CorHealth Ontario
Advancing cardiac, stroke and vascular care

CorHealth COVID-19 Heart Failure Stakeholder Forum #3

April 8, 2020 6:00-7:00 pm

Teleconference: (647) 951-8467 / Toll Free: 1 (844) 304-7743

Conference ID: 822279661#

Agenda

Description	Presenter	Time
1. Welcome • Recap of April 1st Meeting • Meeting Objectives	Sheila Jarvis	18:00
2. COVID-19 – Provincial & Global Context • A view of the COVID-19 data from a global and provincial context	Dr. Heather Ross	18:05
3. Virtual Care & Heart Failure • Follow up on Medly • Ottawa Experience • Discussion-sharing new experiences with virtual care	Alex Iverson Erika MacPhee Heather Ross	18:10
4. Home IV Lasix • Southlake Experience	Morgan Krauter	18:25
5. Open Forum Discussion • Share what is happening locally in the HF community during COVID-19	Dr. Heather Ross	18:35
6. Other Considerations & Next Steps	Dr. Heather Ross / Karen Harkness	18:55

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Welcome

SHEILA JARVIS

Recap of April 1st Meeting

- Key Themes Discussed:
  - Education on COVID-19, including: a snapshot of Ontario ICU & the trajectory of COVID-19 cases in Ontario, top 5 things to know about COVID-19, and information patients with COVID-19 cardiac injury
  - Virtual care resource repository & Medly Information Session on logistics and costs of implementation
  - Advanced care planning and ways to support heart failure patient conversations during COVID-19
  - Reviewed CorHealth COVID-19 Heart Failure Memo#1, released on CorHealth's COVID-19 Resource Center, here: https://www.corhealthontario.ca/CorHealth-COVID-19-Heart-Failure-Memo1-Recommendations-for-Managing-Heart-Failure-During-Covid-19.pdf
- Meeting summary notes can be found on our website: https://www.corhealthontario.ca/COVID-19-Heart-Failure-Stakeholder-Forum2-Meeting-Notes_01April2020.pdf

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Meeting Objectives

1. Provide the opportunity for stakeholders to discuss and share what is happening locally in the Heart Failure Community, in the context of COVID-19
2. Provide global and provincial data on COVID-19
3. Provide information on home IV Lasix through Southlake's experience
4. Provide information on virtual care & heart failure through Ottawa's experience

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COVID-19: Provincial & Global Context

DR HEATHER ROSS

arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6

Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins Universit…

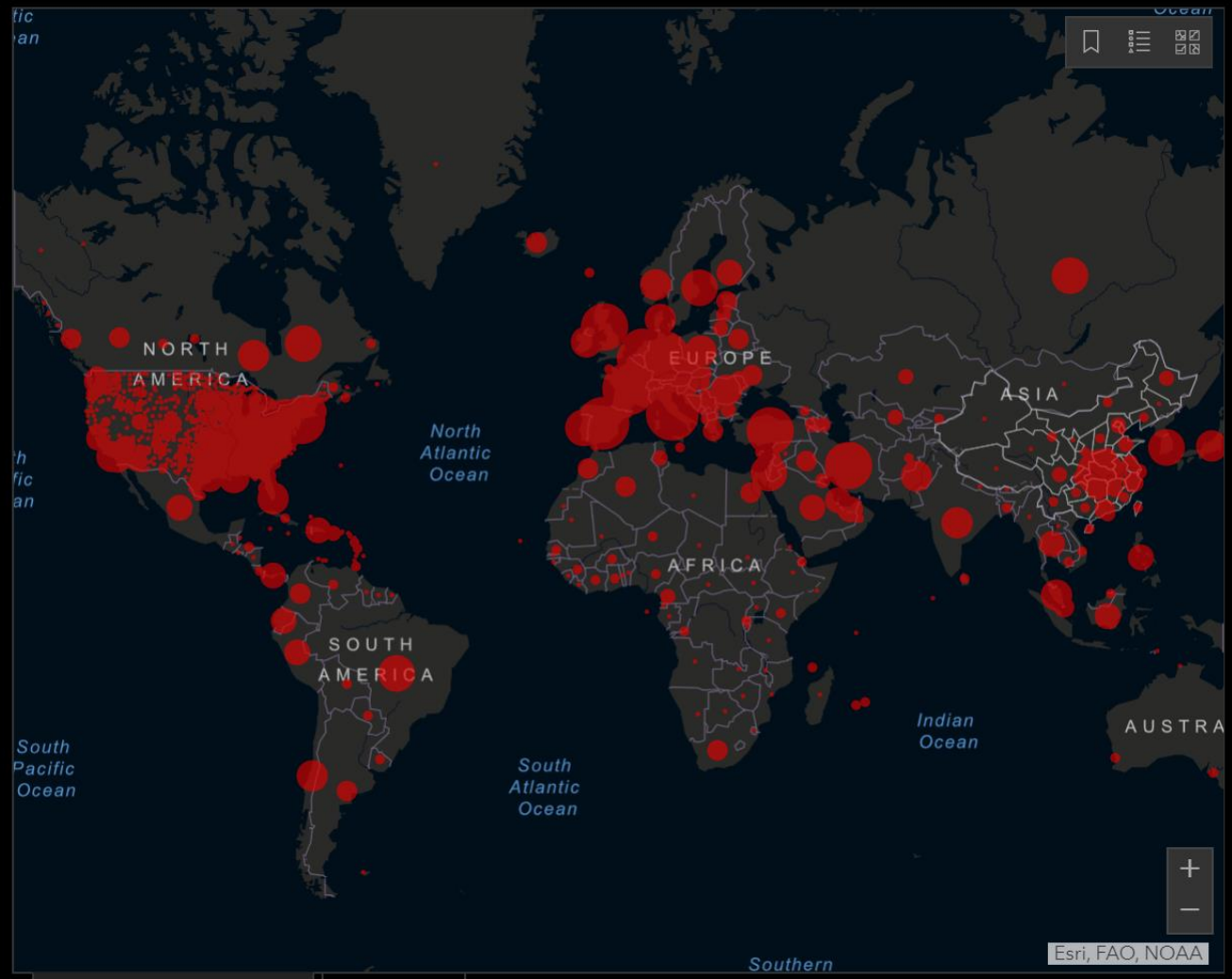
Total Confirmed
1,464,852

Confirmed Cases by Country/Region/Sovereignty

- 402,923 US
- 146,690 Spain
- 139,422 Italy
- 110,070 France
- 109,329 Germany
- 82,809 China
- 64,586 Iran
- 61,455 United Kingdom
- 34,109 Turkey
- 23,403 Belgium
- 23,248 Switzerland
- 20,678 Netherlands
- 17,897 Canada
- 14,275 Brazil
- 13,141 Portugal
- 12,916 Austria

Admin0 | Admin1 | Admin2

Last Updated at (M/D/YYYY)
4/8/2020, 1:01:25 PM



Cumulative Confirmed Cases | Active Cases

184
countries/regions

Lancet Inf Dis Article: Here. Mobile Version: Here. Visualization: JHU CSSE. Automation Support: Esri Living Atlas team and JHU APL. Contact US. FAQ.
Data sources: WHO, CDC, ECDC, NHC, DXY, 1point3acres, Worldometers.info, BNO, state and national government health departments, and local media reports. Read more in this blog.

Total Deaths
85,397

- 17,669 deaths Italy
- 14,673 deaths Spain
- 10,328 deaths France
- 7,097 deaths United Kingdom
- 4,009 deaths New York City **New York** US
- 3,993 deaths Iran
- 3,213 deaths **Hubei** China
- 2,248 deaths Netherlands
- 2,240 deaths

Total Recovered
315,105

- 77,567 recovered China
- 48,021 recovered Spain
- 36,081 recovered Germany
- 29,812 recovered Iran
- 26,491 recovered Italy
- 22,717 recovered US
- 19,523 recovered France
- 9,800 recovered Switzerland
- 6,776 recovered

Confirmed | Logarithmic | Daily Increase

Are cases growing at different rates in different countries?

The COVID-19 outbreak started in different countries at different times, and now those countries are at different stages. For instance, on 25 March, Italy had reported 74,386 confirmed cases, while the UK had only reported 8,077.

But it would be useful to know whether cases in the UK now are growing faster, slower, at the same speed as cases did in Italy when it had a similar number.

This chart is designed to allow these comparisons, by showing how quickly the number of cases in each country has grown since the 100th confirmed case. That gives a standard starting place for each line on the graph.

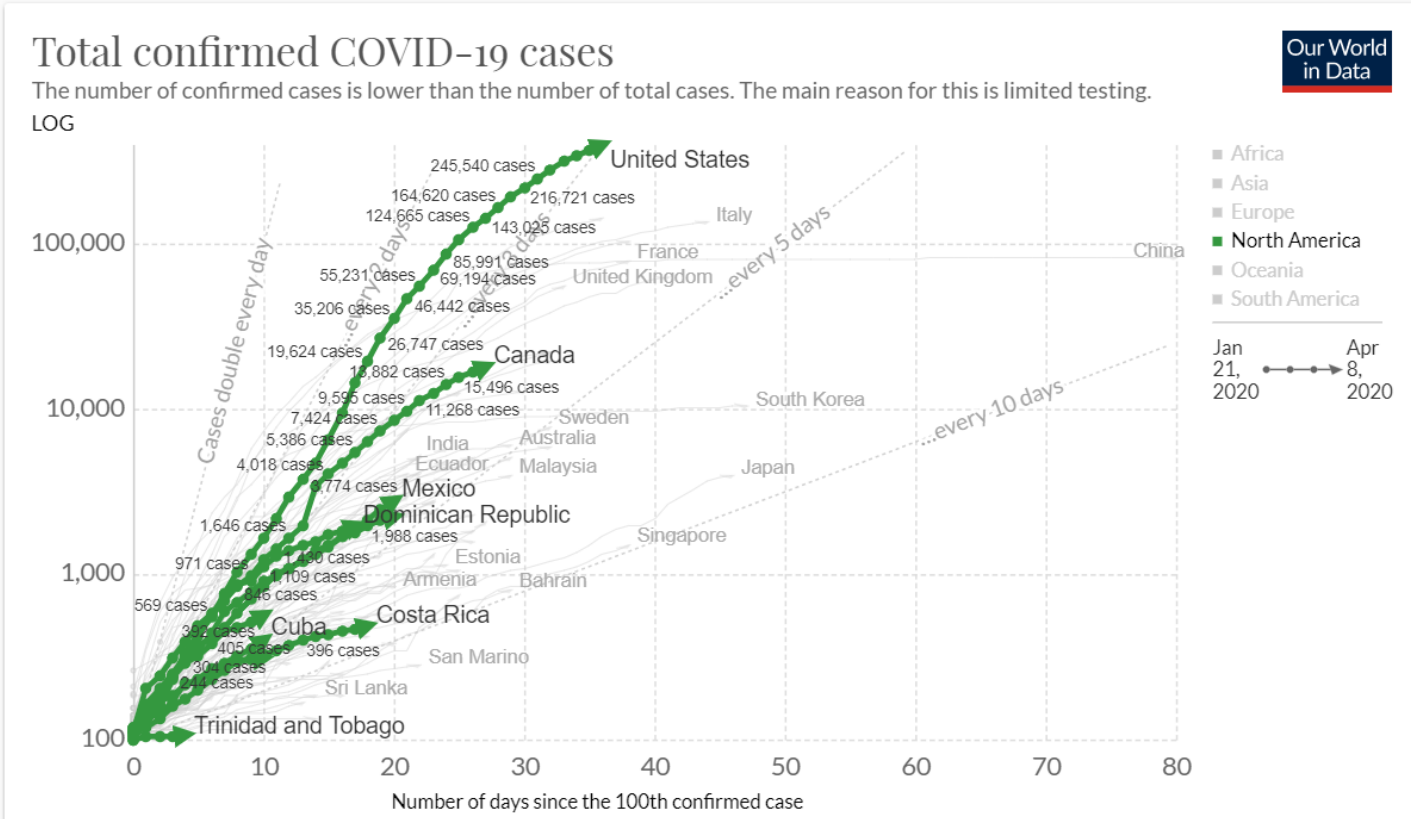
China had a particular fast rise. Just 10 days after the 100th confirmed case the country already confirmed the 10,000th case.

Other countries saw a much slower increase. The speed at which the number of confirmed cases increased in Singapore and Japan was much slower than in other countries.

The straight grey lines show the trajectory for a doubling time of 2 days, 3 days, 5 days and 10 days. If a country's line on the chart is higher than those lines, then its number of cases is doubling faster than that.

The pathway of China and South Korea shows that the speed at which cases rise is not necessarily constant over time. Both countries saw a rapid initial rise but then implemented severe countermeasures (see here), and the pathway became flatter, meaning that the spread of the disease has slowed down.

> ***Relative to the size of the population:*** *We also show the trajectory of confirmed cases adjusted for population size – presented as the number of confirmed cases per million people. This is shown from the day that a given*



Subscribe to receive updates

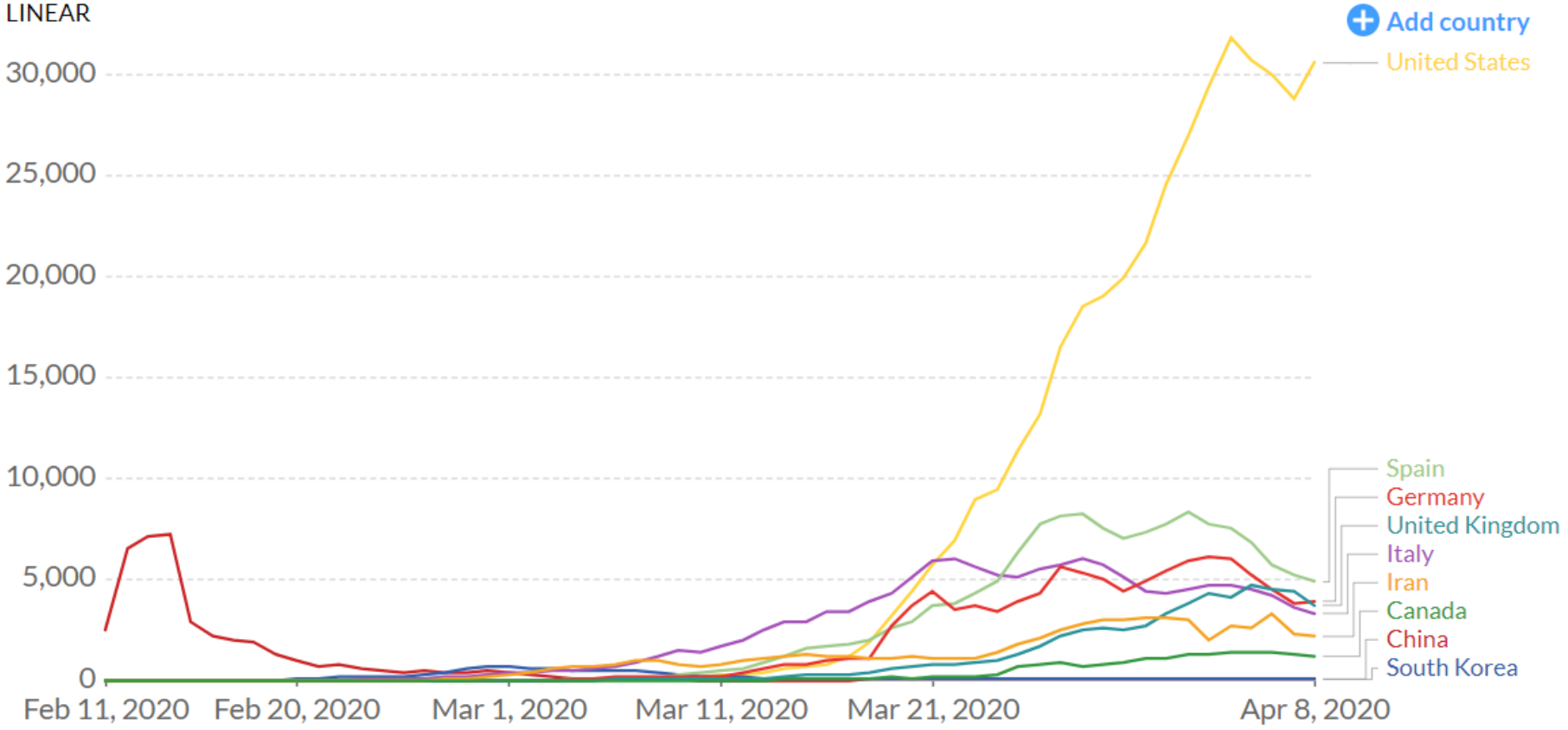
Feedback

COVID-19 – Daily new confirmed cases – rolling 3-day average

Our World in Data

The number of confirmed cases is lower than the number of total cases. The main reason for this is limited testing.

LINEAR



Source: European CDC – Situation Update Worldwide – Last updated 8th April, 11:30 (London time)

CC BY

Note: The rolling average is the average across three days – the confirmed cases on the particular date, and those on the previous and the following day. For example, the value for 26th March is the average over the 25th, 26th and 27th March. The latest value is calculated as the average of confirmed cases on the particular date and the previous day.

Dec 31, 2019 — Apr 8, 2020

CHART | MAP | DATA | SOURCES

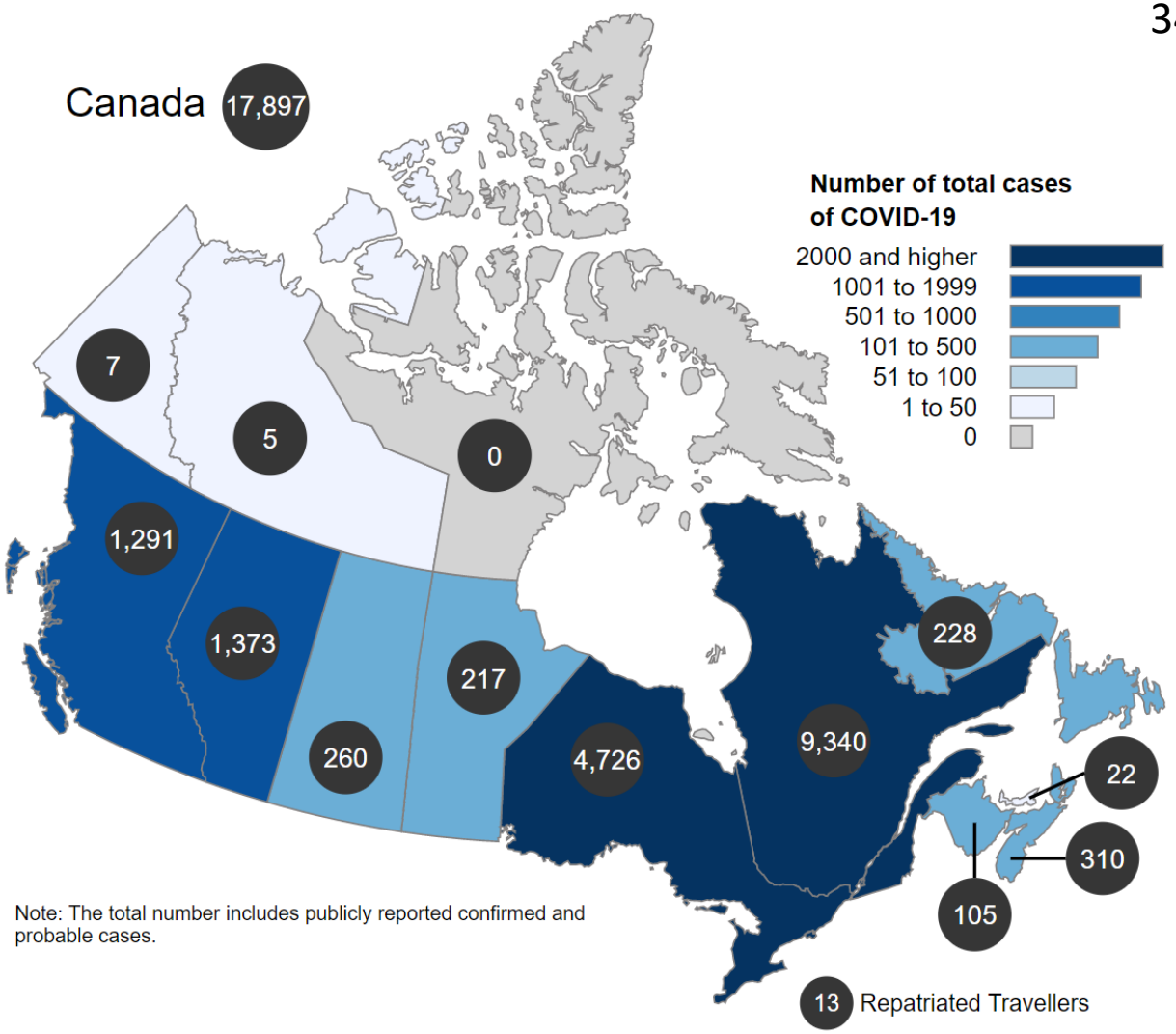
canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html?topic=tilelink

Number of COVID-19 Total Cases in Canada on April 7th, 2020

Last Data Update 2020-04-07 18:46 EDT

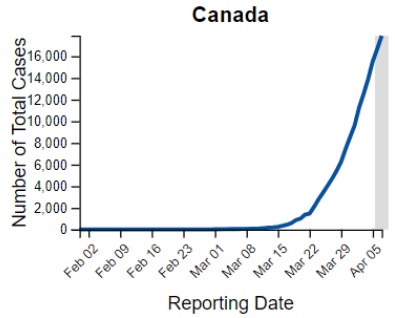
Hover over provinces and territories to see cases over time or hit the play button to animate the map.

348,105 tested in Canada



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

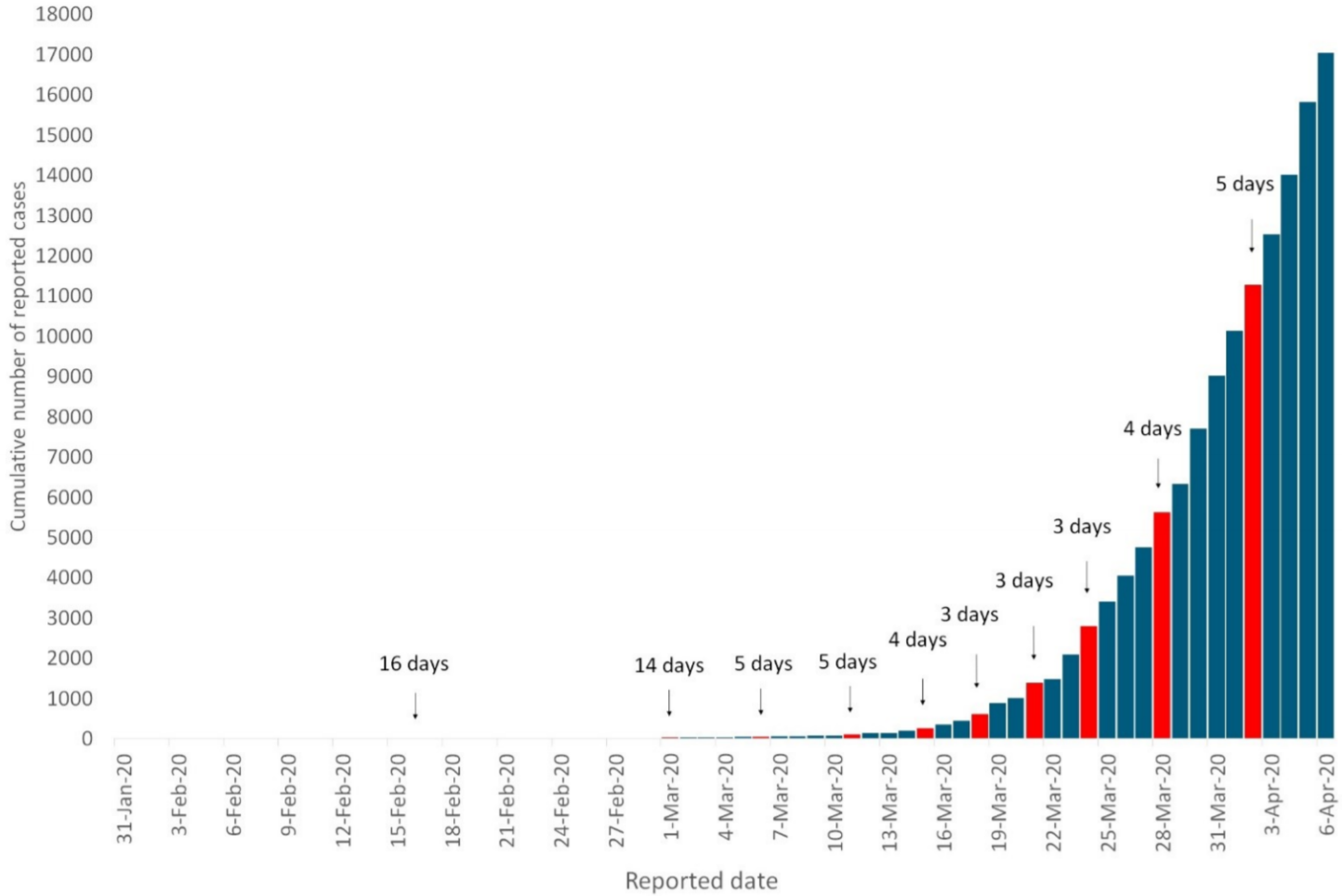
The number of COVID-19 total cases in **Canada** was **17,897** as of April 7th, 2020.

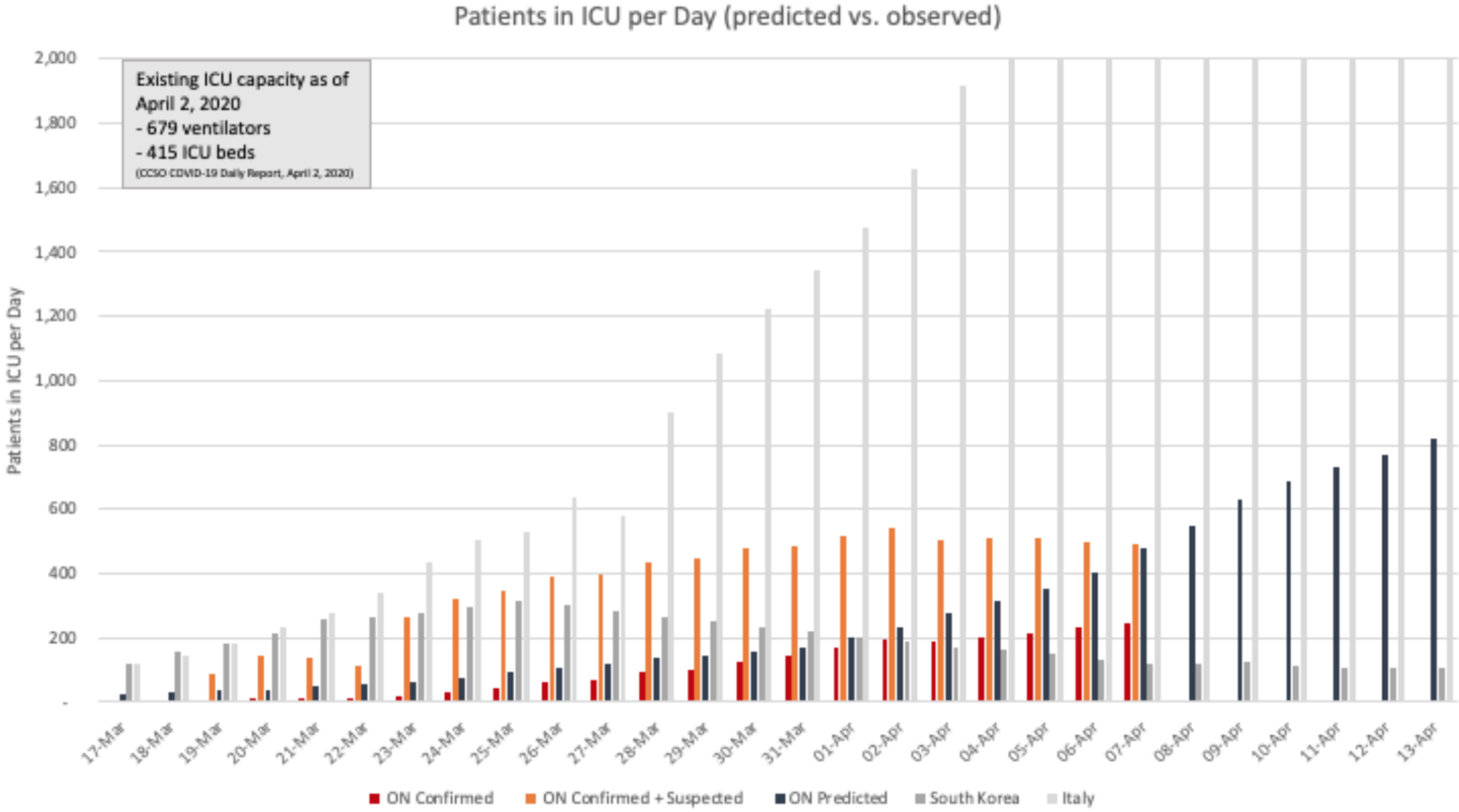


▶ Play .csv

COVID-19 Virtual Assistant

Figure 2. Doubling time of cumulative number of reported COVID-19 cases in Canada by date of report, April 7, 2020, 11:00 AM EST (n=17,046)



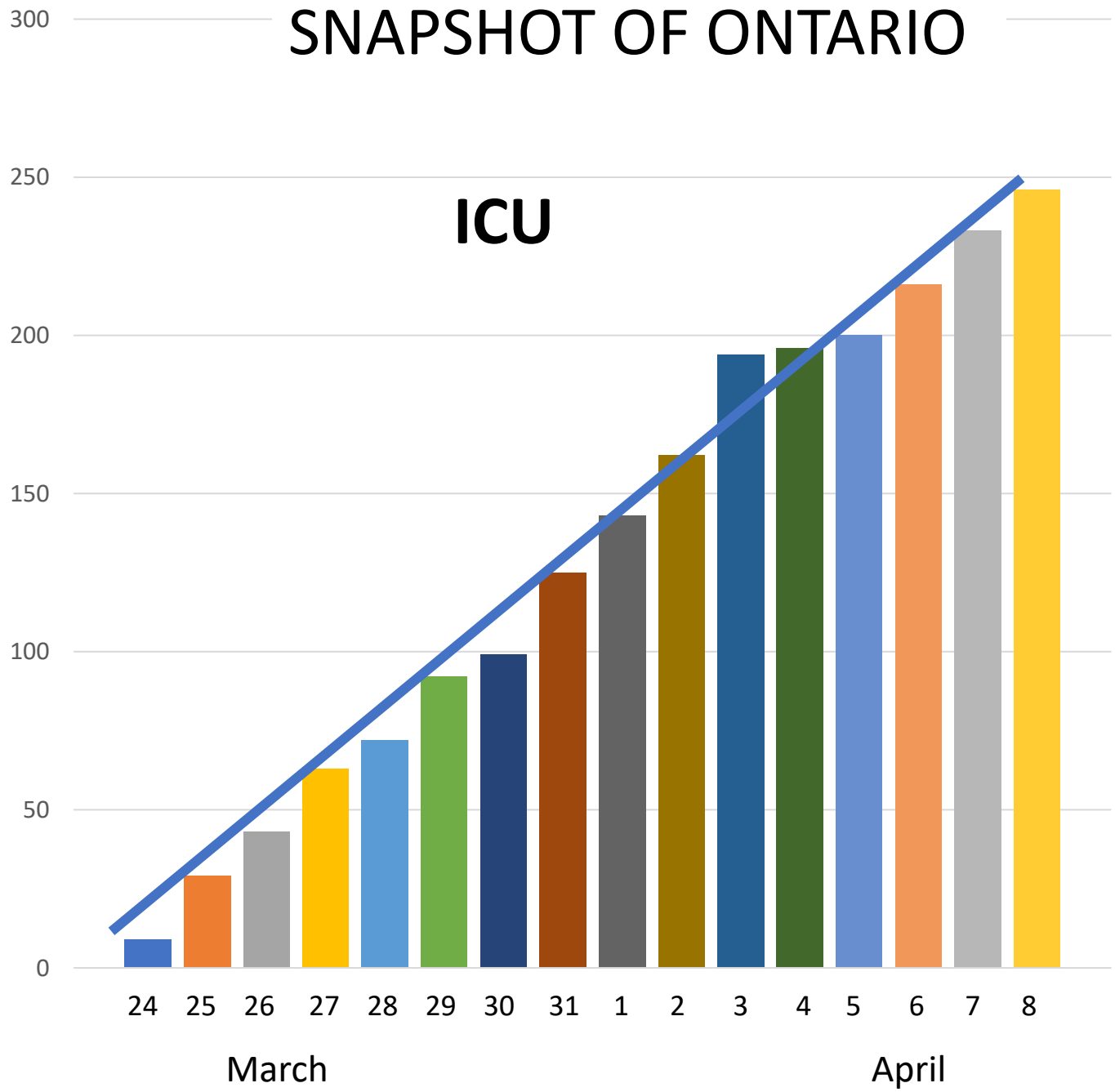

Patients in ICU per Day (predicted vs. observed)
Existing ICU capacity as of April 2, 2020
- 679 ventilators
- 415 ICU beds
(CCSO COVID-19 Daily Report, April 2, 2020)
Patients in ICU per Day
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
-
17-Mar
18-Mar
19-Mar
20-Mar
21-Mar
22-Mar
23-Mar
24-Mar
25-Mar
26-Mar
27-Mar
28-Mar
29-Mar
30-Mar
31-Mar
01-Apr
02-Apr
03-Apr
04-Apr
05-Apr
06-Apr
07-Apr
08-Apr
09-Apr
10-Apr
11-Apr
12-Apr
13-Apr
ON Confirmed
ON Confirmed + Suspected
ON Predicted
South Korea
Italy

Summary of cases of COVID19 Ontario Jan 15 – March 30		
	number	%
Number tested	81,364	
Number of cases	4726	8.7% increase
Resolved	1802	
deceased	153	

38 total pts at UHN

TODAY UHN → ICU 24

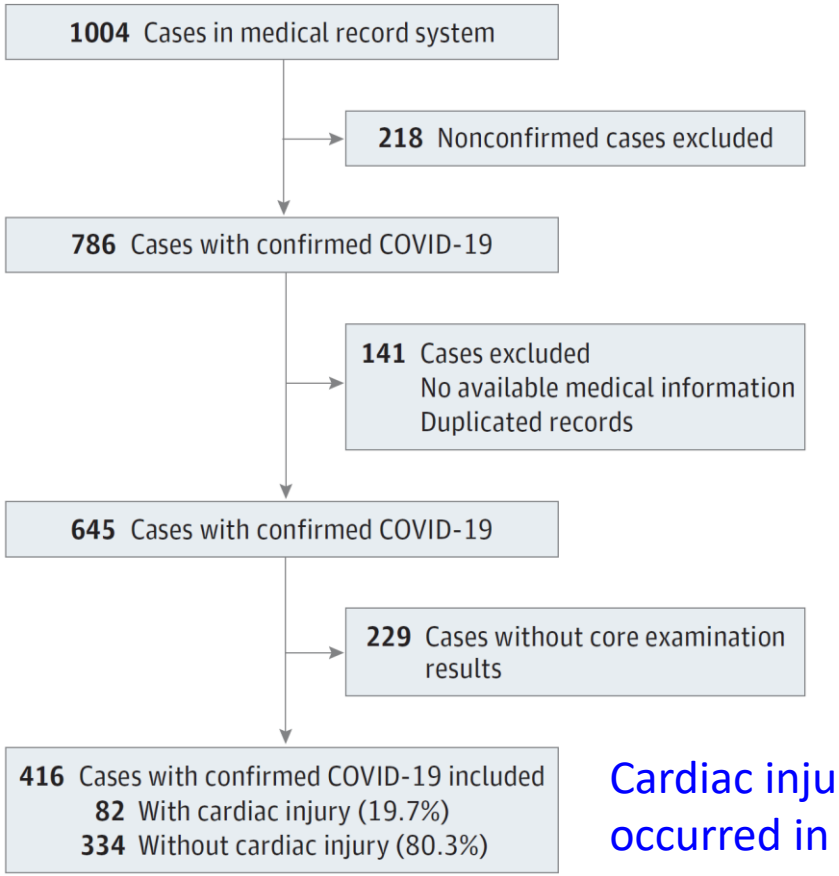
5 – ECLS
4 dialysis



JAMA Cardiology | Original Investigation

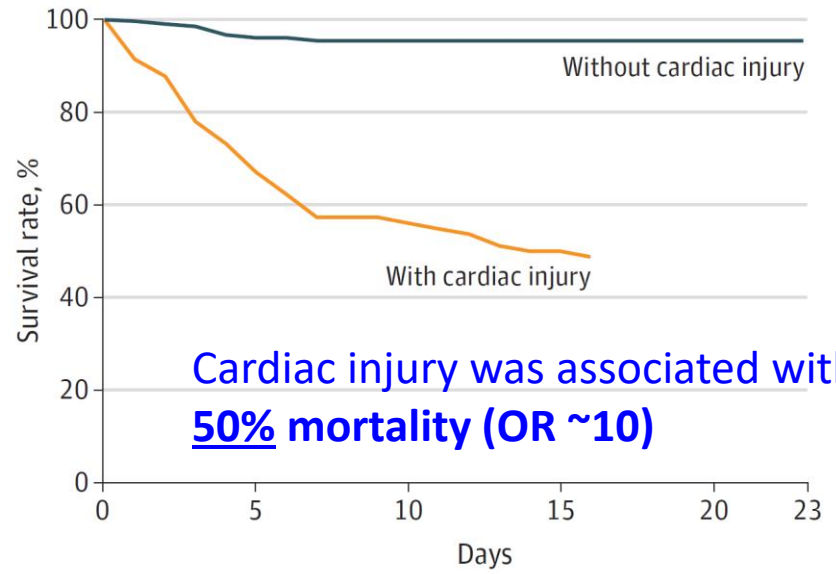
Association of Cardiac Injury With Mortality in Hospitalized Patients With COVID-19 in Wuhan, China

Figure 1. Flowchart of Patient Recruitment



Cardiac injury occurred in **20%**

B Time from admission



Cardiac injury was associated with **50% mortality (OR ~10)**

No. at risk						
With cardiac injury	82	55	46	41	0	0
Without cardiac injury	334	321	319	319	319	319

Mortal hazard: ~2 wk after sxs, ~1 wk after hospital admission

C Comparison of outcomes

	No. of events/ No. of patients	Time from symptom onset		Time from admission	
		Duration, mean (range), d	*P* value log-rank	Duration, mean (range), d	*P* value log-rank
With cardiac injury	42/82	15.6 (1-37)	<.001	6.3 (1-16)	<.001
Without cardiac injury	15/334	16.9 (3-37)		7.8 (1-23)	

Shi *et al*. JAMA Cardiol doi:10.1001/jamacardio.2020.0950

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Virtual Care & Heart Failure: Medly Update

ALEX IVERSON

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Virtual Care & Heart Failure: Ottawa Experience

ERIKA MACPHEE

UNIVERSITY OF OTTAWA
HEART INSTITUTE
INSTITUT DE CARDIOLOGIE
DE L'UNIVERSITÉ D'OTTAWA

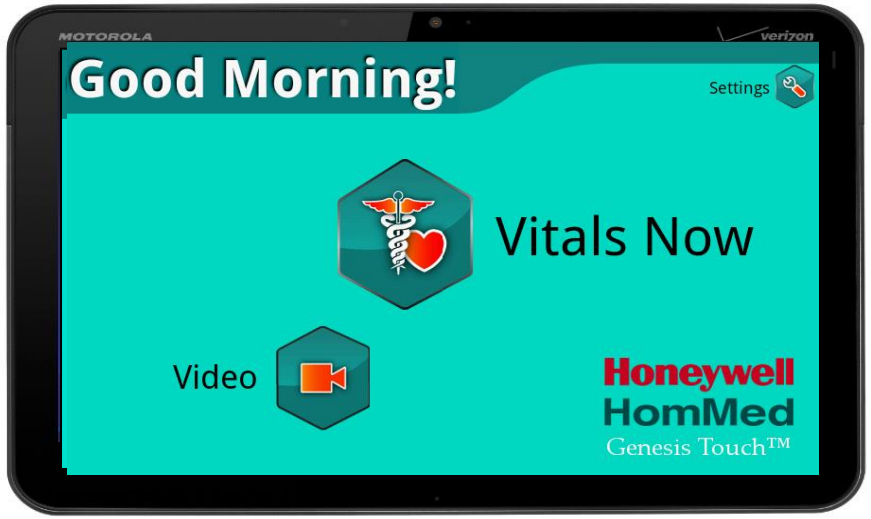
Cardiac Virtual Care

Erika MacPhee
VP Clinical Operations

WHAT IS TELEHOME MONITORING?

The Cardiac Virtual Care program at the University of Ottawa Heart Institute provides nursing support for cardiac patients who require assistance with medication management, fluid volume regulation, vital sign monitoring and patient education

TELEHOME MONITORING



LifeStream™ [redacted] University of Ottawa Heart Institute

File Patient O[redacted]eports Library Help

Days 14 Sites/Categories All Available

Tabular Trends

Patient
- Alert Limits
- Current Status
- Demographics
- Equipment Setup
- Patient Information
- Patient List
- Tabular Trends

Organization
- Care Providers
- Diagnoses
- Equipment List
- Insurer
- Medications/Classificat ...
- Site/Category Mgmt
- System Configuration
- Users

Maintenance
- Change Password
- System Log

System
- Exit
- Logoff

Navigator | Quick Select

Readings

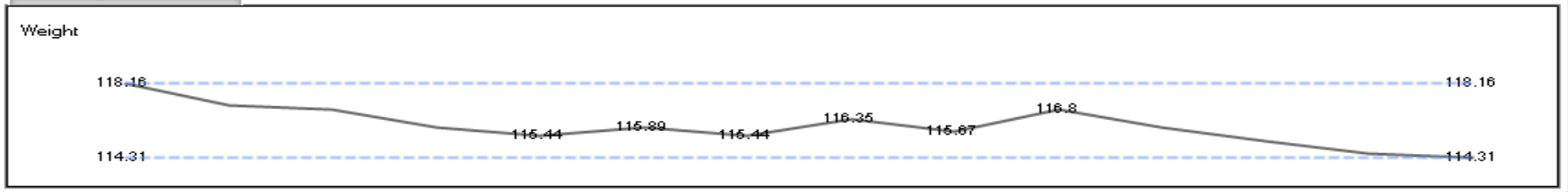
Vitals

	Date	Condition	Weight	BP	Sp	Heart Rate	Tempera
☑	Mon 16/08/...	Alert	114.3	118 / 66	--	52	--
☑	Sun 15/08/...	Within Limits	114.5	131 / 66	--	52	--
☑	Sun 15/08/...	Empty Packet	--	-- / --	--	--	--
☑	Sat 14/08/...	Alert	115.2	126 / 68	--	46	--
☑	Fri 13/08/2...	Alert	115.9	130 / 66	--	47	--
☑	Thu 12/08/...	Alert	116.8	121 / 62	--	45	--
☑	Wed 11/08...	Alert	115.7	124 / 55	--	46	--
☑	Tue 10/08/...	Within Limits	116.3	127 / 62	--	51	--
☑	Mon 09/08/...	Alert	115.4	115 / 61	--	44	--
☑	Sun 08/08/...	Within Limits	115.9	127 / 66	--	50	--
☑	Sat 07/08/...	Within Limits	115.4	126 / 66	--	53	--
☑	Fri 06/08/2...	Within Limits	115.9	135 / 64	--	51	--
☑	Thu 05/08/...	Alert	116.8	138 / 70	--	56	--
☑	Wed 04/08...	Alert	117.0	126 / 69	--	52	--
☑	Tue 03/08/...	Alert	118.2	126 / 67	--	51	--

Expected Readings 0 Scheduled Readings Recorded 1 Next Reading 17/08/2010 06:00

Details

Trending Chart - Vitals



O'Brien, Ed : 613-761-5030 | OK | Ready | 6 0 1 0 3

start | Novell GroupWise - ... | vOACIS Login | LifeStream™ - Heale... | Microsoft PowerPoint... | 2:36 PM

UOHI MODEL

- Uses an Acute Intervention Model
  - All patients are still being actively treated in additional to coaching
- Expert cardiac RNs provide care between medical visits
  - The program has medical directives for the acute care of patients
- Based on Transitional Care Model providing care after discharge when patients are at risk
- All UOHI HCP can refer (MD order/referral required in community)
- No home visits
- No OHIP fees

WHO SHOULD BE MONITORED?

- HF patients with 1 readmission /1 month or 2 / in 6 months (NYHA III/IV)
- Patients with new HF diagnosis
- Patients recovering from cardiac surgery
- Patients requiring VS, arrhythmia monitoring
- Any cardiac patient requiring frequent monitoring or trending of information to facilitate optimal clinical management

WHAT IS IVR AND HOW DOES IT WORK?

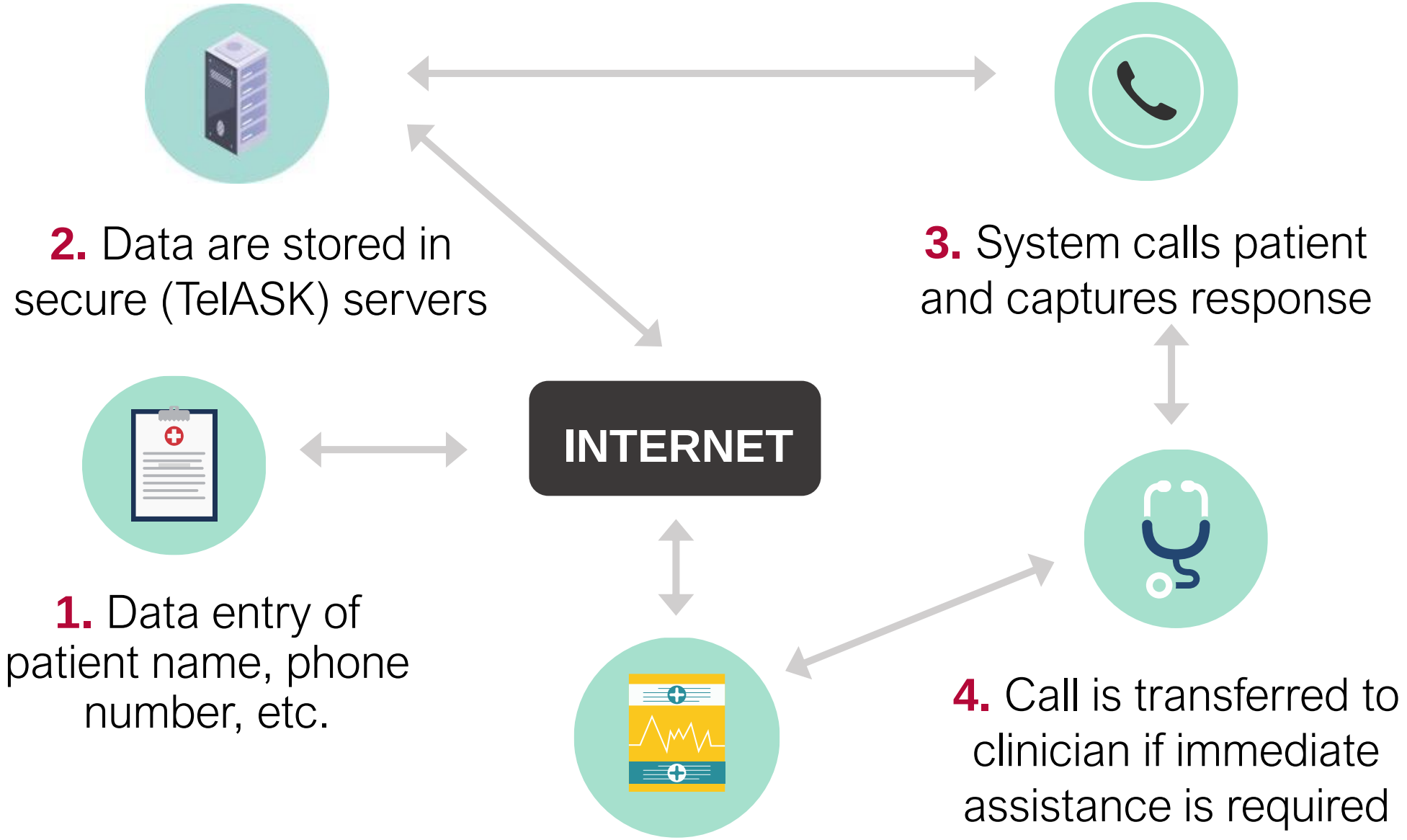
- A technology which uses the telephone system (land-line or mobile) to deliver a set of automated questions to patients who respond by voice or phone key pads

- The system dials patients on scheduled date & the text to speech engine personalizes the call

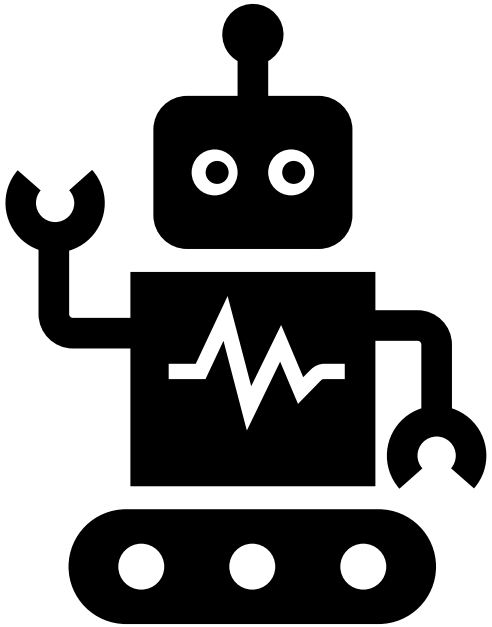
- The system asks questions in an algorithm using branched logic

- Patient responses are dropped into a database which also allows for documentation of assessments

- The system highlights issues that require further management by health care providers


INTERNET
2. Data are stored in secure (TelASK) servers
3. System calls patient and captures response
1. Data entry of patient name, phone number, etc.
4. Call is transferred to clinician if immediate assistance is required
5. Clinician views outcomes in real time or prints reports

QUESTIONS?



emacphee@ottawaheart.ca

Virtual Care & Heart Failure Questions

- Would anyone like to share their ‘new’ experience with virtual care during the COVID pandemic?

- What has gone well?
- Any challenges?
- Any lessons learned?

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Providing Ambulatory IV Lasix: Single Center Experience, Southlake

MORGAN KRAUTER, NP

DR. LIANE POREPA, MD FRCPC

Southlake Heart Function Program

- Providing ambulatory IV Lasix since 2010
- Long-term IV Lasix (average n= 50)
  - Average 6-8 weeks;
  - Longest x 14 months
- Short-term IV Lasix (average n = 1-2 /week)
  - 1-5 days
- Overall Mortality 27%
- Overall heart failure related readmission rate while on IV diuretic therapy (6%)

SOUTHLAKE
REGIONAL HEALTH CENTRE

Patient Selection

- **Clinical factors:**
  - History of diuretic resistance
  - Cardiorenal dysfunction
  - Right-sided heart failure
- **Special populations:**
  - Long-term-care home patients
  - Palliative patients who will not be returning to hospital

SOUTHLAKE
REGIONAL HEALTH CENTRE

Setting

- **Inpatient**
    - Goal is to shorten current admission and prevent future readmission
- **Outpatient**
    - Resistant to maximized PO diuretic regimen (high dose furosemide, metolazone, bumetinide etc.)
    - Anticipate that lack of urgent treatment will lead to admission

SOUTHLAKE
REGIONAL HEALTH CENTRE

IV Lasix Considerations

- **Setting for initiation**
  - Inpatient vs Outpatient
- **Method**
  - Bolus vs Continuous infusion
- **Access**
  - saline lock vs. Midline vs. PICC
- **Housekeeping issues:**
  - PICC insertion/removal*
  - Home care orders
  - Weekly bloodwork

*Access removed by home care nurse

SOUTHLAKE
REGIONAL HEALTH CENTRE

Outpatient IV Lasix Monitoring

- Regular communication (2-3x weekly x 2 weeks) between patient and HFC staff:
  - Patient is responsible for remote monitoring of weights and BP
  - Phone call to assess tolerance, weight loss, symptom improvement and need for dose titration*
- Weekly lab monitoring; q2-4 weeks if on maintenance (>8 weeks)
- Slow titration off vs. abrupt discontinuation
- Weekly follow-up x 2 after discontinuation to ensure no rebound

* labour intensive

SOUTHLAKE
REGIONAL HEALTH CENTRE

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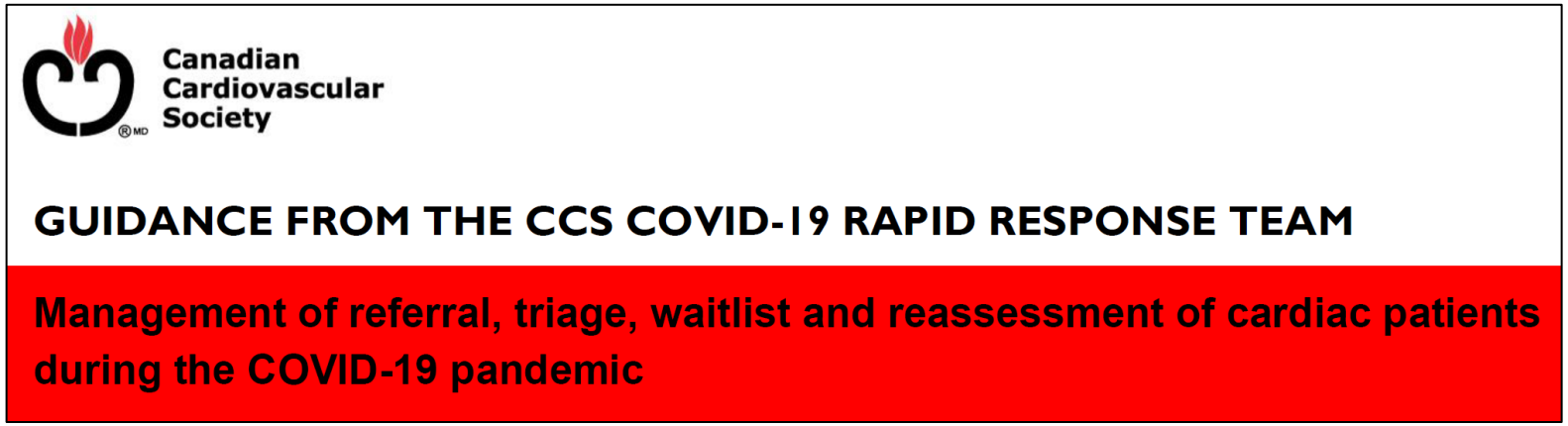
Open Forum Discussion & Questions

DR. HEATHER ROSS

CCS- Guidance Document Update

April 7, 2020



There is no clearly defined pathway to address how best to manage this escalating backlog of work for consultation, diagnostic testing, follow-up or access to cardiovascular procedures. Simple deferral is not acceptable, and robust processes over and above existing wait list management strategies are needed to ensure risk mitigation and to facilitate planning for resumption of full-scale activity. This document presents principles and guidance to effectively triage new requests for clinical assessments, diagnostic testing and therapeutic procedures, and implement new waitlist management systems with the goal of risk mitigation.

Questions

- What has changed within your hospital / program over the last week related to COVID-19?
  - For example:
    - Has your referral criteria changed in response to COVID-19?
    - How are you managing new referrals?
    - How are you supporting post-hospital discharge high risk HF patients?
    - Are you involved in any early discharge initiative for HF patients in the setting of COVID-19?

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Next Steps

DR HEATHER ROSS/KAREN HARKNESS

Next Steps & Wrap Up

- Next **COVID-19 Heart Failure Stakeholder Forum Meeting**
- CorHealth will be hosting a stakeholder forum to discuss **issues related to the provision of rehabilitation during COVID-19**: April 9, 3:00 – 4:00 pm
- CorHealth activities

- Are there other issues we should be considering / discussing?
- Are these meetings still helpful? How could they be more helpful?

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Appendix

in partnership with CHFS/SCIC Canadian Heart Failure Society / Société canadienne d'insuffisance cardiaque

made possible by our sponsors Abbott AstraZeneca Boehringer Ingelheim Lilly Med

HEARTLIFE Patient Education Day

Join us for our first annual patient education day hosted in collaboration with the Canadian Heart Failure Society. We have sessions from leading heart failure experts in Psychology and Cardiac Rehabilitation Registration. We are also co-hosting our first ever session with the Heart & Stroke Foundation on supporting the psychosocial needs of cardiac patients in light of COVID19.

Registration is FREE!

ACCESS PROGRAM PDF HERE

REGISTER HERE

2020 Agenda - Friday, April 17

10:00 a.m. EST	Welcome
	About the HeartLife Foundation
	Jillianne Code, Ph.D
	Marc Bains
	PATIENT WORKSHOP 1
10:15 a.m.– 11:00 a.m.	Heart Failure, Anxiety and Depression: Self-management Tools and Techniques
	Colleen Cannon, Ph.D
11:00 a.m. EST	Break
	PATIENT WORKSHOP 2
	Movin' and groovin': Exercise prescription in patients with heart failure @ home
11:15 a.m.– 12:00 p.m.	*Gordon Fogg*
	Karen Harkness, Ph.D
12:00 p.m. EST	Break
	PATIENT WORKSHOP 3
12:15 – 1:00 p.m.	HeartLife/Heart & Stroke Foundation joint workshop: Heart and Soul - Supporting Psychosocial Needs and Exploring the Heart - Brain Connection
	Cindy Yip, Ph.D
	Jillianne Code, Ph.D
1:00 p.m. EST	Break
1:15 - 2:00 p.m.	**Q & A**
	Lived Experience Virtual Reception

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CorHealth COVID-19 Resource Centre

- Accessible from the CorHealth homepage
- Updated twice a day at 10:30am and 5:30pm
- Includes:
  - General COVID-19-related documents
  - CorHealth Guidance Documents
  - **Presentations & Summary notes from Cardiac, Stroke, and Vascular Forums**
  - Cardiac-, Stroke-, and Vascular-specific COVID-19-related documents
- Organized from most recent resources at the top to oldest at the bottom of each page

COVID-19 Resource Centre Sections

COVID-19 Resource Centre
CorHealth Guidance Documents
CorHealth Stakeholder Forum Meetings
General Cardiac Resources
General Stroke Resources
General Vascular Resources

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