



# CorHealth COVID-19 Cardiac Stakeholder Forum Meeting #15

July 9, 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	<b>1. Welcome</b> <ul style="list-style-type: none"> <li>Meeting Objectives</li> </ul>	<b>Sheila Jarvis</b>
8:05	<b>2. CORE Cardiac Modelling Update</b>	<b>Dr. Harindra Wijeyesundera</b> <i>MD, PhD, Senior Scientist (Sunnybrook Research Institute), Staff Cardiologist (Schulich Heart Centre), Associate Professor (University of Toronto), Senior Adjunct Scientist (ICES), Vice-President, Medical Devices and Clinical Interventions (CADTH)</i>
8:20	<b>3. Cardiac Activity Report Update</b>	<b>Garth Oakes</b>
8:30	<b>4. CORE PPE Estimator</b> <ul style="list-style-type: none"> <li>Estimating demand for PPE for Ontario acute care hospitals during the COVID-19 pandemic</li> </ul>	<b>Dr. Beate Sander</b> <i>PhD, MecDev, MBA, RN, Director, Health Modeling &amp; Health Economics and Population Health Economics Research, THETA, Canada Research Chair in Economics of Infectious Diseases, Scientist, Toronto General Hospital Research Institute, Adjunct Scientist, Institute for Clinical Evaluative Sciences</i>
8:45	<b>5. Resumption of Services Planning</b> <ul style="list-style-type: none"> <li>Heart and Vascular Program Response to COVID-19; Unity Health</li> </ul>	<b>Ms. Desa Hobbs</b> <i>Senior Clinical Program Director Heart, Lung, and Vascular, Unity Health</i>
08:55	<b>4. Other Updates and Next Steps</b> <ul style="list-style-type: none"> <li>Cardiac Imaging (CT, MRI, Nuclear Imaging) Guidance Document Update</li> <li>Overview of COVID-19 Resource Centre</li> </ul>	<b>Jana Jeffrey</b>



# Welcome

**SHEILA JARVIS**

# Meeting Objectives

- Provide an update and discuss key outputs from the CORE Cardiac Modelling Submodule, and discuss key highlights from CorHealth's Cardiac Activity Report
- Provide an overview of the CORE PPE Estimator for estimating the demand for PPE in Ontario acute care hospitals during the COVID-19 pandemic
- Discuss the resumption of services planning, with an example of a heart and vascular program's response to COVID-19 from Unity Health



# CORE Cardiac Modelling: Update

**DR. HARINDRA WIJEYSUNDERA**

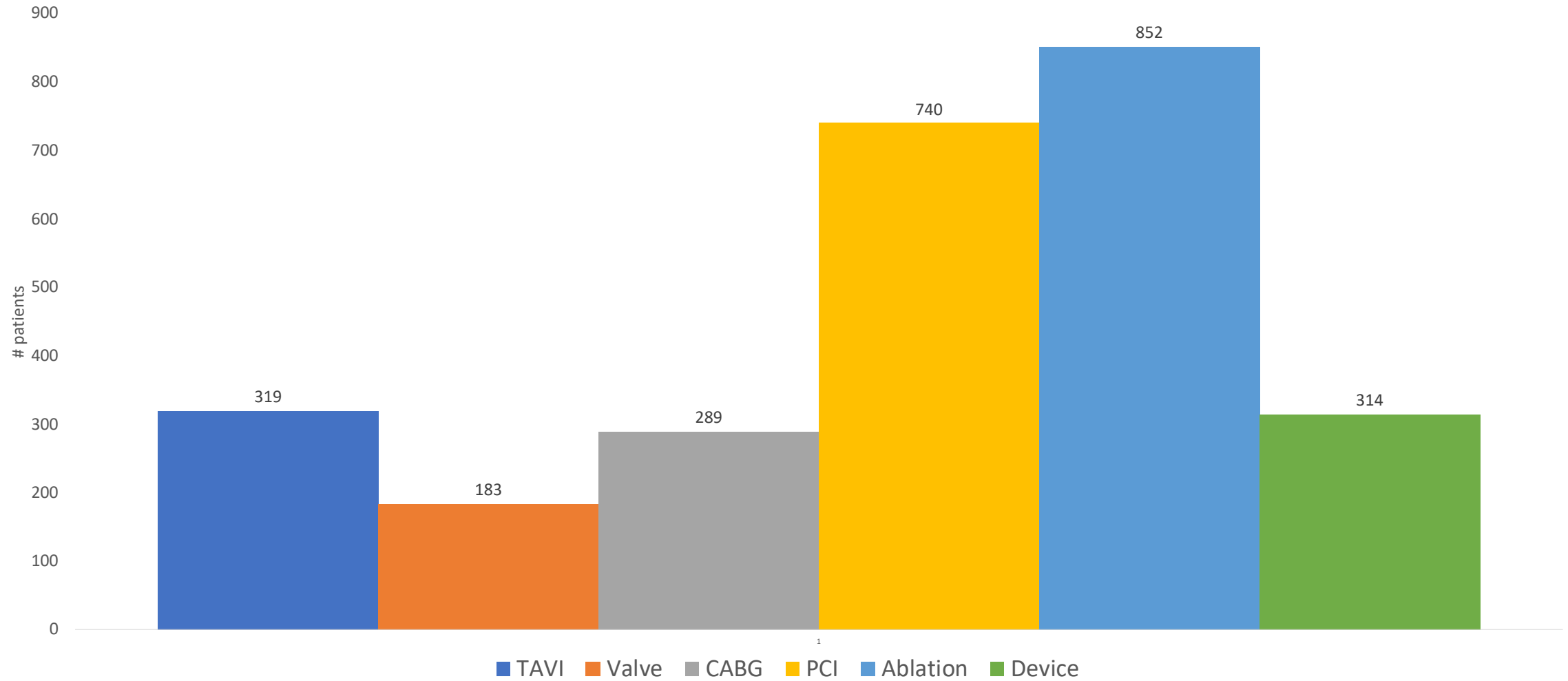
# Outline

- Cardiac Submodule of CORE
  - i. Recap
  - i. Validation work
  - ii. Impact of referral pattern on time to clear backlog

# Cardiac Model Structure & Assumptions

- Procedure run rate, hospitalization rate and referral rate based on observed trends from 2019-2020
- Observed ramp down of elective procedures seen in PCI, CABG, valves, EP ablation, devices and TAVR modelled
  - gradual from March 15
- Backlog is difference between hypothetical referral (at historical rate) and actual procedures completed

Anticipated Incremental Wait-list for Scheduled Outpatients as of June 1st, 2020





# Time to clear backlog

- Definition
  - To return to baseline wait-list
- Assumes
  - Baseline efficiency
  - Baseline referral rate

<b>Procedure</b>	<b>120% of capacity</b>
CABG	12 weeks
Valves	11 weeks
Device	Not possible
PCI	>20 weeks
Ablation	Not possible
TAVI	Not possible

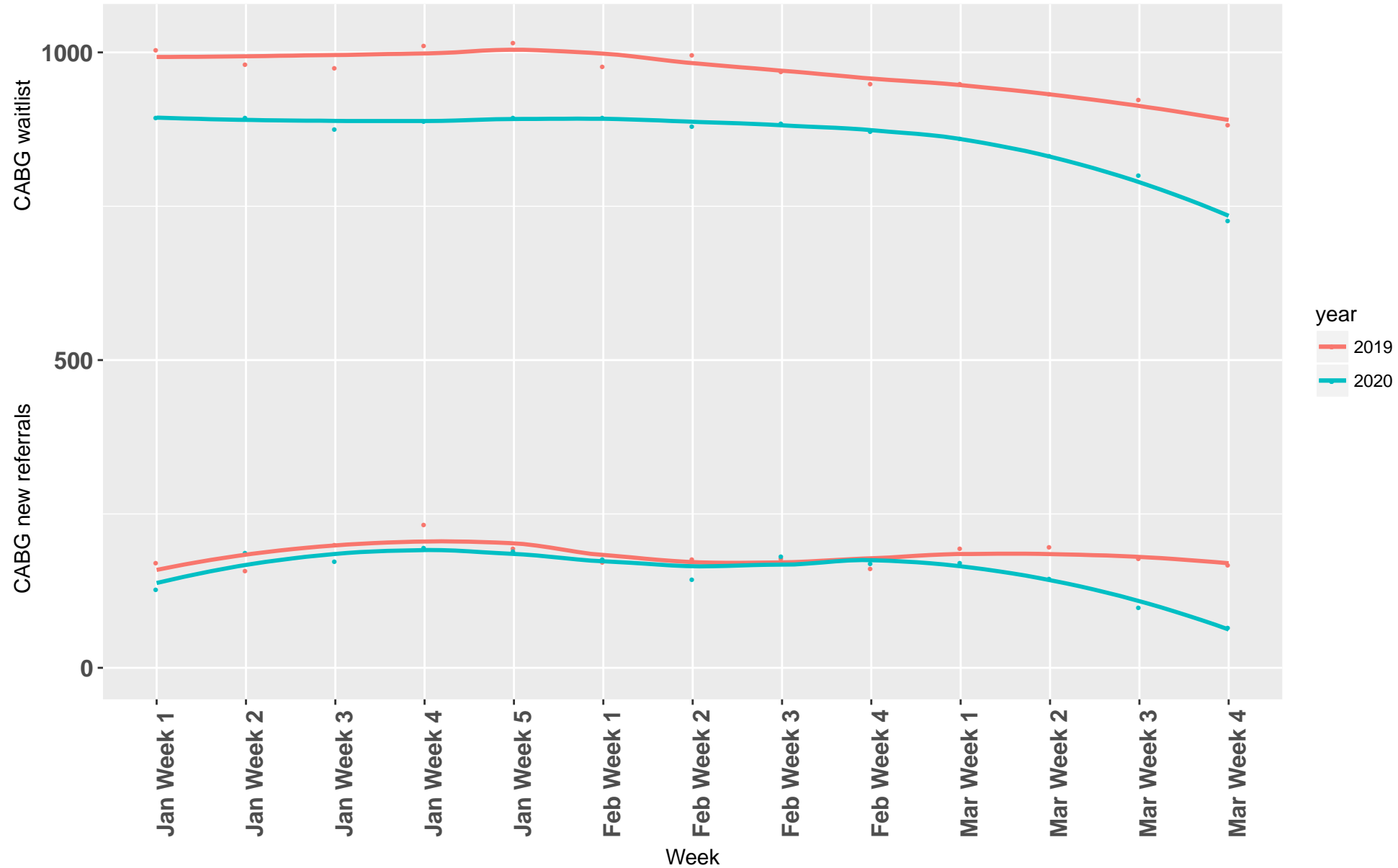
# Validation

- Referrals and waitlists

# CABG referrals

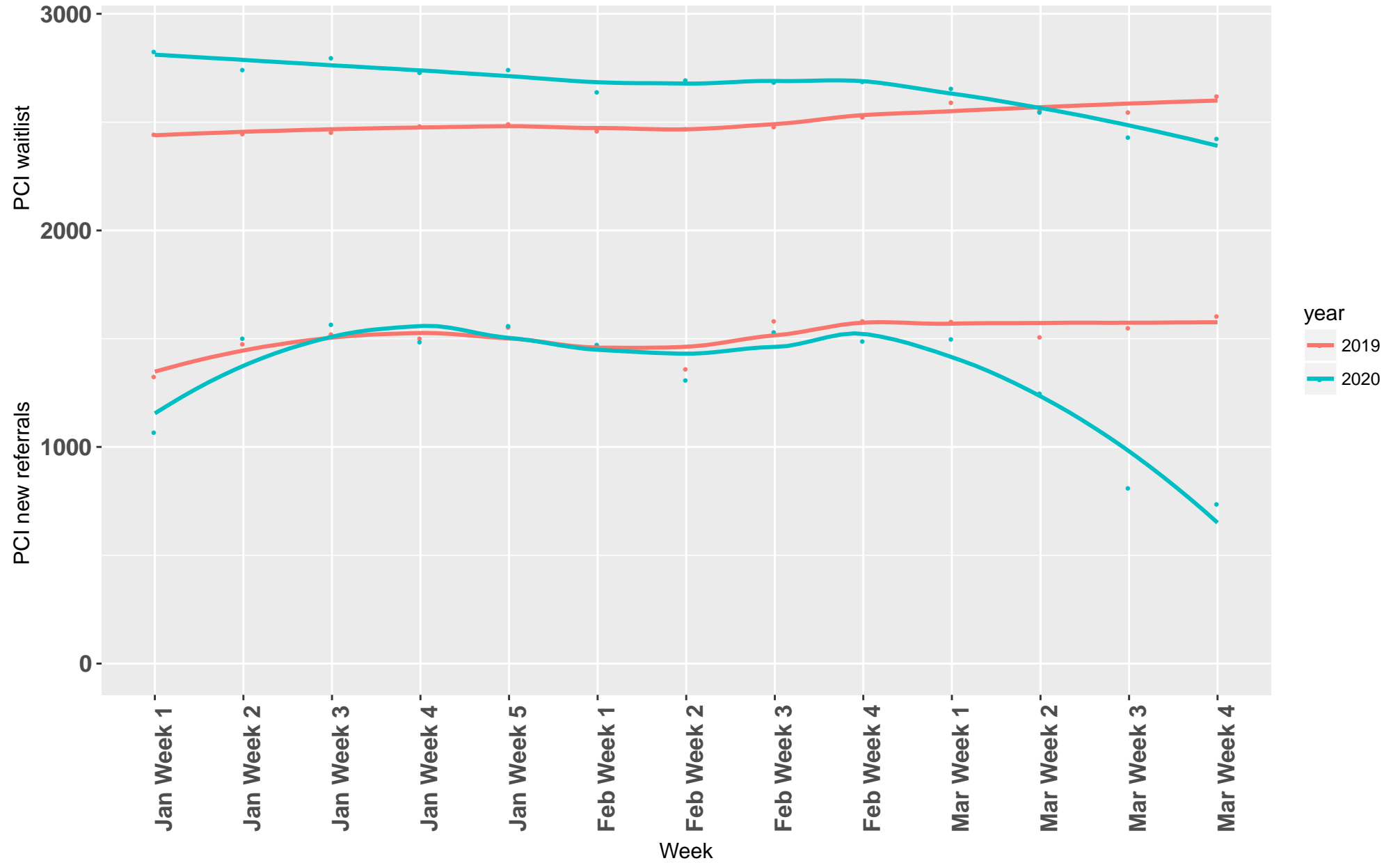
We show here the number of new volumes of CABG referrals (blue highlighted box) and the active CABG waitlist above (non shaded region) for the year 2019 (orange) and year 2020 (green) by weeks from January to March.

Data at ICES only till March 31<sup>st</sup> currently, new data cut in July 2020.

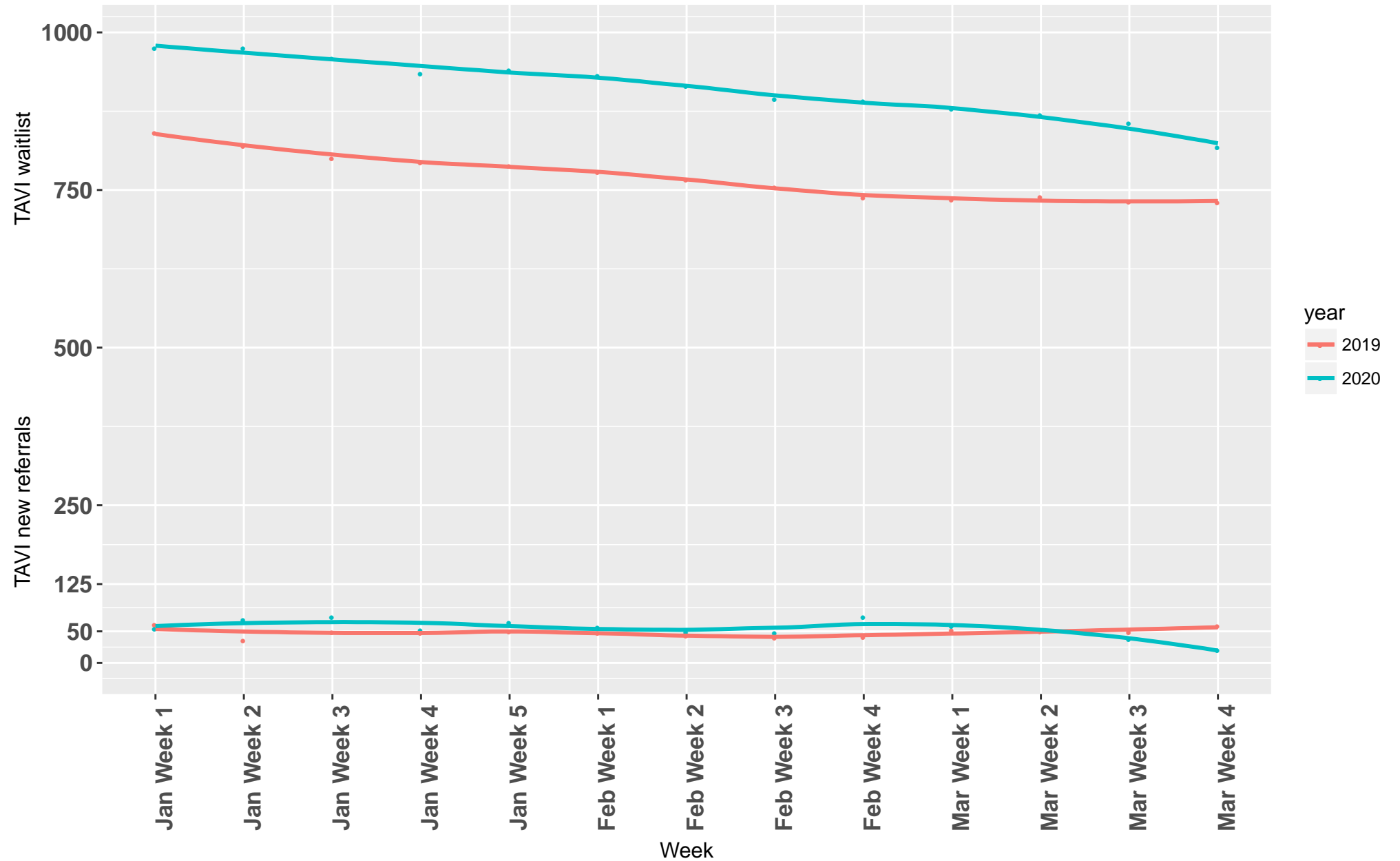


LOESS smoothing curve shown (local polynomial regression)

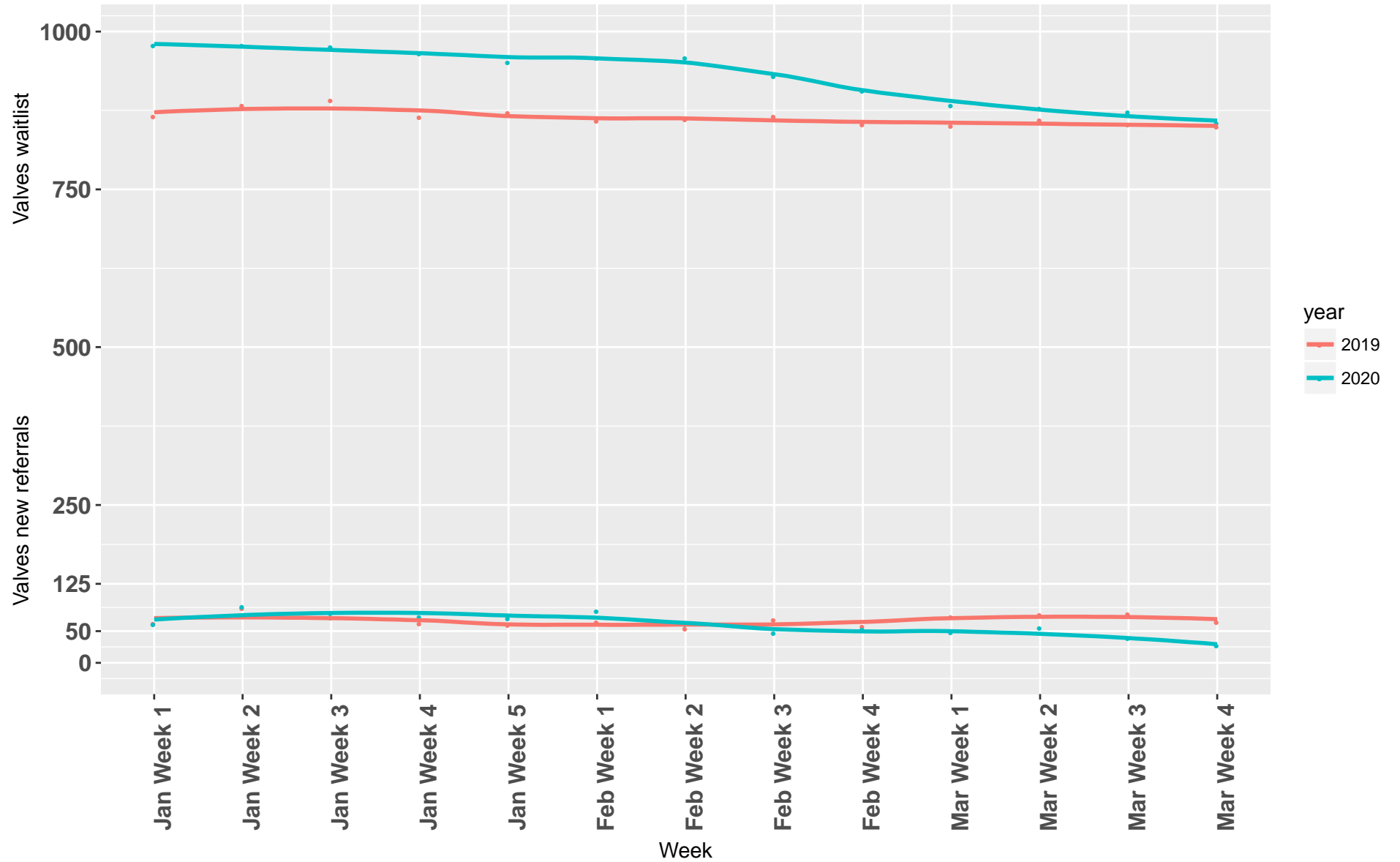
# PCI referral trends



# TAVI referral trends

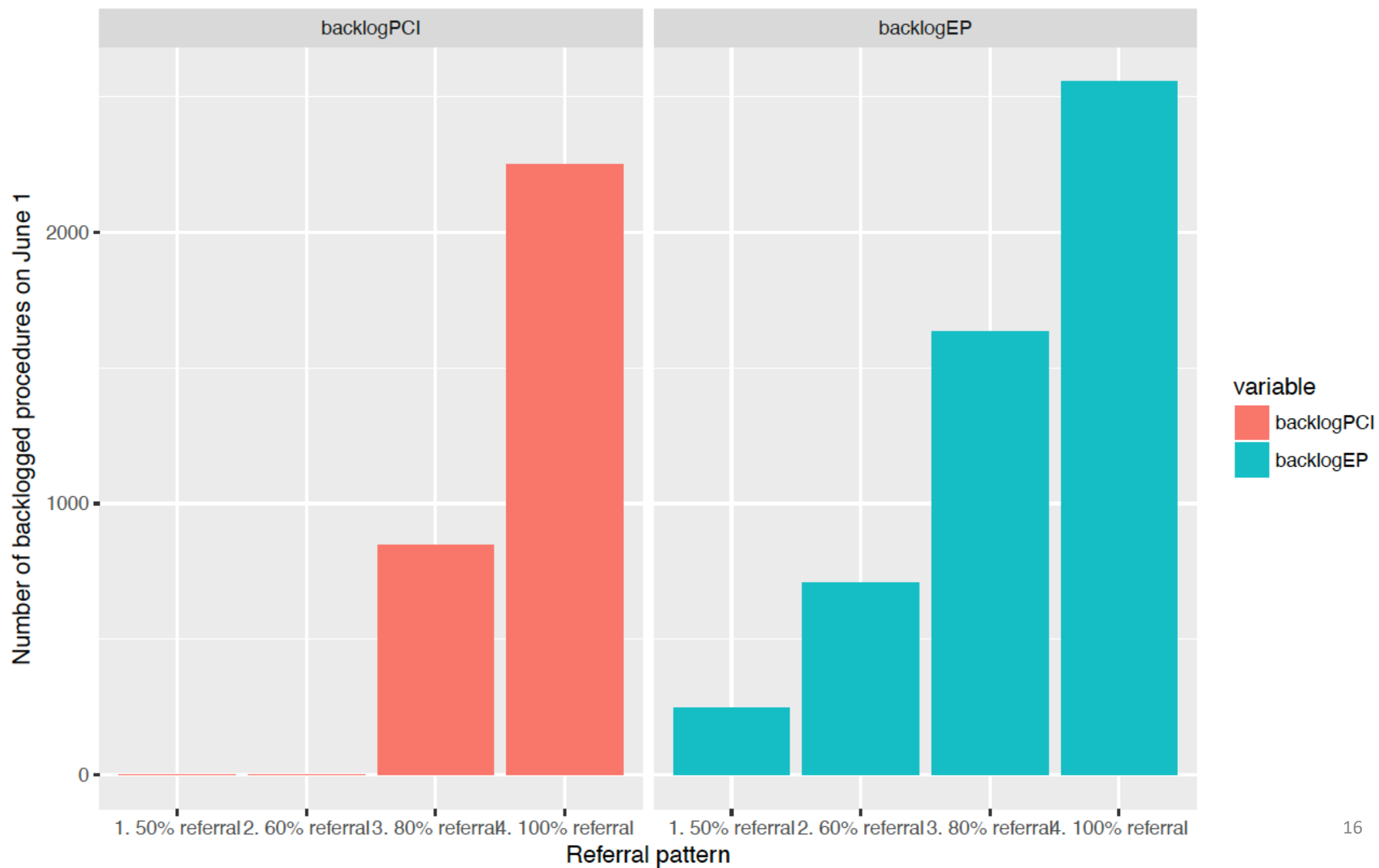


# Surgical valves referral trends

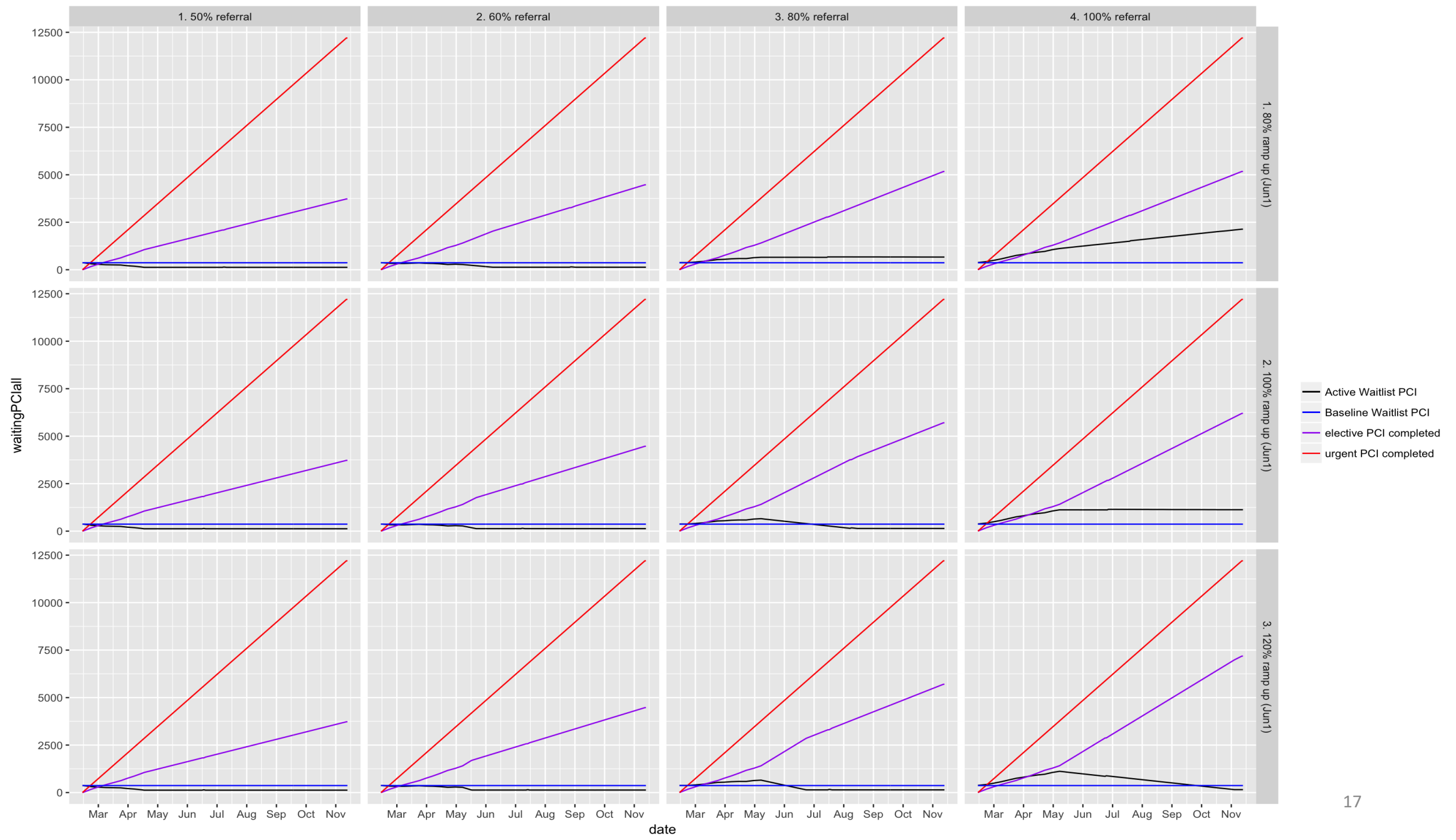


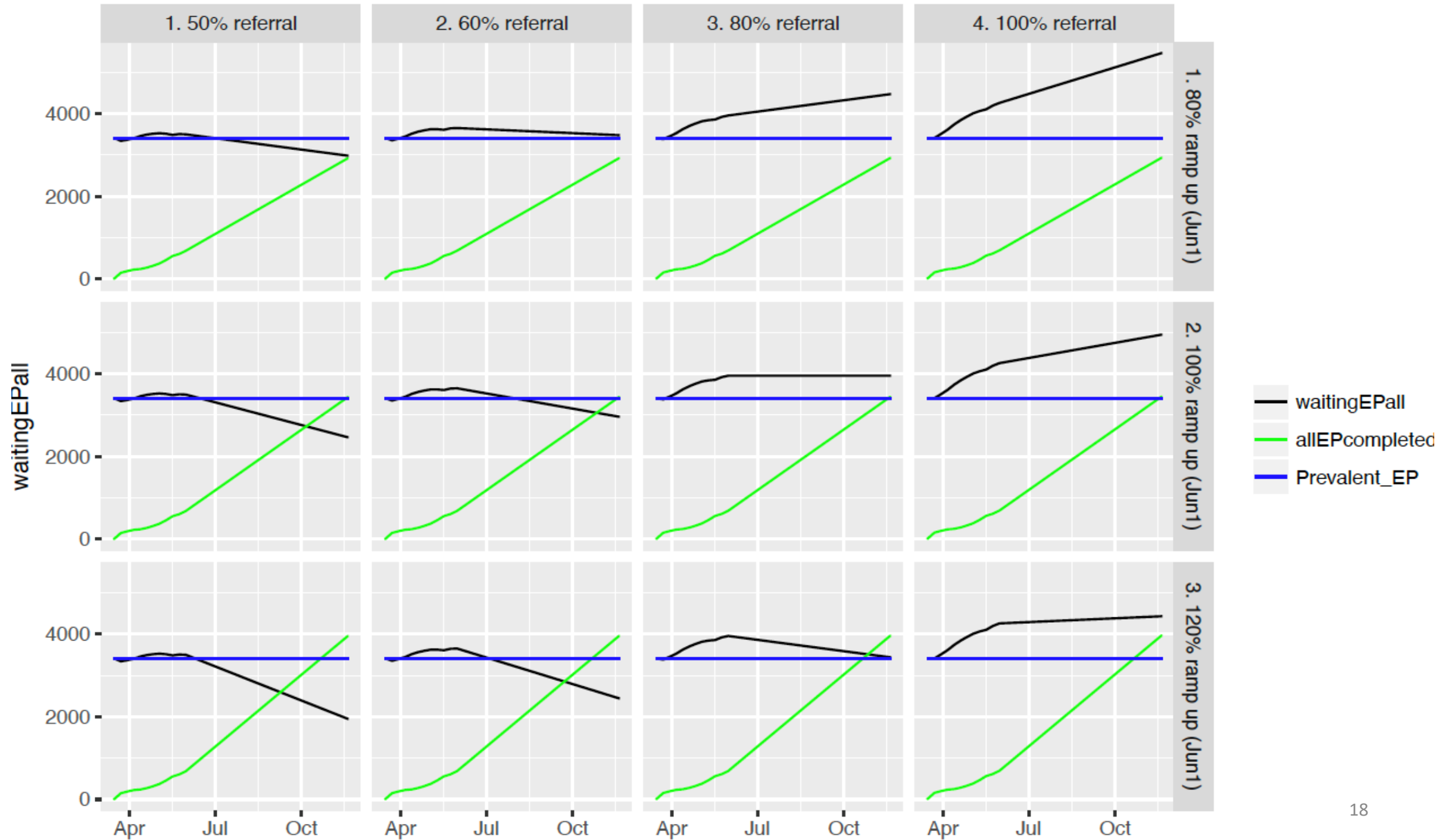
# Summary of referral data

- During COVID-19, around Week 1-2 of March, we saw a decrease in referrals for procedures
- We note that the active waitlist also decreased, despite a reduction in procedural activity.
- This suggests that there is a “referral” backlog upstream
  - 2 possibilities
    - Catch up phenomena – non-discretionary procedures
    - Selection bias – no longer need the procedure . ie discretionary









# New reality

- Some care is *discretionary*
  - *Provides flexibility in the system to deal with non-discretionary care*
- Focusing on each subspecialty in isolation does not acknowledge the shared resources across cardiac care
- Require principles to help difficult resource allocation decisions
  - Fair process, utility, proportionality

# Next Steps

- Validation of deaths on wait-list with CorHealth data linked to Registered persons database at ICES
- Anticipate mid-end July



# Cardiac Activity Update

**GARTH OAKES**

# Percentage Reduction/Increase in Activity

Procedure	June 22 – June 28, 2020 Compared to 2019	June 22 – June 28 (this week), Compared to June 15 – June 21 (last week)
CATH	-22%	1%
PCI	-22%	-5%
CABG	-32%	2%
Valve Surgery	51%	-2%
CABG + Valve	-21%	0%
TAVI	6%	0%
Electrophysiology	-23%	4%
Device Implants	-9%	22%

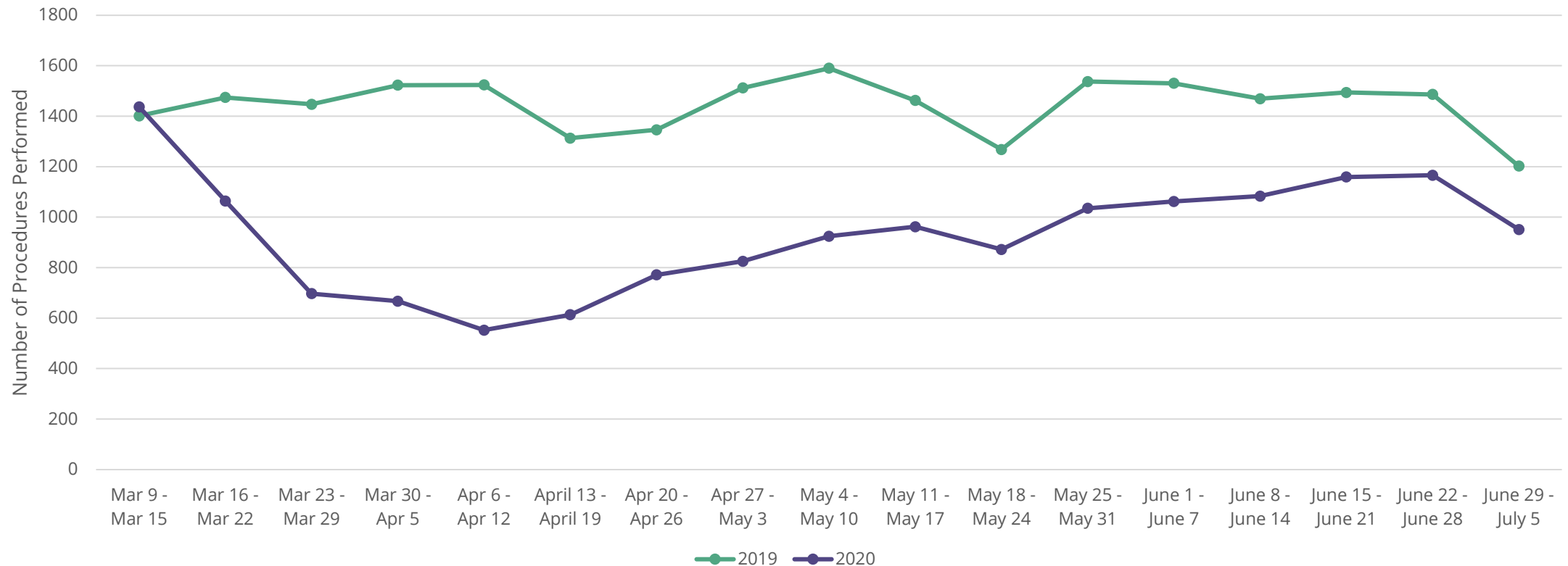
Data are from the CorHealth Cardiac Registry

CATH data includes CATHs which were part of SSPICs

Electrophysiology data includes EP Diagnostic Studies, and Standard and Complex Ablations

Device Implants data includes single chamber and dual chamber ICDs, CRT-ICDs and CRT-Pacemakers

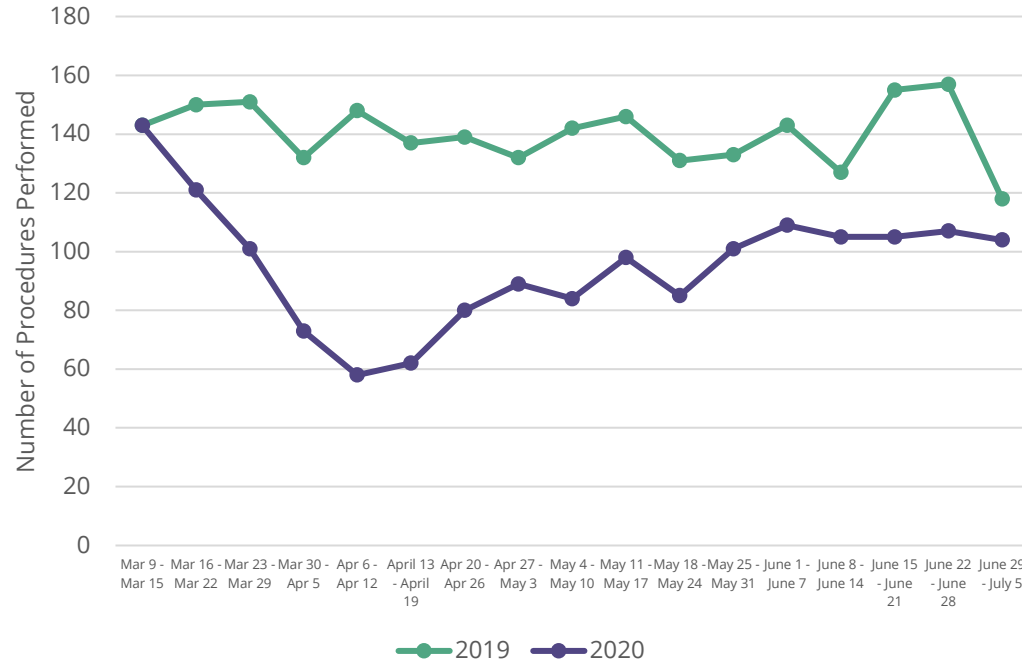
# Comparison of Current Provincial CATH Activity From This Year to Last Year



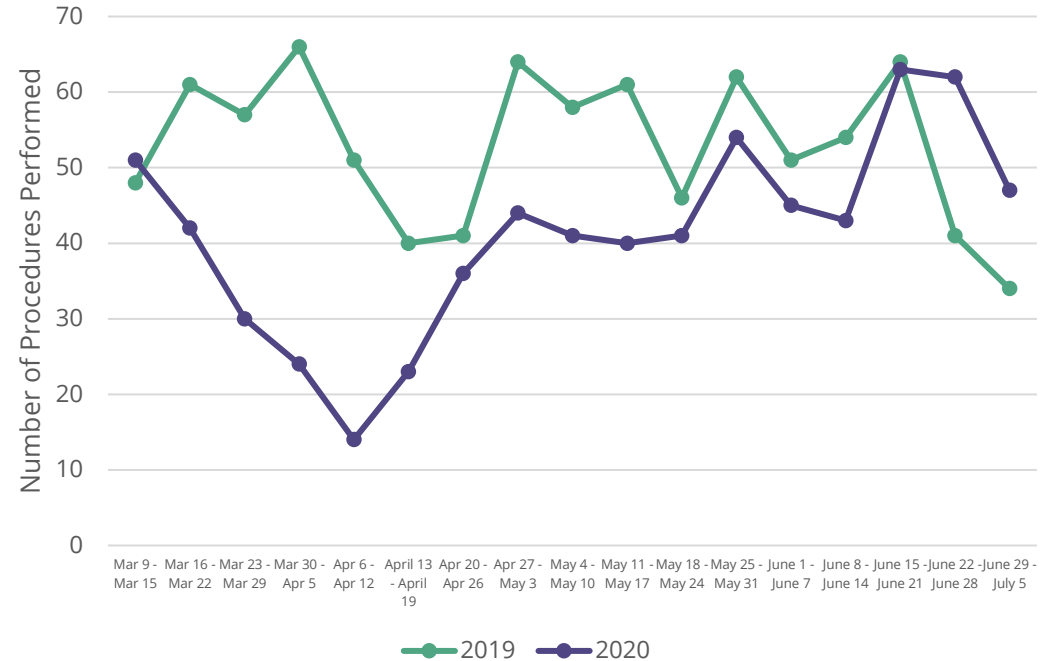
Data are from the CorHealth Cardiac Registry; Data includes CATHs which were part of SSPICs.

# Comparison of Current Provincial Cardiac Surgery Activity From This Year to Last Year

## Isolated CABG



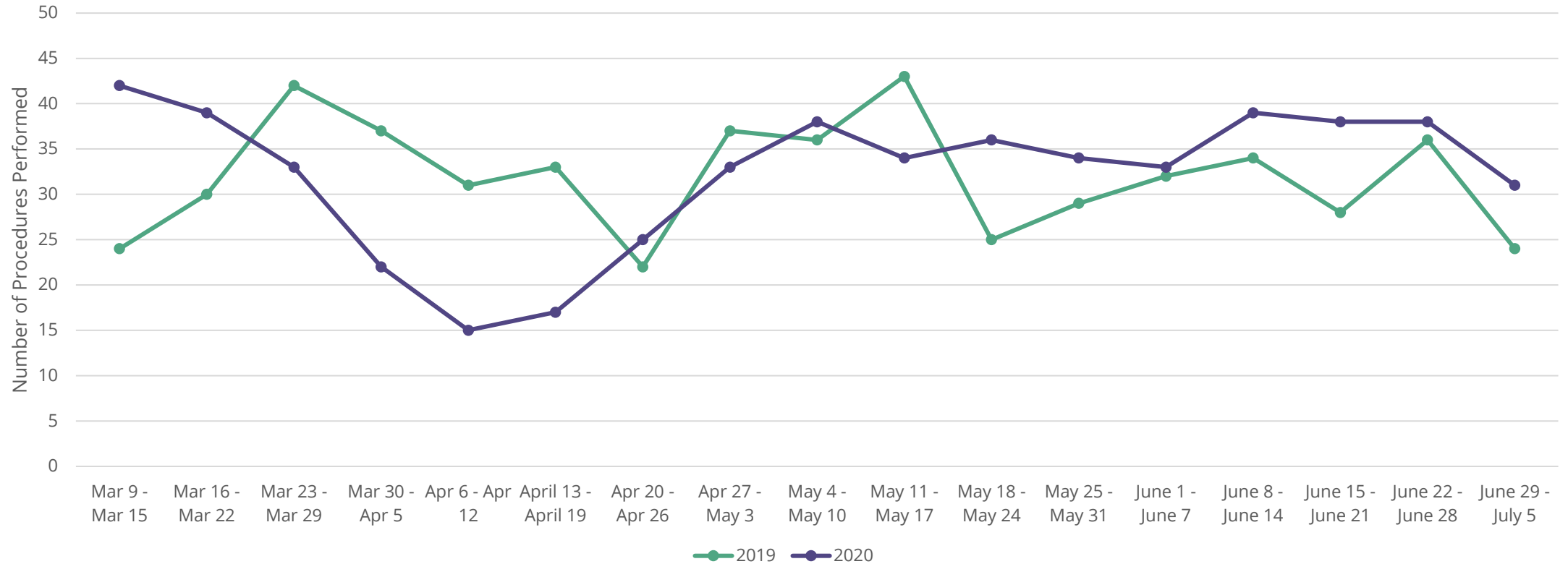
## Isolated AVR



Data are from the CorHealth Cardiac Registry.

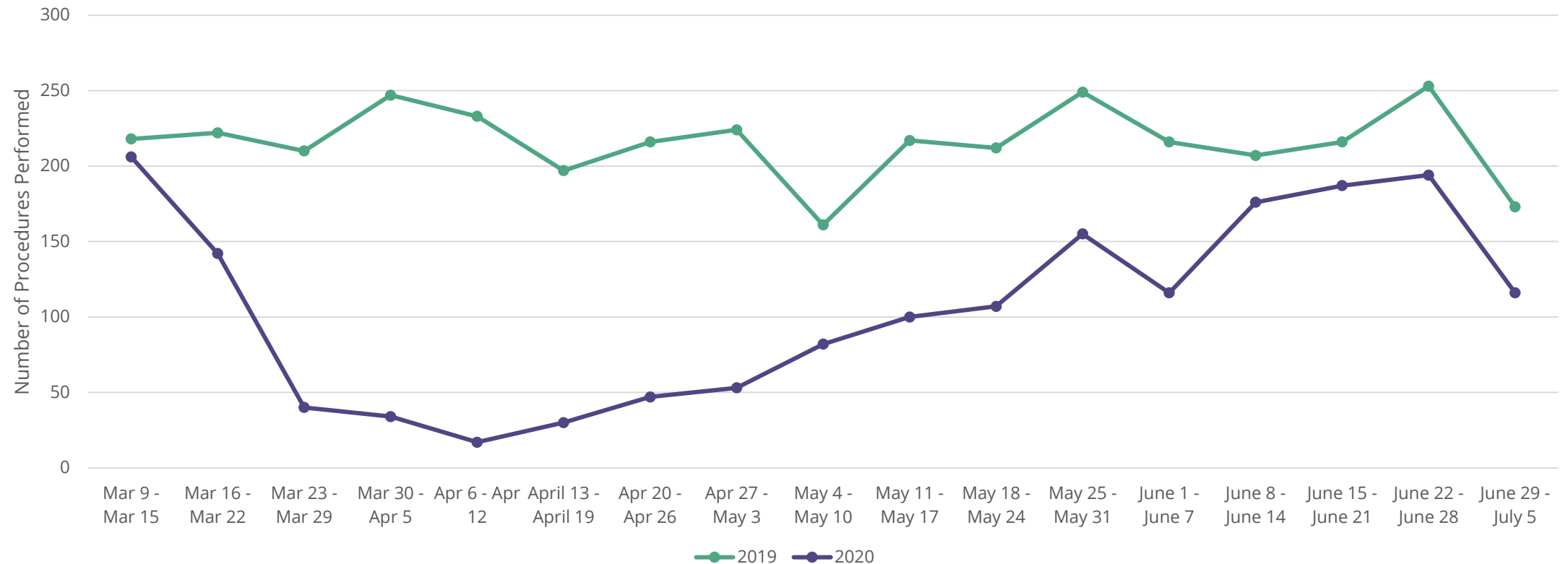


# Comparison of Current Provincial TAVI Activity From This Year to Last Year



Data are from the CorHealth Cardiac Registry.

# Comparison of Current Provincial Electrophysiology Activity From This Year to Last Year



Data are from the CorHealth Cardiac Registry; Data include EP Diagnostic Studies and Standard and Complex Ablations.



# Core PPE Estimator

*Estimating demand for PPE for Ontario acute care hospitals during the COVID-19 pandemic*

**DR. BEATE SANDER**



# Resumption of Services Planning: *Heart and Vascular Program Response to COVID-19*

**MS. DESA HOBBS**



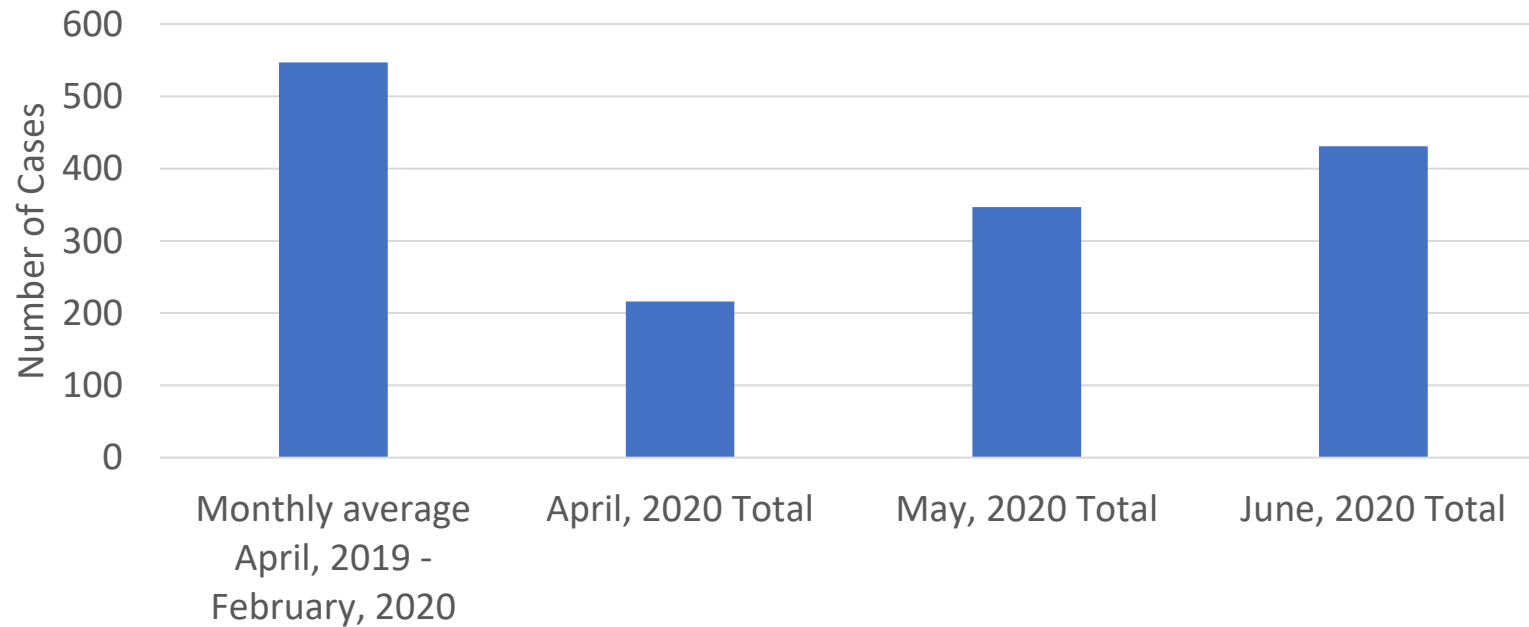
# Agenda



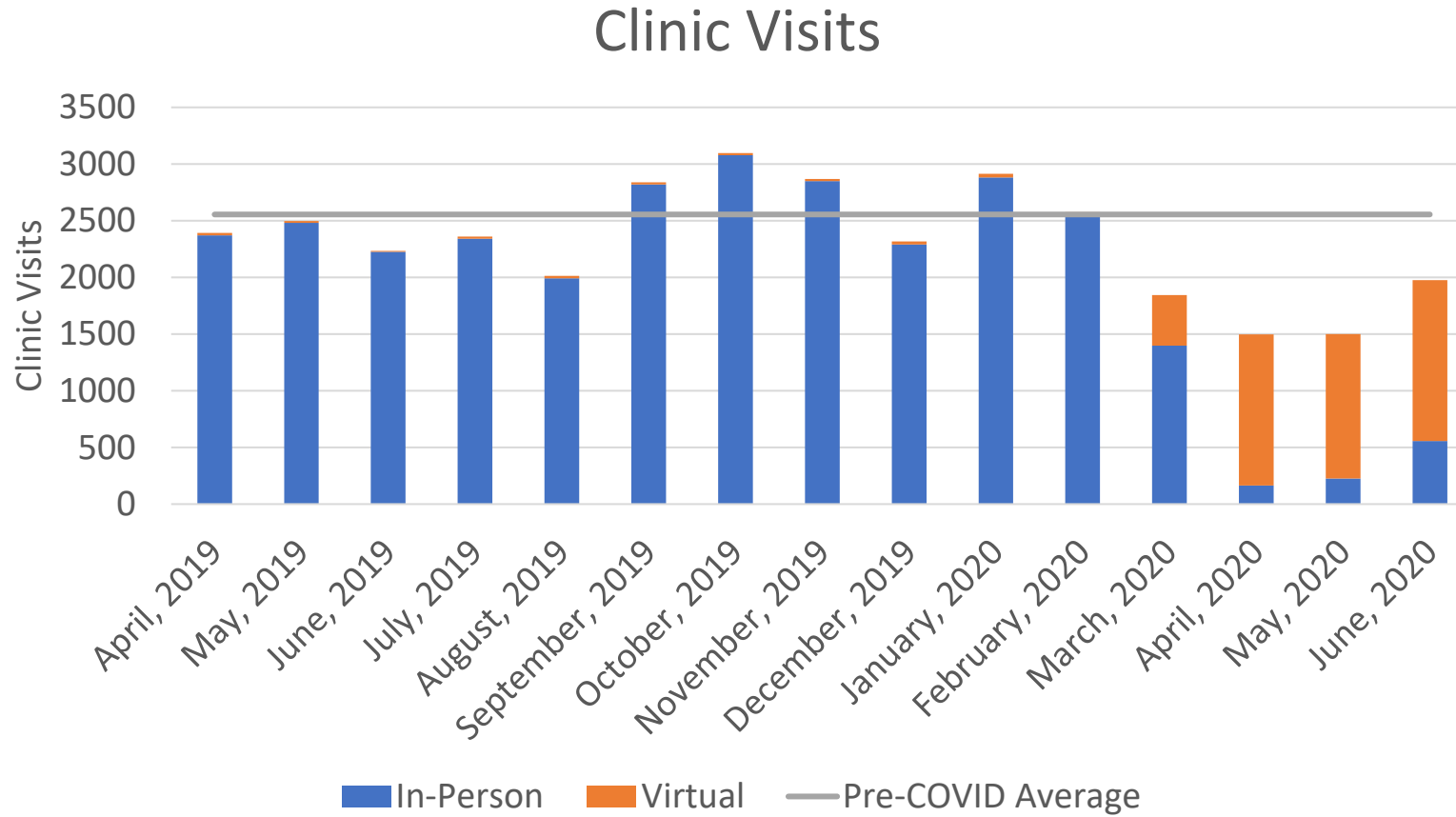
1. Pandemic: Ramping down
2. Currently: Ramping up
3. Post-COVID: Future considerations

# Ramping Down Activity

## Surgical & Procedural Activity



# Ramping Down Activity



# Structure Enabling Ramping Down



Following Ministry directives closely



Operating room

- OR blocks shifted from designated cardiovascular blocks to undesignated urgent blocks
- Booking form required, with urgency indicated
- OR leadership team reviewed all cases



VERY regular communication

- Daily organization-wide leadership huddles
- Daily heart & vascular leadership huddles
- Corporate Clinical Service Planning Committee
- Weekly CEO Town Hall meetings



CONSOLIDATION

Ambulatory clinic consolidation





# Ramping Up- PPE, Patient Flow and Space

- Space – physical distancing
- Environmental Services
- High-Risk Medications
- Visitor Policy
- How to quantify projected volumes in clinic
  - New referrals?
  - How much will stay virtual?
- Personal Protective Equipment calculations.  
Example:



		PPE required per case			
Procedure	Number of cases	Surgical masks	N95 masks	Gowns	Face shields
Cath	10	7	2	4	1
Ablation	10	5	3	6	3
<b>Total</b>	<b>20</b>	<b>120</b> <b>(7X10)+(5X10)</b>	<b>50</b>	<b>100</b>	<b>40</b>

## Ramping Up – Staffing

Challenges with repatriating redeployed staff:

- Stressful burden caring for patients during a pandemic
- During ramp-up, redeployed staff needed in important areas (e.g. COVID-19 Assessment Centre)


Strategies to balance staff burnout and clinical requirements

- Managing vacation – **must** incorporate staff vacation into ramp-up planning!

Timeframe	Vacation Cap
April 1 to April 30	2 consecutive days
April 30 to May 15	Extended – 2 consecutive days
May 15 to June 12	1 week maximum
June 12 to Sept 11	2 week maximum

# Staff Wellness

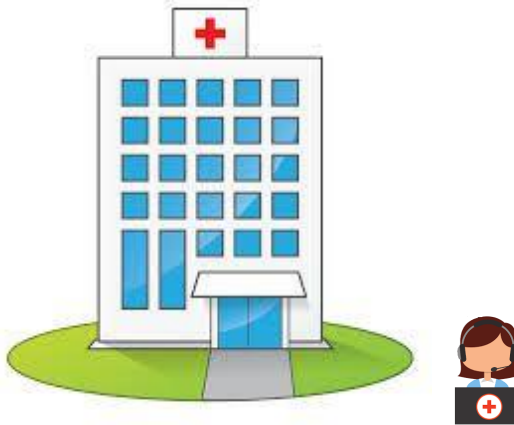
An illustration showing several hands of different skin tones reaching towards the center, holding a string that forms a lavender flower. The background is a gradient of purple.

If you need help dealing with a stressful situation call a  
**Code Lavender** 

**Code Lavender** is a compassionate response that any staff, leader, physician or team can request when a stressful event occurs.


Once actioned, a spiritual care response team will provide supports, which can include a purposeful physical presence, prayer, mindfulness or other comforting supports based on needs.

- Most patients seen in hospital
- Few virtual visits
- Steady stream of referrals



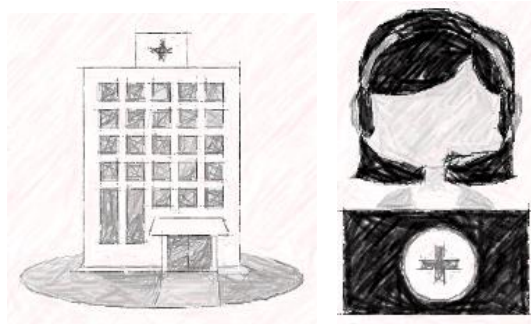
Pre-COVID

- Most patients seen virtually
- Few in-person visits
- Few referrals



COVID

- How much care will stay virtual?
- How will referrals pick up?
- How does this affect wait lists for procedures?



Post-COVID





**Questions?**



# Other Updates and Next Steps

**JANA JEFFREY**

# COVID-19 Resource Centre

## *Reminder*

- CorHealth developed the [CorHealth COVID-19 Resource Centre](#) to share the most recent updates on the novel coronavirus (COVID-19), as well as relevant resources for our stakeholders, including:
  - **[The most recent provincial, national and international, updates on COVID-19](#)**, including cardiac, stroke, vascular, heart failure, rehabilitation, and virtual care resources
  - **[21 COVID-19 Guidance Memos](#)**: 14 Cardiac Guidance Memos (including 2 Cardiovascular Rehabilitation Guidance Memos), 4 Stroke Guidance Memos (including 2 Stroke Rehabilitation Guidance Memos), 2 Vascular Guidance Memos, 1 Heart Failure Guidance Memos (please see appendix for links to specific Guidance Memos)
  - **[37 COVID-19 Stakeholder Forum Presentations & Summary Notes](#)**: 14 Cardiac Stakeholder Forums, 5 Heart Failure Stakeholder Forums, 6 Stroke Stakeholder Forums, 8 Vascular Stakeholder Forums, 4 Rehabilitation Stakeholder Forums



# Other Updates and Next Steps

- Cardiac Imaging Guidance Document – *In Progress*
- Next COVID-19 Cardiac Forum Meeting – *Thursday, July 23, 8:00 – 9:00 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

# Guidance Memos

- CorHealth has released 14 COVID-19 Cardiac Memos since March 15, 2020:
  - [Recommendations for an Ontario Approach to Managing Cardiac Electrophysiology During COVID-19 \(March 24, 2020\)](#)
  - [Recommendations for an Ontario Approach to Provision of Hospital Echocardiography Services During COVID-19 \(March 25, 2020\)](#)
  - [Recommendations for an Ontario Approach to Managing STEMI During COVID-19 \(March 25, 2020\)](#)
  - [Recommendations for an Ontario Approach to Managing Catheter Based Structural Heart Procedures During COVID-19 \(March 30, 2020\)](#)
  - [Recommendations for an Ontario Approach to Provision of Non-Hospital Echocardiography Services During COVID-19 \(April 2, 2020\)](#)
  - [Recommendations for an Ontario Approach to Managing Referrals for Cardiac Services During COVID-19 \(April 3, 2020\)](#)
  - [Immediate Reduction in Cardiac Procedures & Surgeries \(April 4, 2020\)](#)
  - [Recommendations for Resuming Selective Urgent Outpatient Cardiac Procedures, and Surgeries \(April 13, 2020\)](#)
  - [Recommendations for an Ontario Approach to Prioritization of Cardiac Surgical Procedures for Treatment of Coronary Artery, Valvular and Other Cardiac Disease in Response to Phases of COVID-19 \(April 24, 2020\)](#)
  - [Recommendations for an Ontario Approach to Prioritization of Diagnostic Cardiac Catheterization and Percutaneous Coronary Intervention in Response to Phases of COVID-19 \(April 24, 2020\)](#)
  - [Recommendations for an Ontario Approach to Triaging Echocardiographic Services During COVID-19 \(April 29, 2020\)](#)
  - [Recommendations for an Approach to the Provision of Cardiovascular Rehabilitation during COVID-19 in Ontario \(May 12, 2020\)](#)
  - [Recommendations for an Ontario Approach to Resuming Echocardiographic Services during COVID-19 \(June 15, 2020\)](#)
  - [Recommendations for an Approach to Resuming In-Person Outpatient Cardiovascular Rehabilitation Services in Ontario \(June 17, 2020\)](#)

# Guidance Memos

- CorHealth has released one COVID-19 Heart Failure Memo and one Information Sheets:
  - [Recommendations for an Ontario Approach to Ambulatory Monitoring & Management of Heart Failure During COVID-19 \(April 20, 2020\)](#)
  - [CorHealth Info Sheet – Bumetanide Access Through the Exceptional Access Program \(EAP\) During COVID-19 \(April 24, 2020\)](#)
- CorHealth has released 4 COVID-19 Stroke Memos:
  - [CorHealth COVID-19 Stroke Memo #4 – Recommendations for an Approach to Resuming Outpatient Stroke Rehabilitation Services in Ontario \(July 7, 2020\)](#)
  - [CorHealth COVID-19 Stroke Memo #3 – Recommendations for an Ontario Approach to Engage & Support Caregivers for Persons with Stroke during COVID-19 \(June 11, 2020\)](#)
  - [CorHealth COVID-19 Stroke Memo #2 – Recommendations for an Ontario Approach to the Provision of Stroke Rehabilitation During COVID-19 \(April 20, 2020\)](#)
  - [CorHealth COVID-19 Stroke Memo #1 – Ambulatory Imaging & Cardiac Investigations for TIA and Minor Stroke During COVID-19 \(March 31, 2020\)](#)
- CorHealth COVID-19 Vascular Memo Released:
  - [Recommendations for an Ontario Approach to Managing Vascular Surgery During COVID-19 \(March 27, 2020\)](#)
  - [Recommendations for an Ontario Approach to Prioritization of Vascular Surgical and Endovascular Procedures in Response to Phases of COVID-19 \(April 28, 2020\)](#)