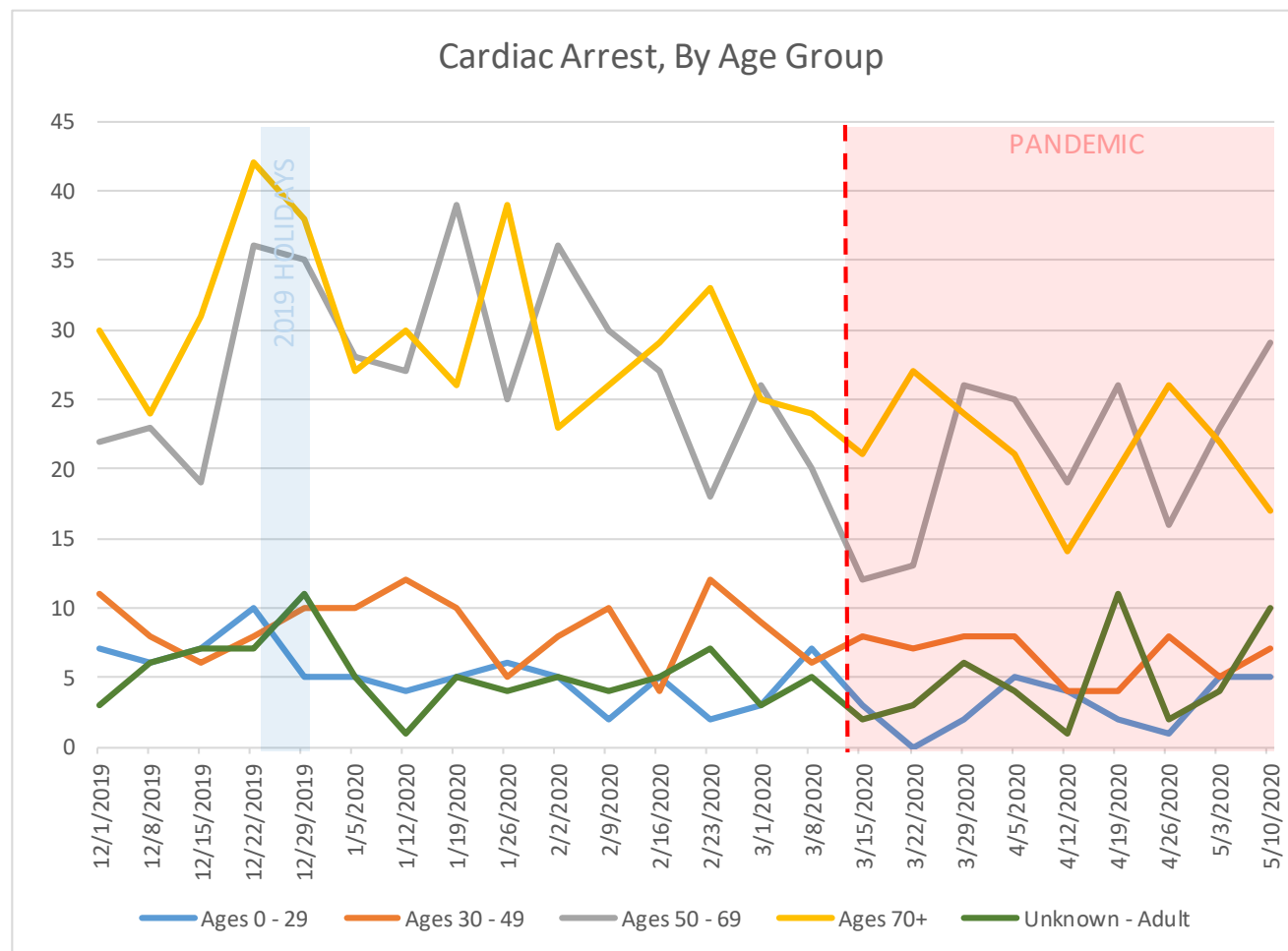
Appendix B: Additional STEMI Data

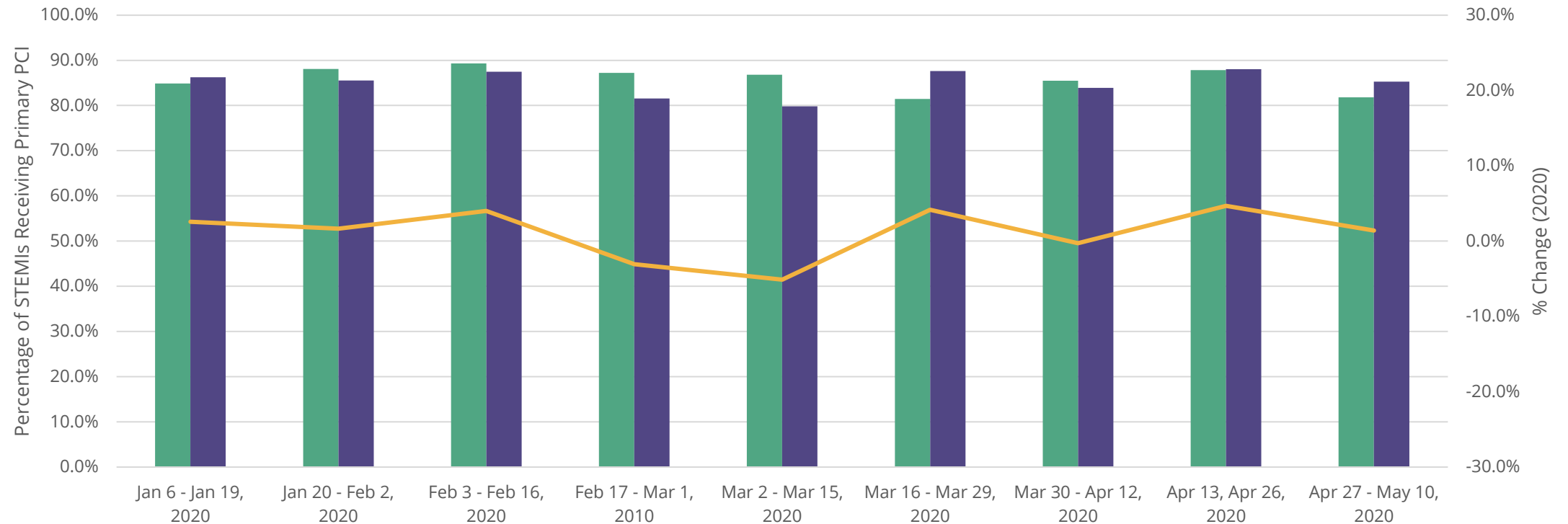# Percentage of STEMI Activations That Received Only a CATH (no PCI or Lytic)
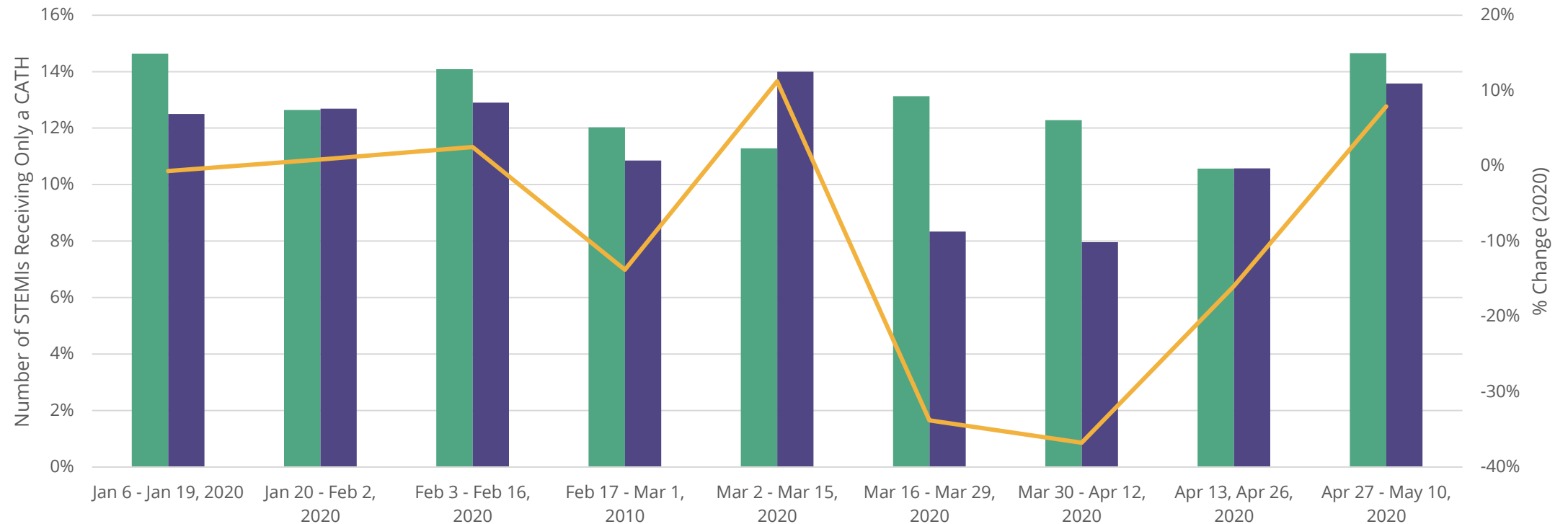
Volume of STEMIs Receiving Fibrinolysis

	Jan 6 - Jan 19, 2020	Jan 20 - Feb 2, 2020	Feb 3 - Feb 16, 2020	Feb 17 - Mar 1, 2010	Mar 2 - Mar 15, 2020	Mar 16 - Mar 29, 2020	Mar 30 - Apr 12, 2020	Apr 13, Apr 26, 2020	Apr 27 - May 10, 2020
2019	36	34	40	32	29	34	35	36	34
2020	34	33	36	28	35	18	16	22	22

Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; % Change is calculated for the 2020 data set as compared to the average biweekly percentage of STEMIs receiving only CATH from January 6th to March 15th 2020 .

Change in % Primary PCI in 2020 Compared to 2019

| Volume of PPCIs									
2019	174	200	209	198	191	180	212	217	189
2020	201	183	203	181	166	170	151	162	116

Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; These data only include STEMIs that went on to receive a same sitting PCI; % Change is calculated for the 2020 data[68] set as compared to the average biweekly percentage of PPCI from January 6th to March 15th 2020 .

Proportion of STEMI Patients That Were 65 Years of Age or Older
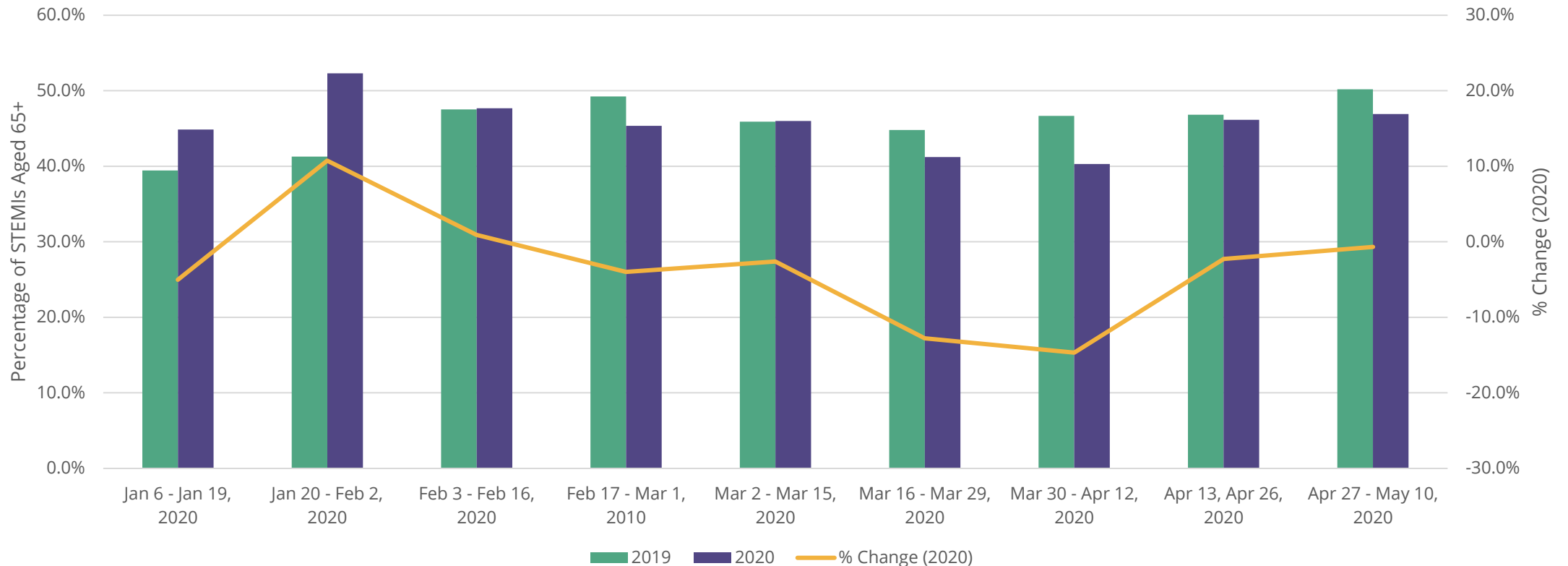
Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; % Change is calculated for the 2020 data set as compared to the average biweekly percentage of patients ≥65 years of age from January 6th to March 15th 2020 .

Proportion of Female STEMI Patients Presenting to Ontario PCI Centres
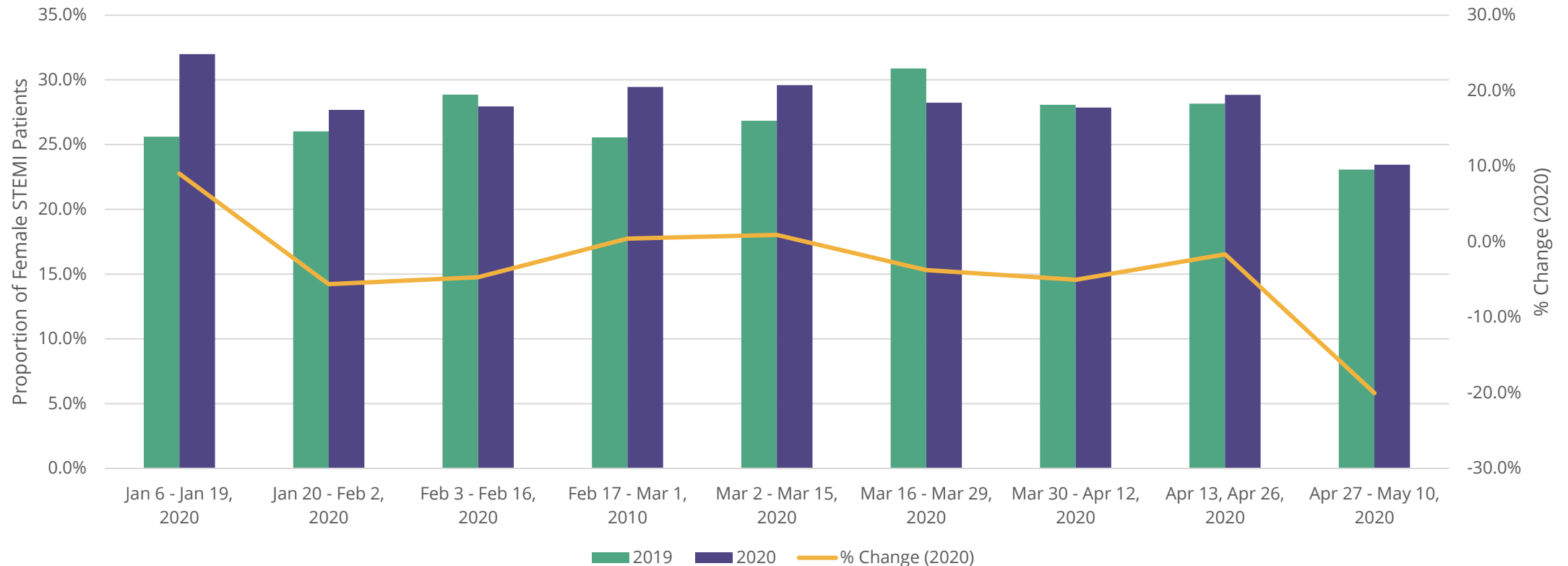
Data are from the CorHealth Ontario Cardiac Registry; STEMIs are defined as all patients with a Primary Referral Reason Type = STEMI and onlisted in the cardiac registry as a coronary angiogram; % Change is calculated for the 2020 data set as compared to the average biweekly percentage of female patients from January 6th to March 15th 2020 .

CorHealth Ontario