



CorHealth COVID-19 Cardiovascular Stakeholder Forum Meeting

January 13, 2021 | 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 <ul style="list-style-type: none">• Meeting Objectives	Sheila Jarvis
8:05	2. Cardiac & Vascular Activity Update	Mirna Rahal
8:15	3. Cardiac Mortality on Waitlist & Overview of Vascular Analyses on COVID-19 Impact	Dr. Harindra Wijesundera & Mirna Rahal
8:35	4. Ontario Health Memo: Further Actions for Optimizing Care for All Patients	Dr. Chris Simpson
8:45	5. Open Forum Discussion <ul style="list-style-type: none">• <i>What strategies are being employed to try and secure bed space and resources?</i>• <i>What is driving COVID-19 pressure points (e.g., community spread, within hospital)?</i>• <i>What activities are being employed to support patients in seeking/accessing care during COVID-19?</i>	Dr. Madhu Natarajan & Dr. Sudhir Nagpal
08:55	5. Other Updates and Next Steps	Jana Jeffrey



Welcome

SHEILA JARVIS

Meeting Objectives

- To provide an update on Cardiac & Vascular Activity
- To review & discuss ICES data on COVID-19 Wave 1 Impacts on CV Outcomes, and provide a commentary on vascular analyses of COVID-19 Impact
- To review the Ontario Health Memo released on Further Actions for Optimizing Care for All Patients & provide an open forum discussion

Housekeeping Reminders:

- *Please ensure that you are on mute, not on hold, when you are not speaking on the call*
- *Please be aware that when the call is put on hold, we often hear hold music or persistent beeping*



Cardiac & Vascular Activity Update

MIRNA RAHAL



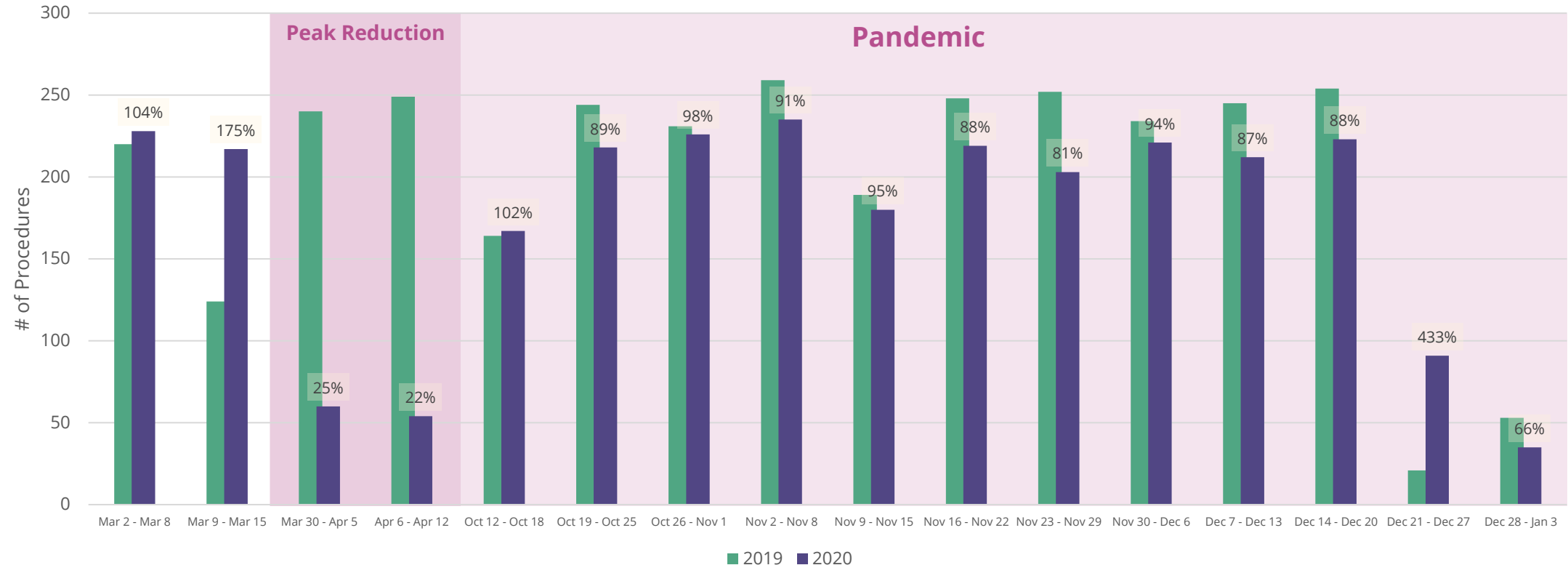
**CorHealth
Ontario**

*Advancing cardiac, stroke
and vascular care*

Vascular Scheduled Activity

Access to Care Wait Times Information System

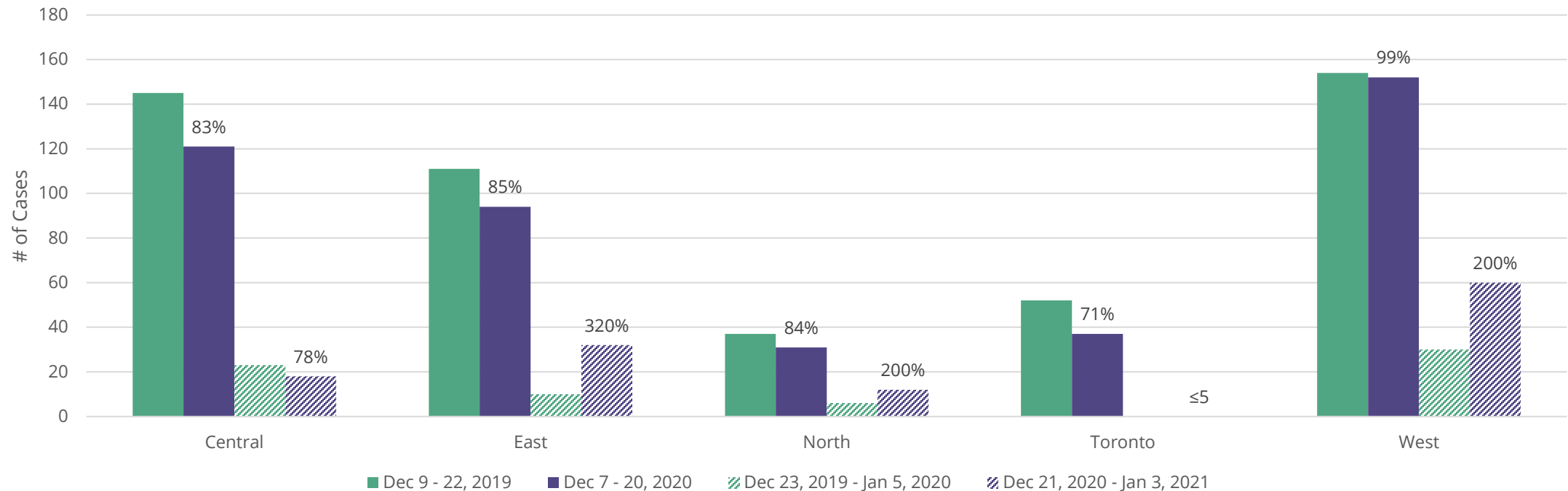
Overall Scheduled Vascular Surgery Volumes 2020 vs 2019 – Ontario



Notes: Data are from Access to Care WTIS, CY 2019 and 2020
 Each 2020 week is shown on the horizontal axis; 2019 volumes represent volumes from the equivalent Monday to Sunday week in 2019
 Percentage value above each bar is the 2020 volume as a percentage of the 2019 volume, or ≤5 for volumes ≤5.
 In 2020, March Break occurred from March 16-22, 2020. It was a week earlier in 2019, from March 11-17, 2019.

Overall Scheduled Vascular Surgery Volumes 2020 vs 2019 – By Region

Overall Vascular Surgery - By Region
(Dec 7 – Dec 20 and Dec 21 - Jan 3)



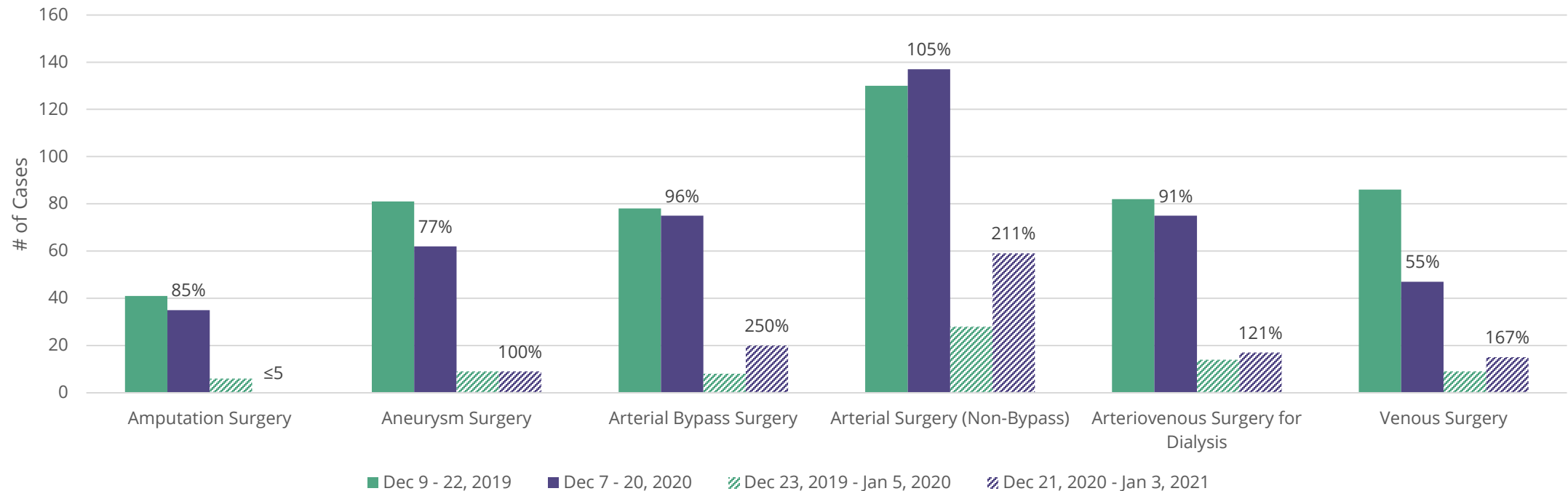
Ontario: Dec 7, 2020 – Dec 20, 2020: 87% of prior year volume
Dec 21, 2020 – Jan 3, 2021: 170% of prior year volume



Notes: Data are from Access to Care WTIS, CY 2019 and 2020
Percentage value above each bar is the 2020 volume as a percentage of the 2019 volume, or ≤5 for volumes ≤5.

Scheduled Vascular Surgery Volumes 2020 vs 2019 – By Procedure Type

Vascular Surgery - By Procedure Type
(Dec 7 – Dec 20 and Dec 21 - Jan 3)



Ontario: Dec 7, 2020 – Dec 20, 2020: 87% of prior year volume
Dec 21, 2020 – Jan 3, 2021: 170% of prior year volume



Notes: Data are from Access to Care WTIS, CY 2019 and 2020
Percentage value above each bar is the 2020 volume as a percentage of the 2019 volume, or ≤5 for volumes ≤5.



Cardiac Activity

CorHealth Registry

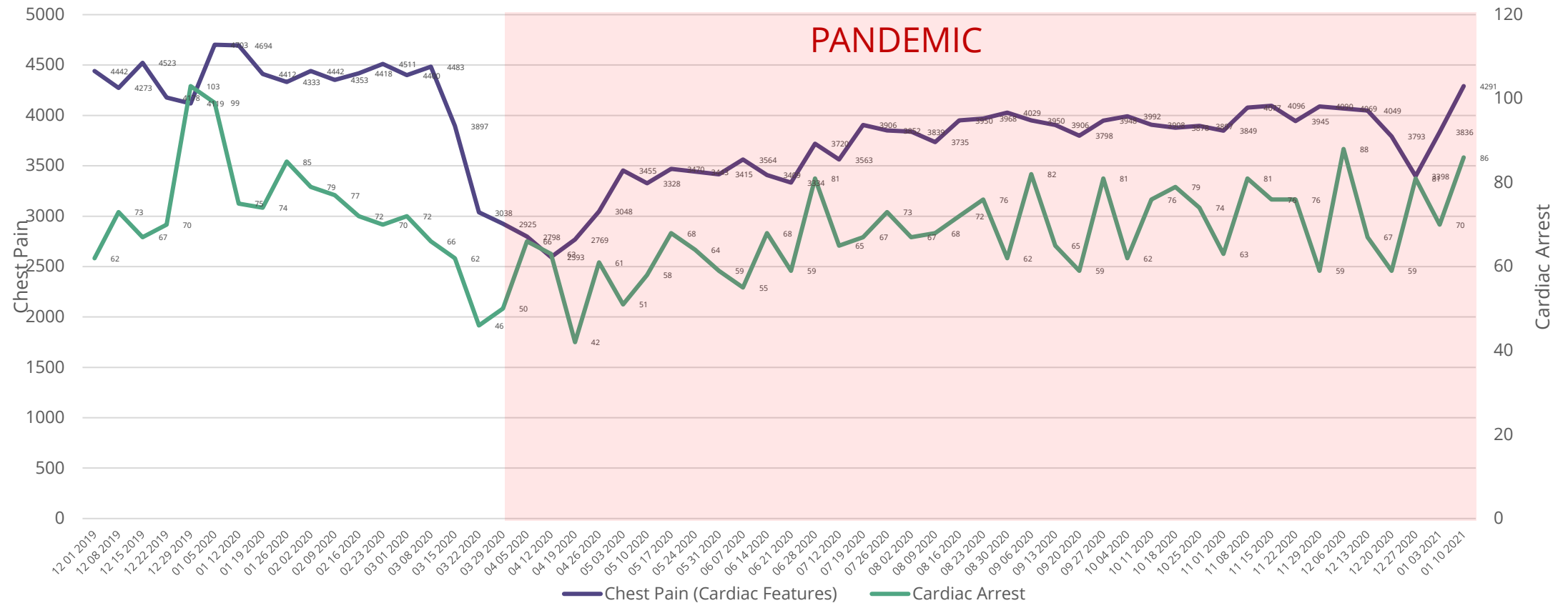
Change in Cardiac Activity between 2019 and 2020

Procedure	March to December 2019	March to December 2020	Change	% Change
CATH	62,515	50,908	(11,607)	-19%
PCI	23,871	20,032	(3,839)	-16%
CABG	6,040	4,885	(1,155)	-19%
Valve Surgery	2,359	2,167	(192)	-8%
CABG + Valve	1,065	966	(99)	-9%
TAVI	1,446	1,589	143	10%
Electrophysiology	9,336	7,547	(1,789)	-19%
Device Implants	2,933	780	(153)	-5%

Percentage Reduction/Increase in Activity

Procedure	Dec 28, 2020 – Jan 3, 2021 Compared to Prior Year	Dec 28, 2020 – Jan 3, 2021 Compared to Dec 21 – Dec 27, 2020
CATH	-4%	-25%
PCI	-25%	-17%
CABG	-32%	-33%
Valve Surgery	-43%	-47%
CABG + Valve	83%	-39%
TAVI	88%	-32%
Electrophysiology	-63%	-48%
Device Implants	-22%	-27%

Cardiac Related ED Visits



Data Source: eCTAS

July 04th data is excluded from all graphs. Due to a technical disruption on July 4th, eCTAS was unavailable for an extended period of time. As a result, daily triage volume is significantly understated (estimated ~40% lower) in all eCTAS reporting for July 4th. Data excludes Sunnybrook Hospital due to recent eCTAS implementation



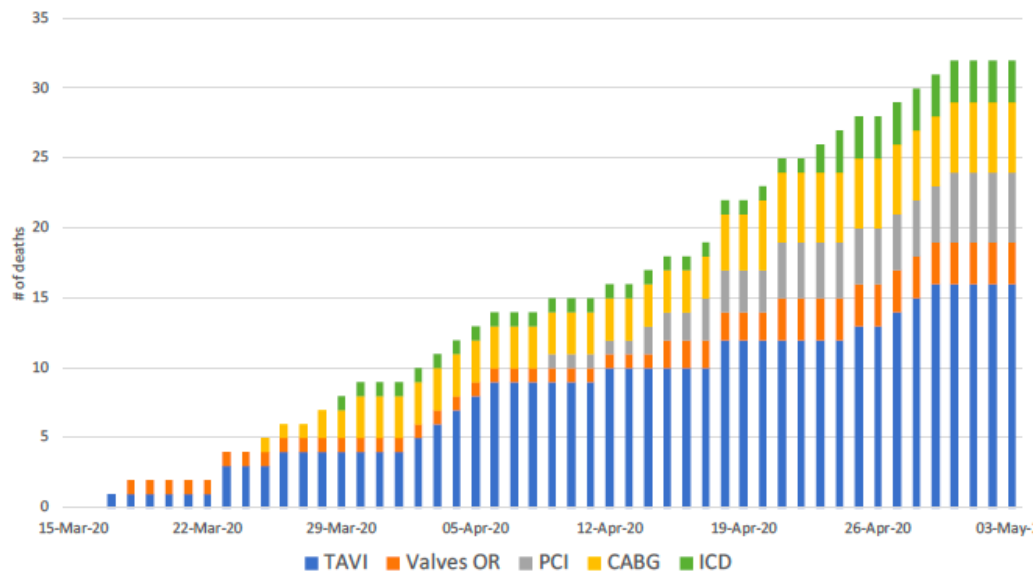
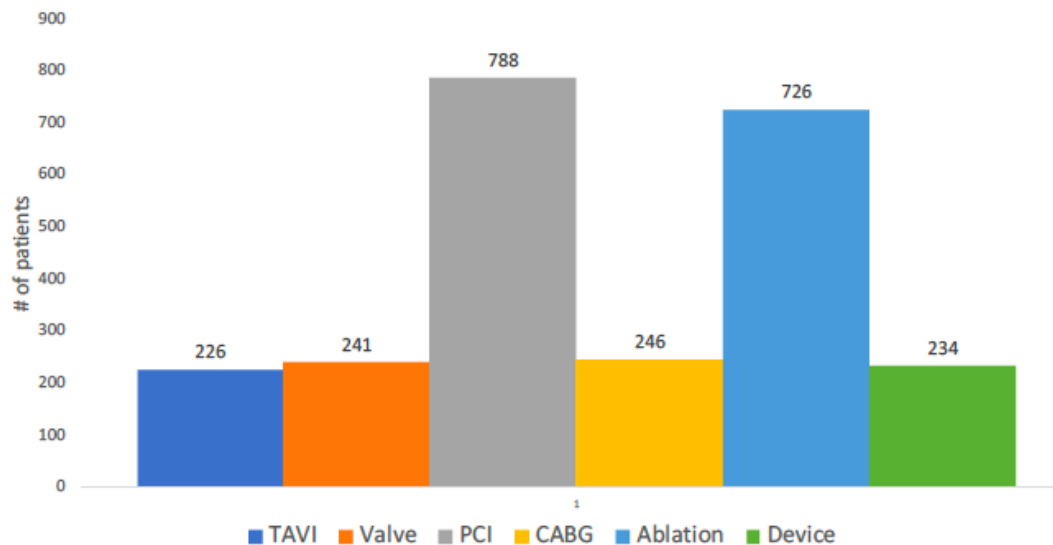
ICES Data: COVID-19 Wave 1 Impacts on CV Outcomes & An Overview of Vascular Analyses on COVID-19 Impact

DR. HARINDRA WIJEYSUNDERA & MIRNA RAHAL

Outline

- Review of Cardiac Submodule Projections from Spring 2020
- Update post-pandemic ICES data
 - Wait-lists
 - “vanishing patient”
 - Wait-list outcomes
 - Pre versus post pandemic

Figure 5: Incremental Wait-list Growth as of May 3, 2020



CARDIAC Submodule

- Report
 - <https://www.covid-19-mc.ca>
- Main Messages
 - There is a rapid growth in incremental cardiac waitlists as a result of the slowdown in activity in preparation for the resource needs for the COVID-19 pandemic.
 - When the first wave of the pandemic diminishes, we will need to determine the point at which foregoing procedures for cardiac patients, *in order to make those resources available to treat COVID-19 patients*, translates to a higher number of deaths among cardiac patients
 - Key:
 - **In all projections, there are no deaths for COVID-19 patients due to resources limitations**

ICES Data

CorHealth Registry
PCI referrals (Jan 1, 2014-
Sept 30, 2020)
n=507,989

CorHealth Registry
CABG referrals (Jan 1, 2014-
Sept 30, 2020)
n=65,234

CorHealth Registry
valve surgery referrals (Jan
1, 2014- Sept 30, 2020)
n=22,846

CorHealth Registry
TAVI referrals (Jan 1, 2014-
Sept 30, 2020)
n=13,989

Exclude:
Quality assurance (n=6,070)
Out of province (n=335)
More than one referral (n=14,599)
Invalid death date/referral date
(n=299)

Exclude:
Quality assurance (n=1,939)
Out of province (n=41)
More than one referral (n=891)
Invalid death date/referral date
(n=118)

Exclude:
Quality assurance (n=881)
Out of province (n=12)
More than one referral (n=245)
Invalid death date/referral date
(n=44)

Exclude:
Quality assurance (n=214)
Out of province (n=10)
More than one referral (n=1)
Invalid death date/referral date
(n=19)

Final PCI referral cohort
n=486,686

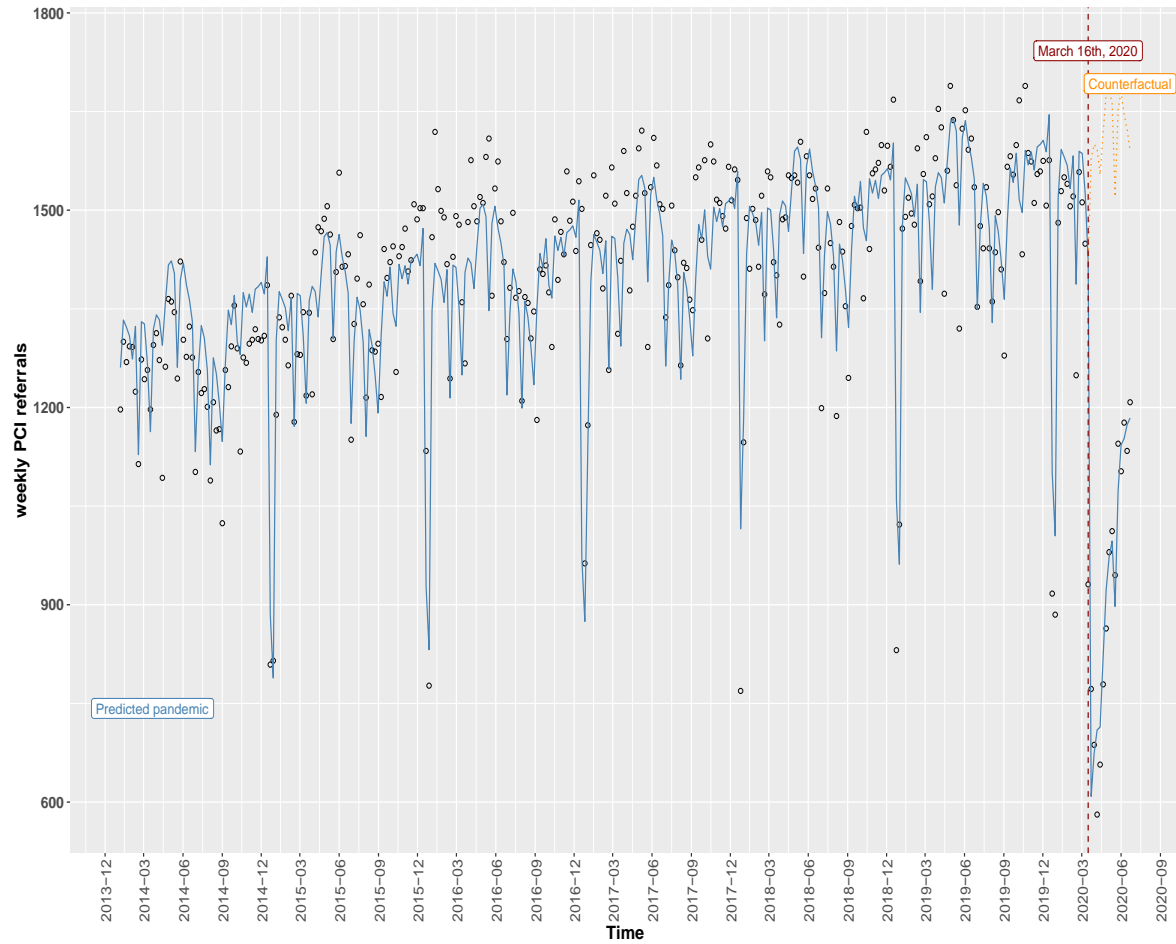
Final CABG referral cohort
n=62,245

Final valve surgery referral
cohort
n=21,664

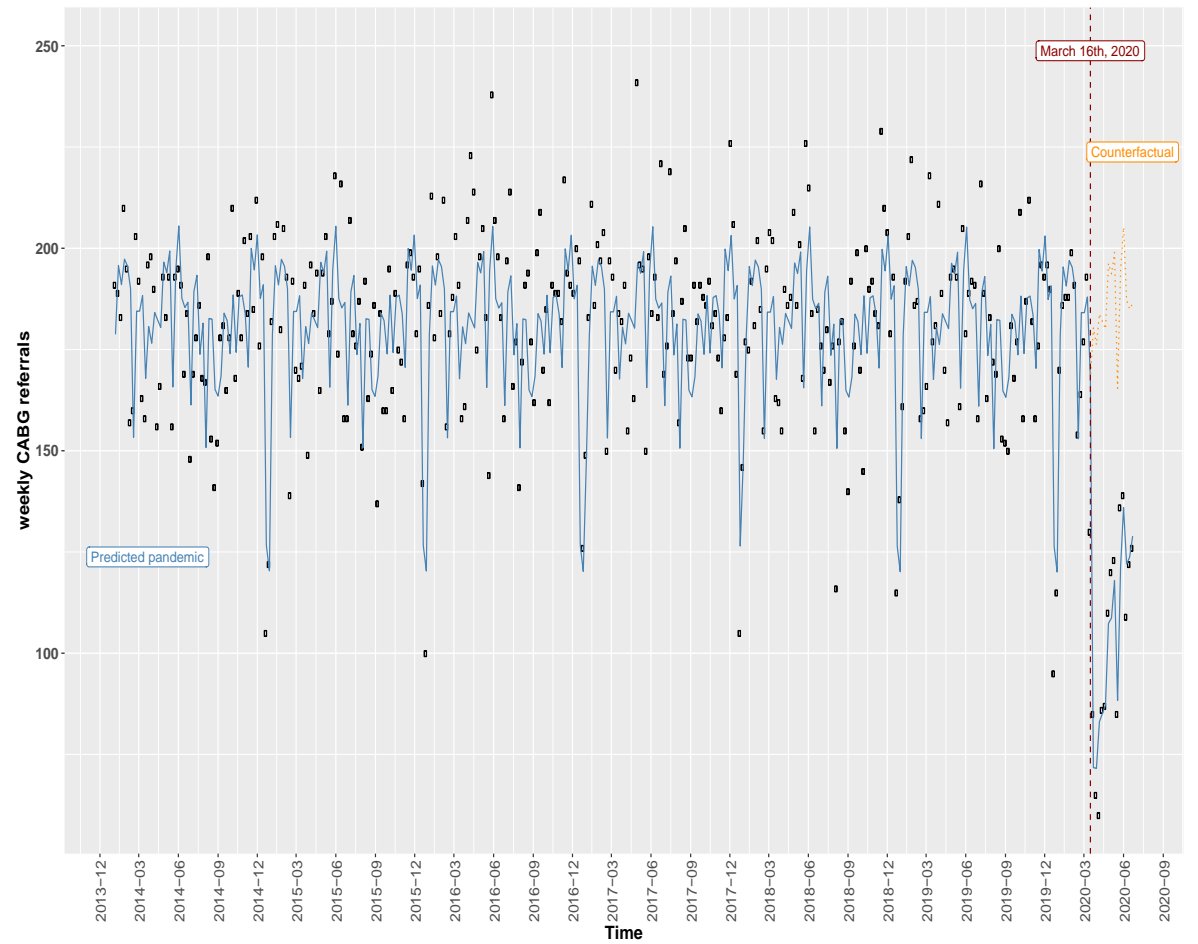
Final TAVI referral cohort
n=13,746

Referrals

Wait-list Revascularization

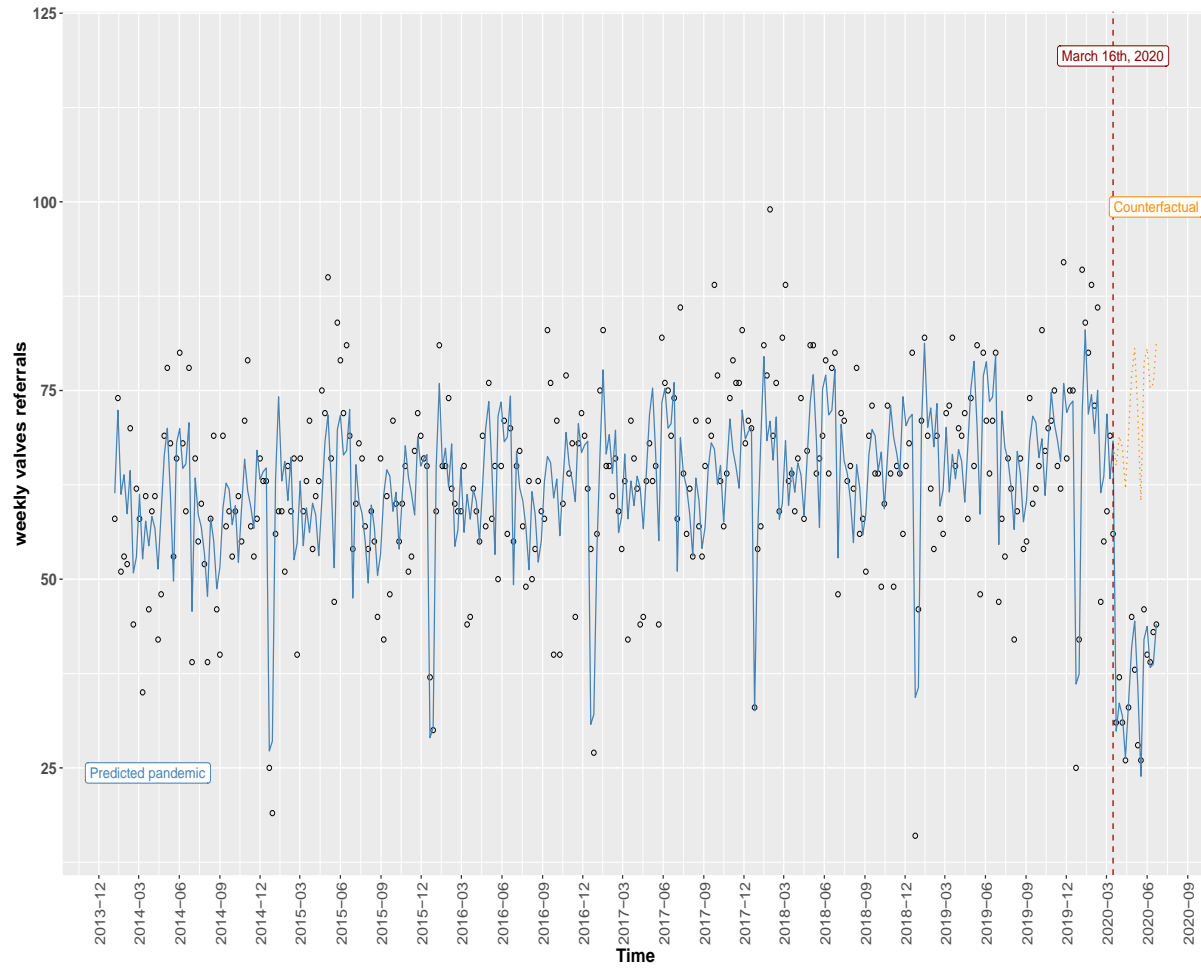


PCI

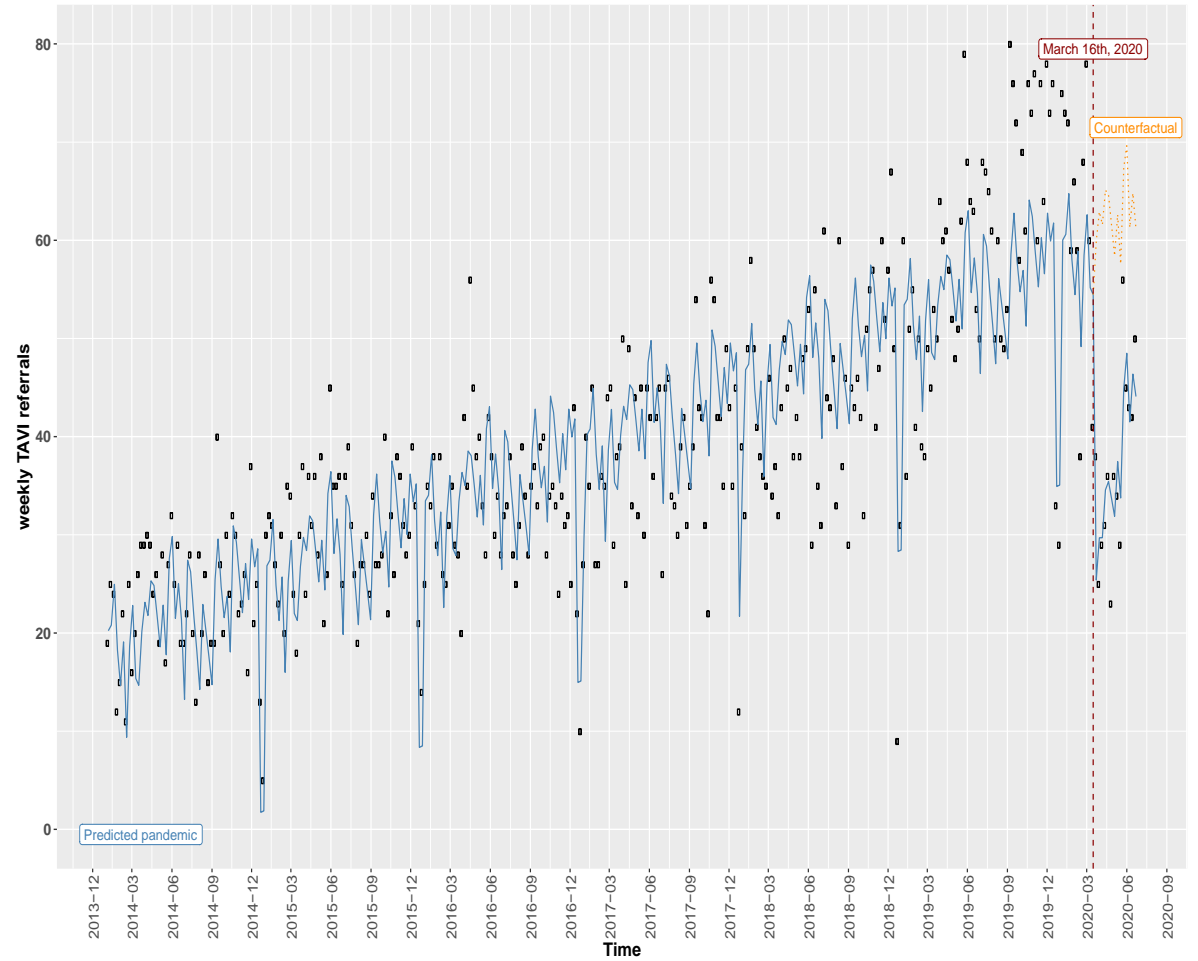


CABG

Wait-list Valve



Surgical Valves



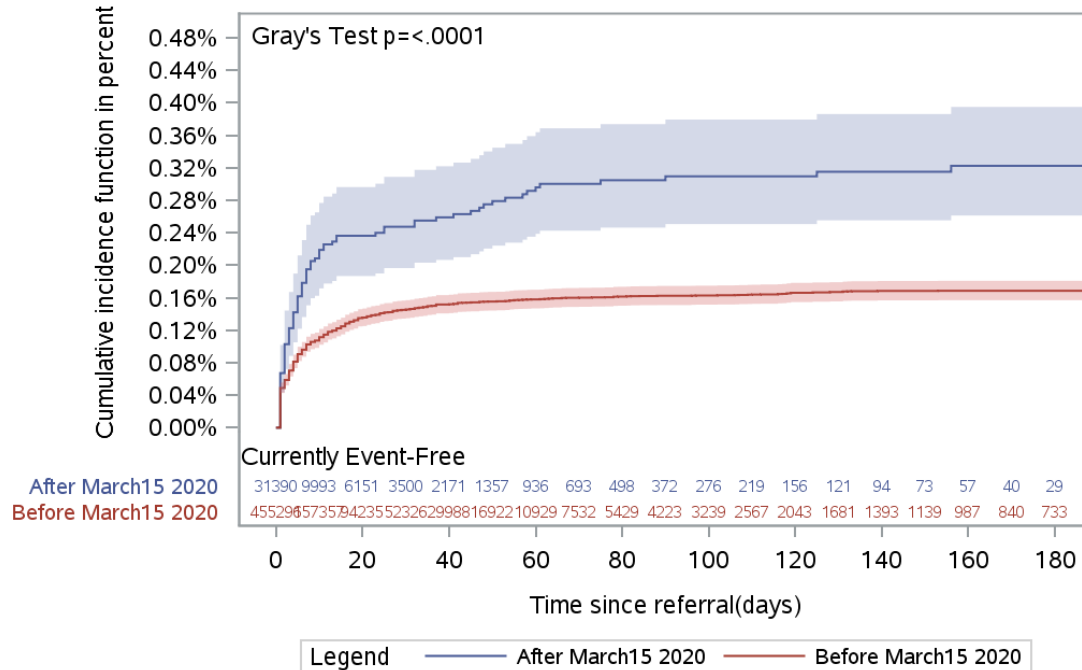
TAVI

Characteristics: Revascularization

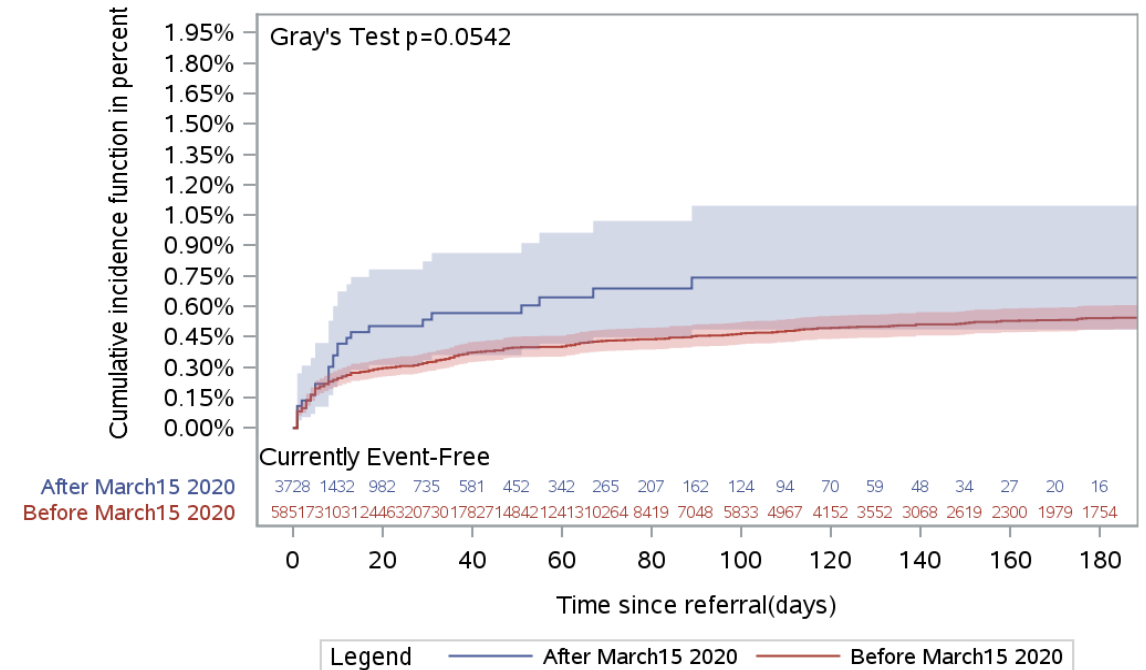
VARIABLE	VALUE	PCI			CABG		
		Pandemic	Pre-pandemic	SMD	Pandemic	Pre-pandemic	SMD
		N=31,390	N=455,296		N=3,728	N=58,517	
Presentation	ACS	41.0%	36.6%	0.09	48.1%	41.6%	0.13
	Emergency	11.7%	10.1%	0.05	9.3%	6.2%	0.12
	Stable CAD	47.2%	53.2%	0.12	42.4%	51.5%	0.18
Median Wait-times to procedure	days	2 (IQR 0-14)	3 (IQR 3-15)		6 (IQR 3-15)	12 (IQR 5-50)	
Median Wait-times to death	days	5 (IQR 2-12)	5 (IQR 1-16)		9 (IQR 5-23)	22 (IQR 4-86)	

Outcomes - Revascularization

PCI



CABG



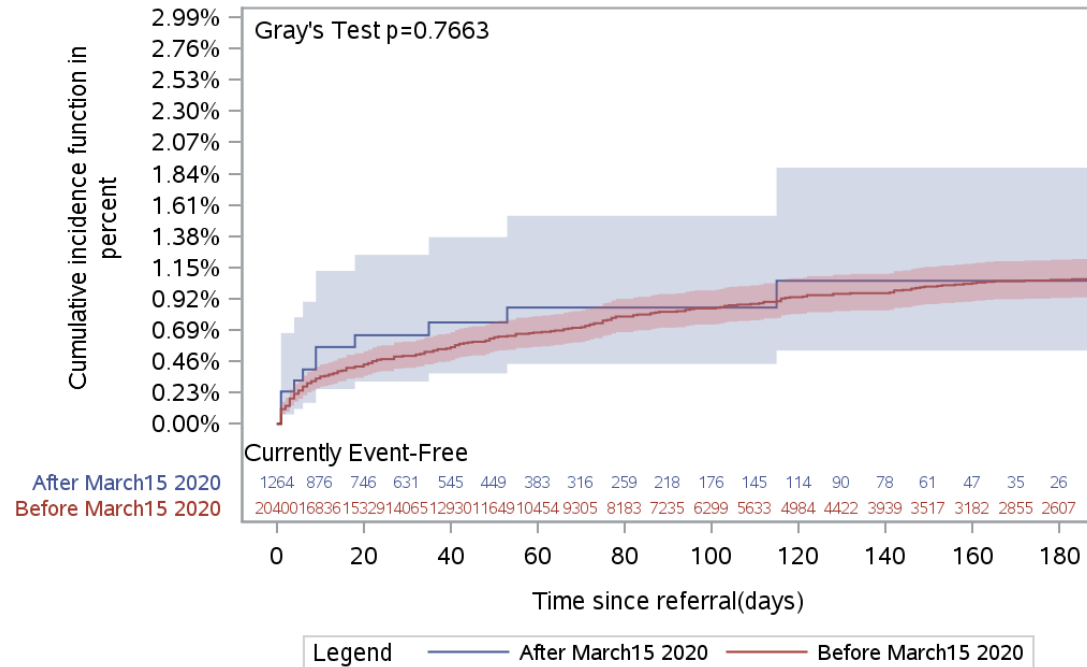
Procedure	PCI	CABG
Mortality HR estimate (95% CI)	1.83 (1.47, 2.27)	1.96 (1.28, 3.01)

Characteristics: Valves

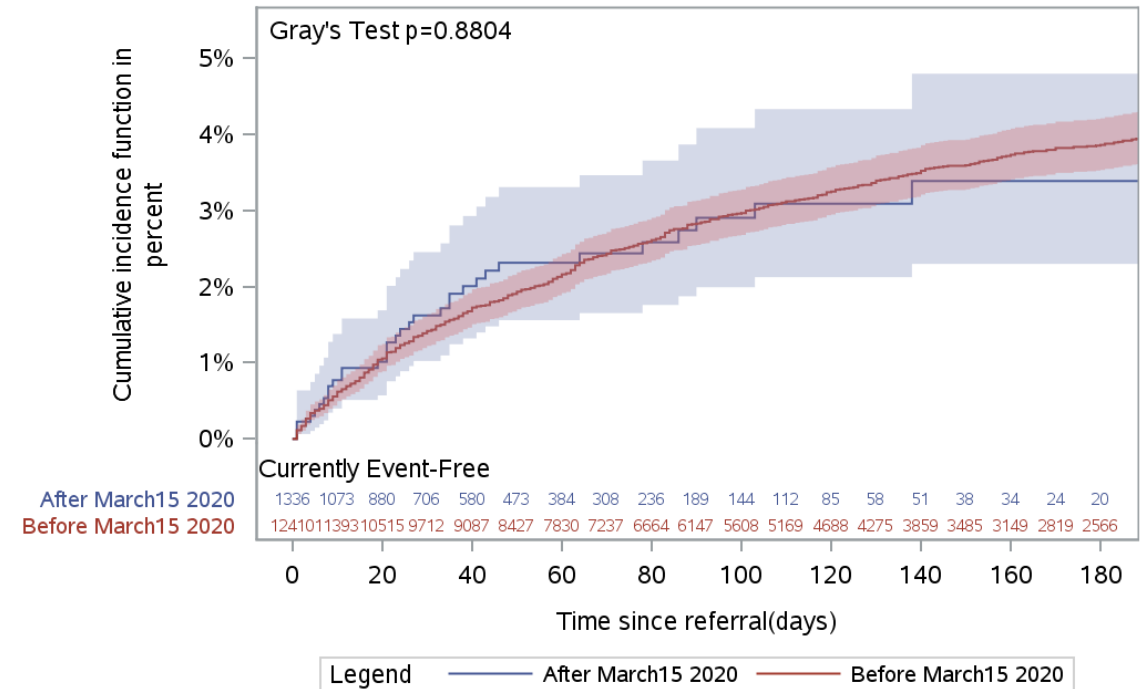
		Valve Surgery		TAVI	
VARIABLE	VALUE	Pandemic	Pre-pandemic	Pandemic	Pre-pandemic
		N=1,264	N=20,400	N=1,336	N=12,410
Median Wait-times to procedure	days	23 (IQR 6-60)	64 (IQR 26-113)	36 (IQR 16-70)	115 (IQR 64-181)
Median Wait-times to death	days	9 (IQR 1-35)	44 (IQR 7-112)	23 (IQR 8-41)	71 (IQR 25-158)

Outcomes - Valves

Valve



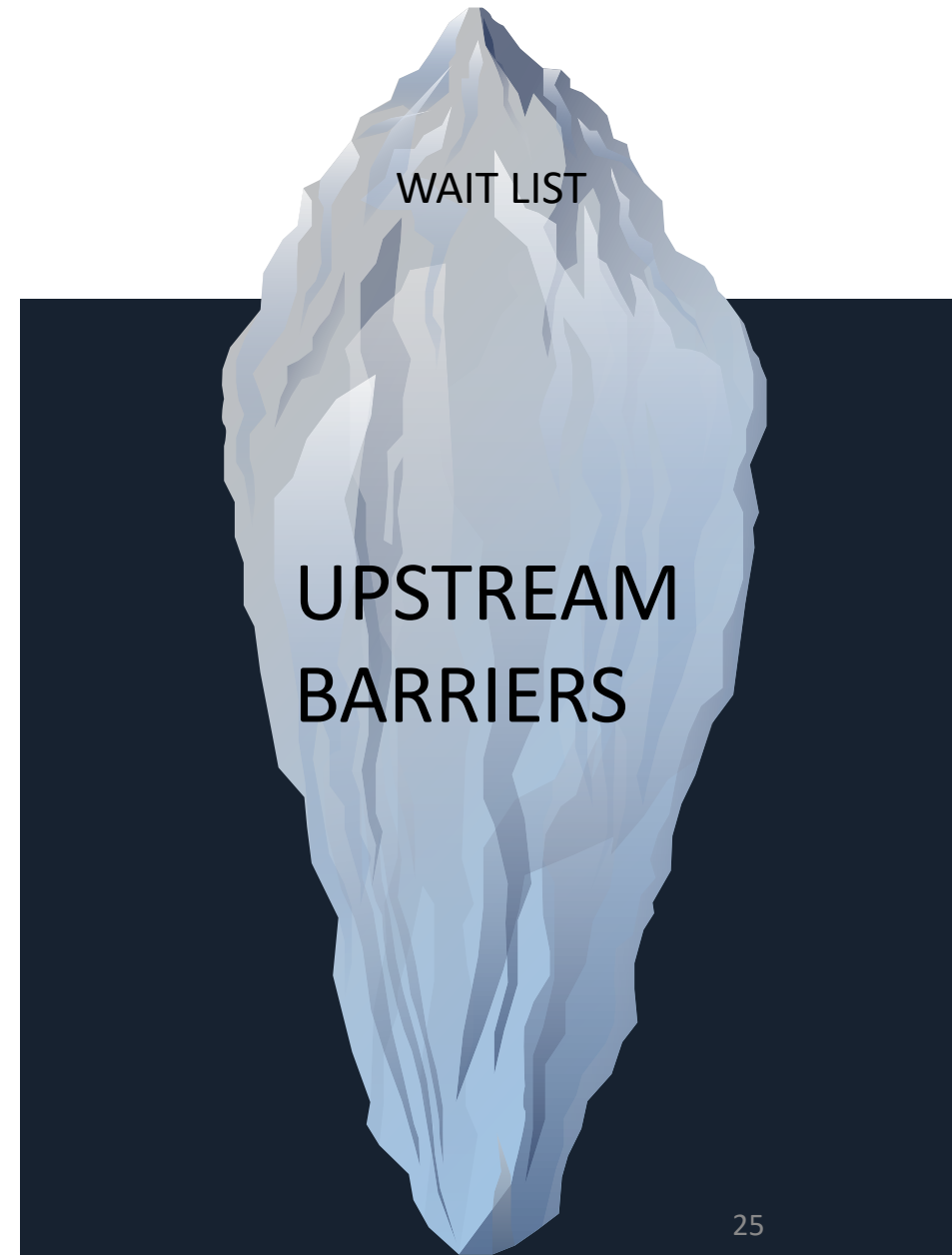
TAVI



Procedure	Valve	TAVI
Mortality HR estimate (95% CI)	1.56 (0.85, 2.89)	1.43 (0.99, 2.04)

Summary

- Wait-lists are markedly lower
 - “vanishing patients” due to upstream barriers
- Wait-times are not prolonged; however, outcomes worse
 - Implications for care
 - Need procedural capacity that is sufficiently nimble to respond to urgent patients
 - Upstream barriers are critical to overcome





Overview of Vascular Analyses on COVID-19 Impact

MIRNA RAHAL



Ontario Health Memo: Further Actions for Optimizing Care for All Patients

DR. CHRIS SIMPSON

Current Context

- Hospitals continue to face capacity challenges as the number of patients continues to increase in the community and in hospitals
 - On December 15th, Ontario Health released a memo to hospitals with a call to action to create capacity of staffed adult acute inpatient beds for COVID-19
 - On January 1st, the Ontario Critical Care COVID-19 Command Centre requested that hospitals make specific plans to accommodate 115% occupancy of their CCSO baseline critical care capacity and be prepared at all times to receive ICU patients in transfer when directed
- To meet these urgent challenges, we must continue to work as a single, seamless hospital system so that we can provide safe, effective care to both COVID-19 and non-COVID-19 patients across the province

ICU Capacity Context

- As the number of patients with COVID-19 requiring critical care increases, Ontario Health projects that **the number of patients requiring care could exceed the number of ICU beds available over the next two months**
- The projections show that some hospitals could quickly exceed their capacity (if not already exceeded by today), while others could still have available ICU capacity in the next two months

Key Recommendations to Address Capacity

- **Critical care capacity:**
 - **Hospitals with currently unoccupied adult ICU bed capacity** must reserve approximately one-third of that capacity for ICU transfers from hospitals who are exceeding their capacity – **these beds will be used to receive ICU transfers from hospitals exceeding their capacity**
 - Ontario Health is working with the Ontario Critical Care COVID-19 Command Centre to get instructions out to hospitals on the beds that need to be reserved. This will include regular updates as the provincial situation and hospitals' individual situations change. Ontario Health is closely monitoring COVID-19 hospital utilization across the province and will be updating projections at least weekly
 - All hospitals are asked to review and standardize their critical care admission criteria in consultation with the Ontario Critical Care COVID-19 Command Centre
 - The process to transfer ICU patients between hospitals will continue to be managed by the Ontario Critical Care COVID-19 Command Centre

Critical Care Capacity - Example

- Based on the current projections, there is a group of approximately 15 to 20 hospitals who would be asked to reserve ICU capacity
- *Example:* Hospital Y is projected to have relatively fewer COVID-19 ICU admissions than other large hospitals. Hospital Y is projected to have 23 to 29 adult ICU beds available. If current patterns of demand continue, Hospital Y would reserve seven to nine ICU beds to receive transfers from other hospitals in Ontario
- Ontario Health is working with the Ontario Critical Care COVID-19 Command Centre to get instructions out to hospitals on the beds that need to be reserved. This will include regular updates as the provincial situation and hospitals' individual situations change

Key Recommendations to Address Overall Capacity

- **Overall hospital capacity:**
 - All hospitals must be ready to accept patient transfers through the Ontario Critical Care COVID-19 Command Centre (ICU patients) OR regional COVID-19 response structure/IMS (inpatient), when directed
- **Hospitals in areas of community transmission should:**
 - Continue surgical, procedural, and other non-COVID-19 in-person care without delay if it is considered time-sensitive (i.e., emergent, urgent, or urgent-scheduled). For example, treatment for certain cancer diagnoses, acute abdominal pain, transplant, certain cardiac care, and certain neurological care
 - Ensure at least 10% to 15% surge capacity of staffed adult acute inpatient beds and/or, where appropriate, staffed repurposed beds (e.g., pediatrics, mental health) for COVID-19 and non-COVID-19 patients
 - Have a plan in place to appropriately defer non-time-sensitive care, if required

Conclusion

- The proposed actions will set the stage to meet the escalating and anticipated hospital capacity demands over the coming weeks
 - We must continue to work as a single system and take collective action together and immediately to maximize system capacity and maintain equitable access
 - All resources are considered provincial, and when called upon by the Ontario Critical Care COVID-19 Command Centre (ICU patients) or regional COVID-19 response structure/IMS (inpatient), hospitals are expected to act accordingly



Thank You



Open Forum Discussion

DR. MADHU NATARAJAN & DR. SUDHIR NAGPAL

Open Forum Discussion

- What strategies are being employed to try and secure bed space and resources?
- What is driving COVID-19 pressure points (e.g., community spread, within hospital)?
- What activities are being employed to support patients in seeking / accessing care during COVID-19?



Other Updates and Next Steps

JANA JEFFREY

Other Updates and Next Steps

- **Next COVID-19 Cardiac & Vascular Forum Meetings:** *dates to be determined*
- *If group members would like to share or suggest any future agenda items, please email jana.Jeffrey@corhealthontario.ca or mike.Setterfield@corhealthontario.ca for future forum meetings.*

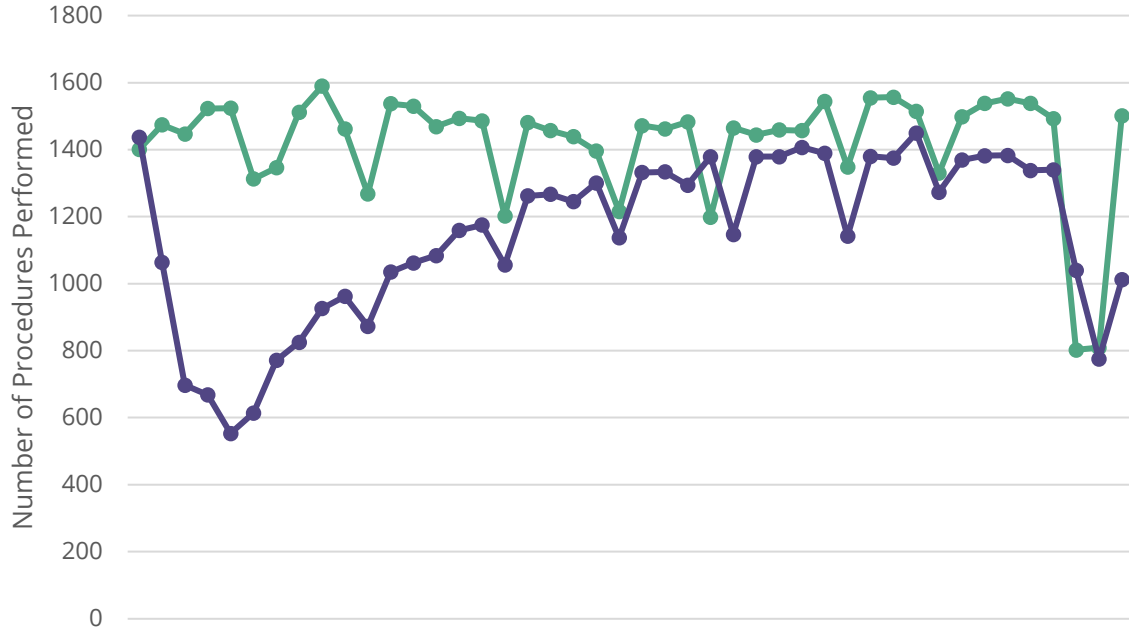


Appendix

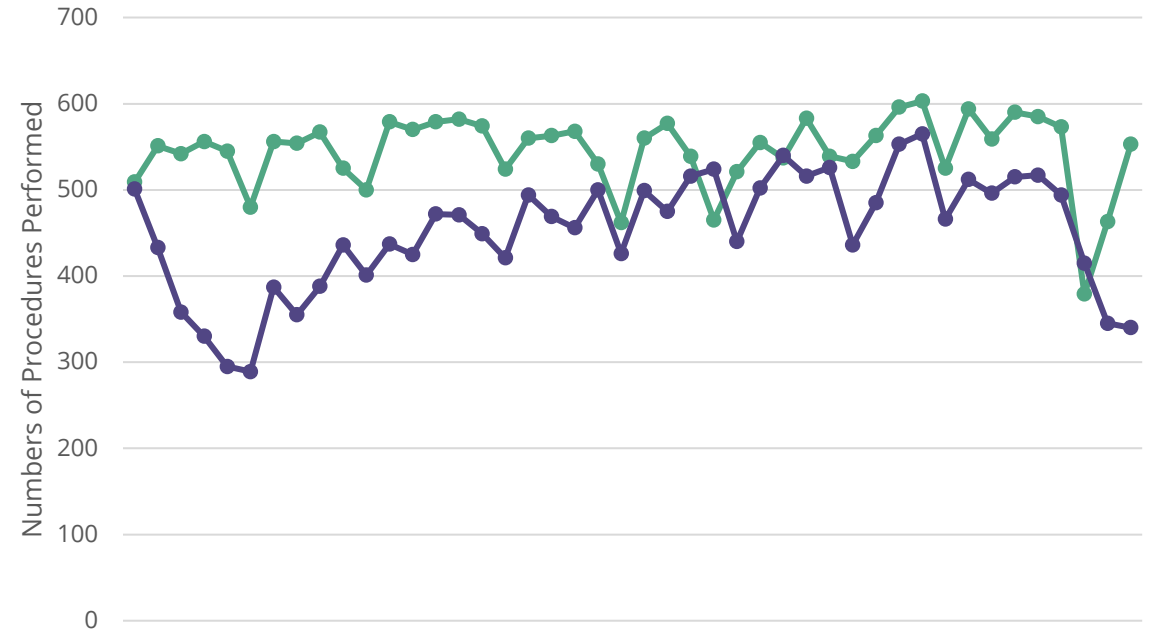
Cardiac Workstreams

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

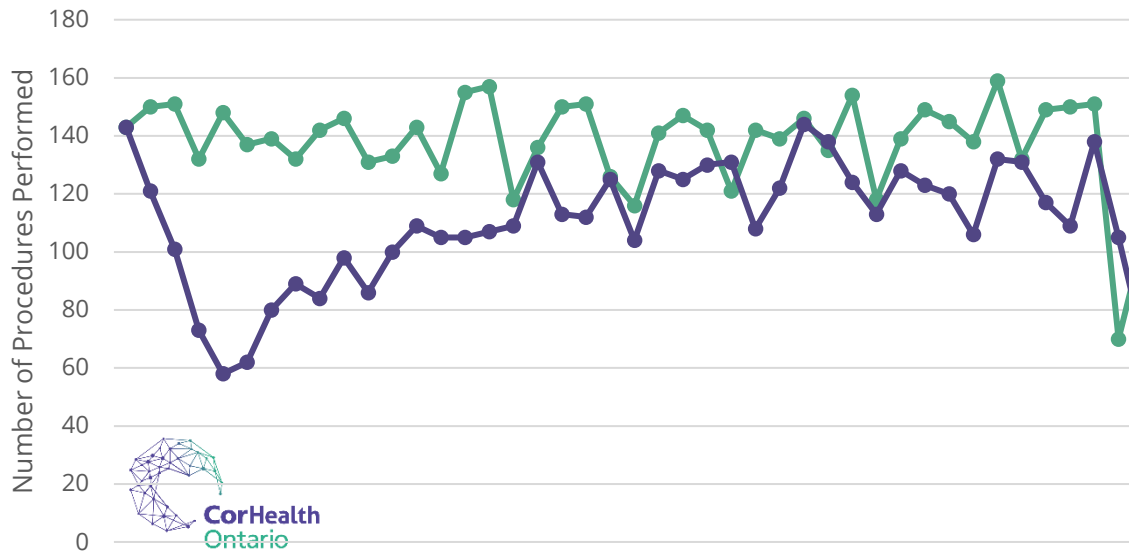
Cath



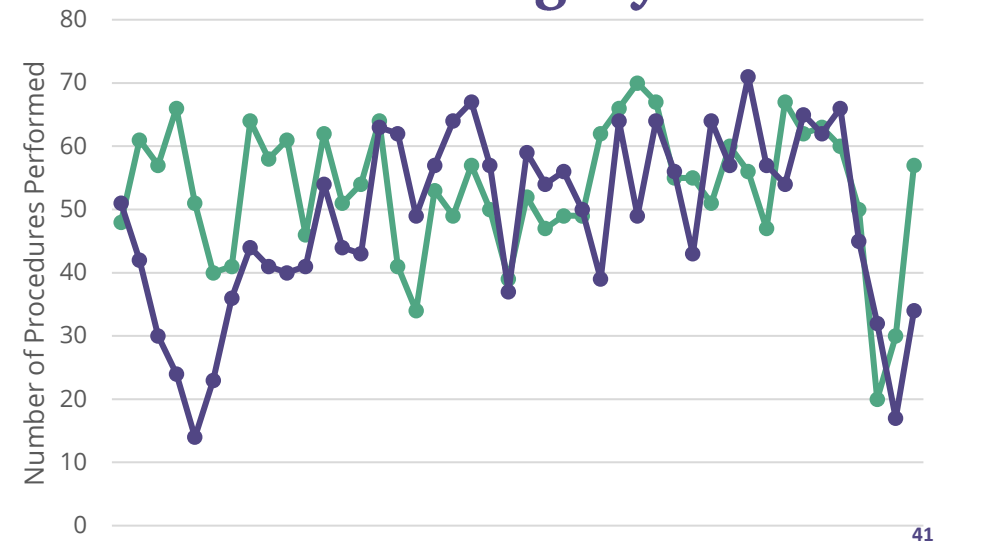
PCI



CABG



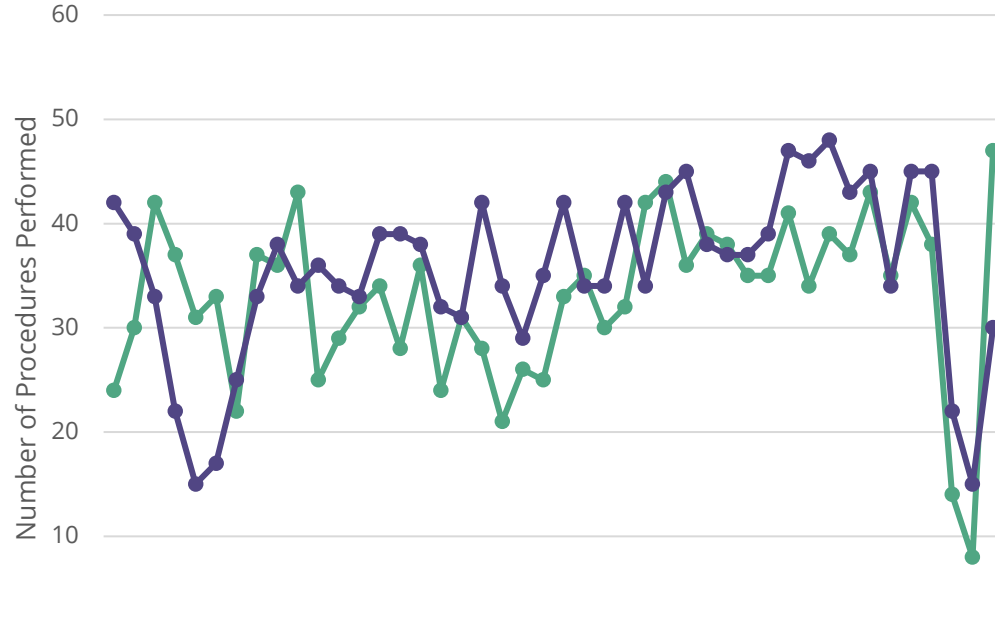
Valve Surgery



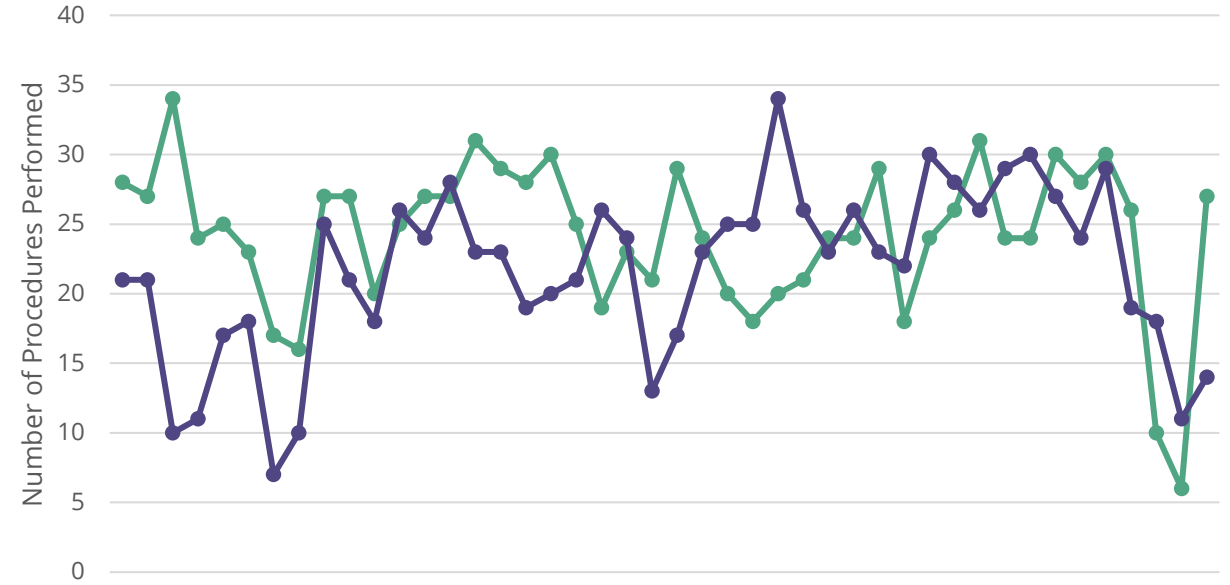
—●— 2019 —●— 2020

—●— 2019 —●— 2020

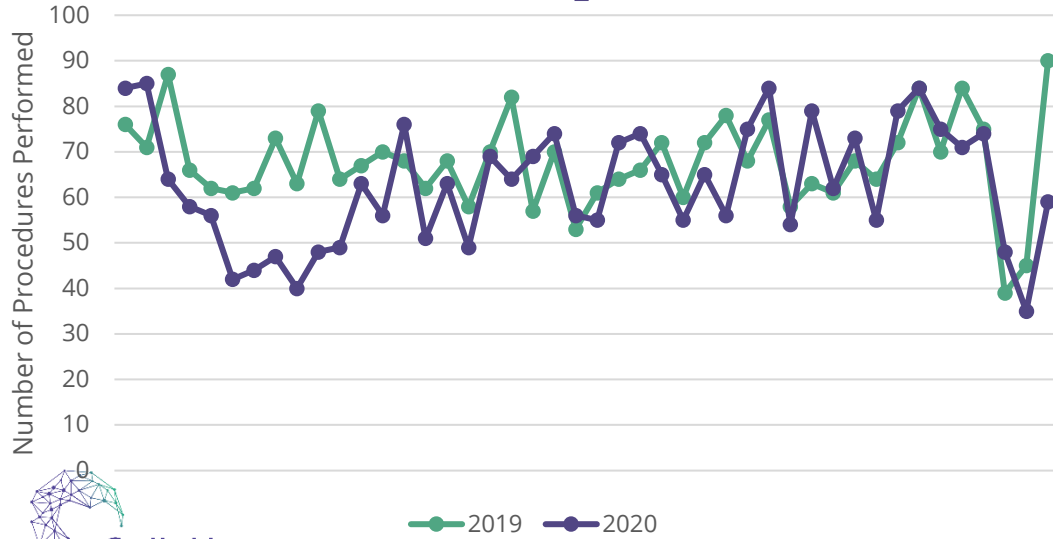
TAVI



CABG + Valve



Device Implants



Electrophysiology

