



# CorHealth COVID-19 Vascular Stakeholder Forum #6

May 27, 2020 9:00-10:00 am

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

Conference ID: 9295169#

# Agenda

TIME	DISCUSSION	ACTION REQUIRED	LEAD
9:00	1. Welcome <ul style="list-style-type: none"> <li>• System Planning Updates</li> <li>• Forum Objectives</li> </ul>	Information	Sheila Jarvis
9:05	3. Update on Vascular Activity Level <ul style="list-style-type: none"> <li>• Magnitude of the reduction in vascular activity during the COVID-19 pandemic</li> </ul> 4. Update on Planning for Surgery Backlog Mitigation Post-COVID <ul style="list-style-type: none"> <li>• Estimating the size of the vascular backlog and the resources required to clear the backlog post COVID</li> </ul>	Information & Discussion	Mirna Rahal
9:45	5. Open Discussion <ul style="list-style-type: none"> <li>• Hospital Planning for Resumption of Elective Services</li> </ul>	Information & Discussion	Dr. Sudhir Nagpal
9:55	6. Next Steps	Discussion	Mike Setterfield



# Welcome

**SHEILA JARVIS**

# System Planning Updates

- Ontario moved into Stage One of the gradual reopening of the Province, with a focus on 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.

# Meeting Objectives

1. Update on vascular activity levels, 2020 compared to 2019
2. Review the updated modelling for vascular surgery backlog planning/mitigation during COVID-19
3. Discuss Hospital Planning for Resumption of Elective Services

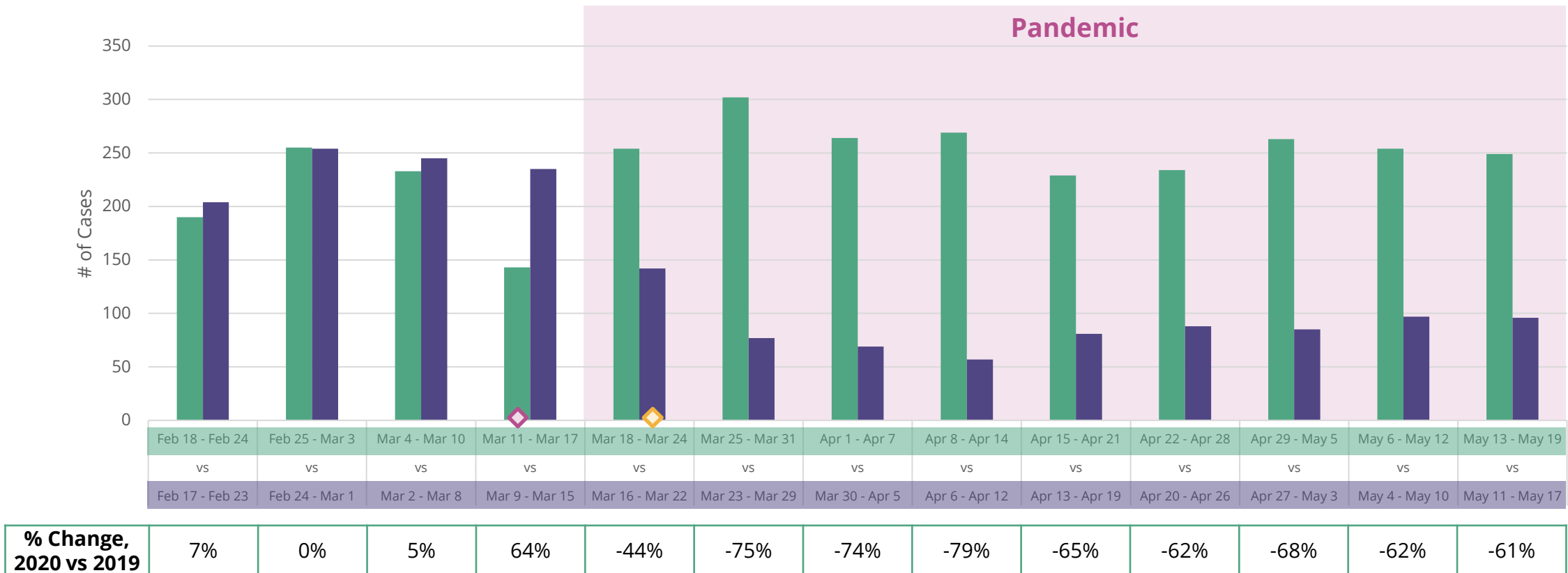


# Update on Vascular Activity Level *2020 Compared to 2019*

MIRNA RAHAL

# Vascular Surgery Volumes, 2020 vs 2019

## Updated to May 17, 2020



■ 2019 ■ 2020 ◆ March Break 2019 ◆ March Break 2020

Data Source: Access to Care WTIS CY 2019 & 2020  
Includes vascular procedures in priority levels 2 to 4



# Change in Activity vs Prior Year and Prior Week

## Updated to May 17, 2020

Procedure	May 11 - May 17, 2020 compared to May 13 - May 19, 2019 (Prior Year)	May 11 - May 17, 2020 compared to May 4 - May 10, 2020 (Prior Week)
Amputation Surgery	-8%	+71%
Aneurysm Surgery	-15%	+56%
Arterial Bypass Surgery	-54%	-39%
Arterial Surgery (Non-Bypass)	-72%	-15%
Arteriovenous Surgery for Dialysis	-83%	+40%
Venous Surgery	-90%	+50%
<b>All Vascular Surgery</b>	<b>-61%</b>	<b>-1%</b>





# Planning for Vascular Surgery Backlog Mitigation Post-COVID

*Estimating the size of the backlog and the  
resources required to clear it*

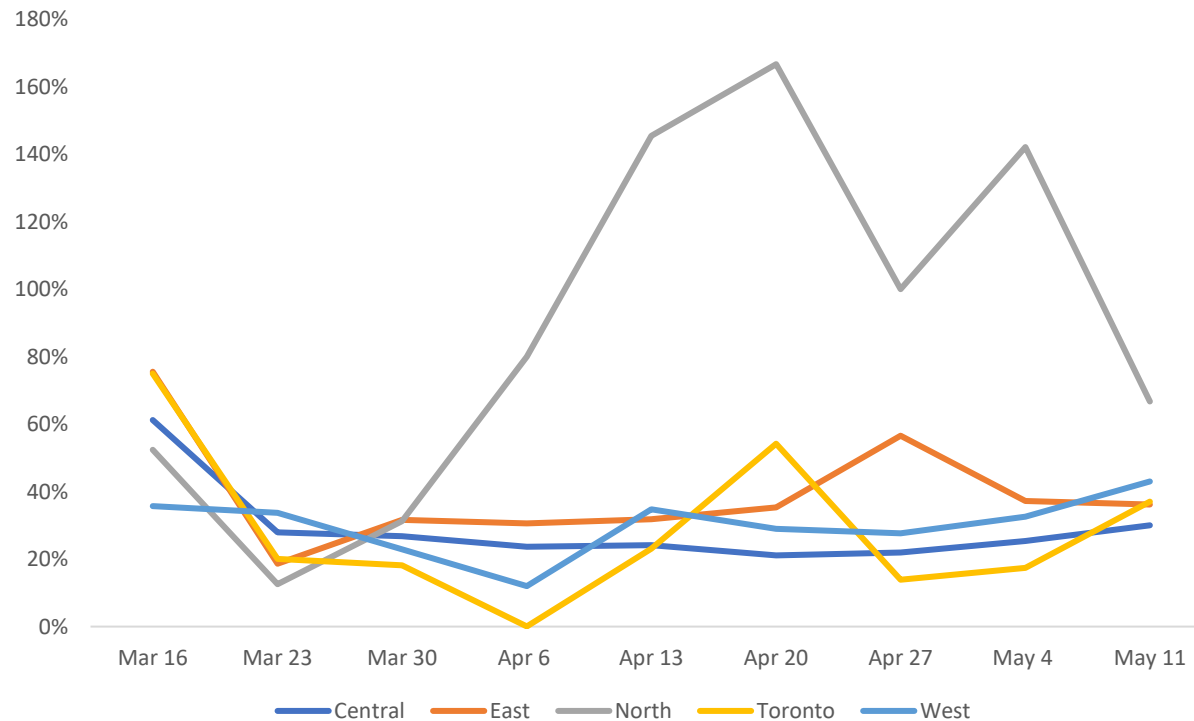
**DEANNA WU**

# Background

- Initial backlog modeling results were shared with the Vascular Stakeholder Forum, with assumptions of capacity ramp up by May 4<sup>th</sup>
- Hospital capacity ramp-up back to baseline and above baseline is unlikely to start any time soon for the following reasons:
  - COVID trends indicate that some hospital capacity will continue to be occupied by COVID patients, and restricted by potential staff shortages and the need for additional precautionary measures for COVID protection:
  - The guidance in the provincial report *"A Measured Approach to Planning for Surgeries and Procedures During COVID-19 Pandemic"* states that hospitals be able to free up 15% capacity when needed, for any potential surge in COVID-19 cases.
- Given these considerations and ongoing capacity restrictions, Vascular Forum members have expressed interest in modeling the vascular backlog in a scenario of a longer and sustained ramp-down period

# Slowdown by Region

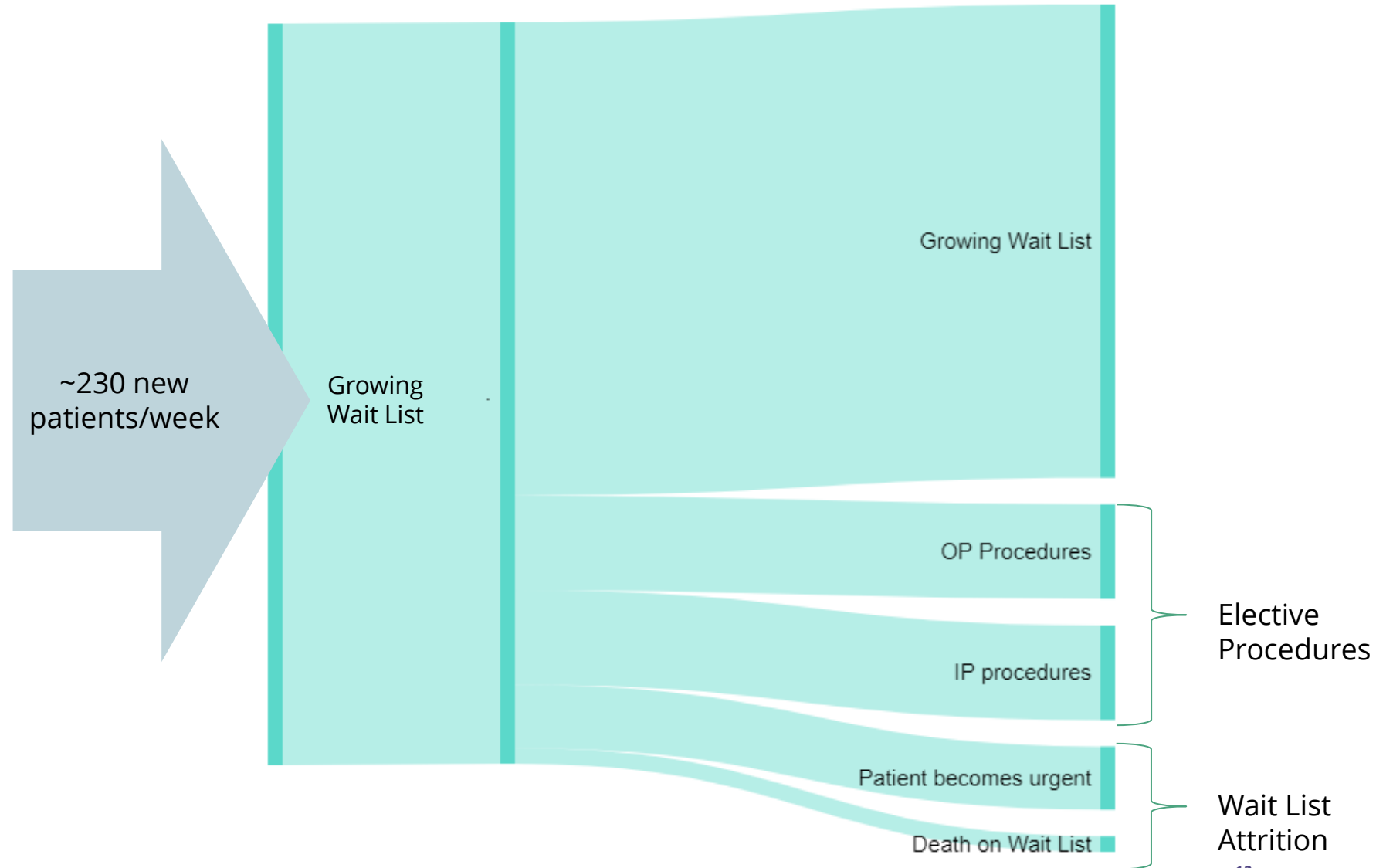
## % of historical P2-4 vascular volumes



Ontario regions are currently performing ~30% to 70% of historical (CY 2019) scheduled vascular surgeries per week (P2-P4)

# Objective

- Review the modeling of accumulated unmet need for non-urgent (scheduled) vascular procedures in a scenario of continued capacity restrictions till the end of 2020
- Review and discuss potential solutions and mitigation strategies to optimize the use of resources within the existing capacity constraints



# Model Assumptions

## Capacity restrictions:

- Hospitals will likely operate at 75-80% of their baseline capacity, at least for the remainder of the calendar year
- This level of capacity translates into 100% of urgent cases plus roughly 40-60% of scheduled (P2-P4) cases
- Assumes modest ramp-up in volumes in 2020, post-rescinding of MOH Directive #2, and a slight decrease in the winter to account for influenza

Capacity reduction assumptions (% of CY 2019 Volumes)					
Month	Central	East	North	Toronto	West
May	30%	38%	80%	30%	36%
Jun	40%	48%	80%	40%	46%
Jul	55%	63%	80%	55%	61%
Aug	55%	63%	80%	55%	61%
Sep	55%	63%	80%	55%	61%
Oct	55%	63%	80%	55%	61%
Nov	40%	48%	80%	40%	46%
Dec	40%	48%	80%	40%	46%

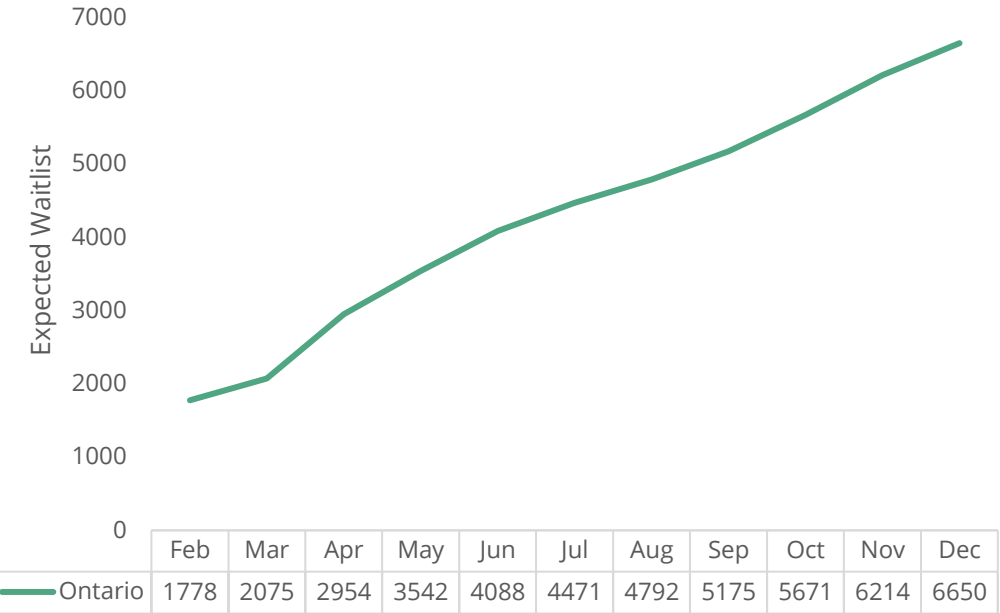
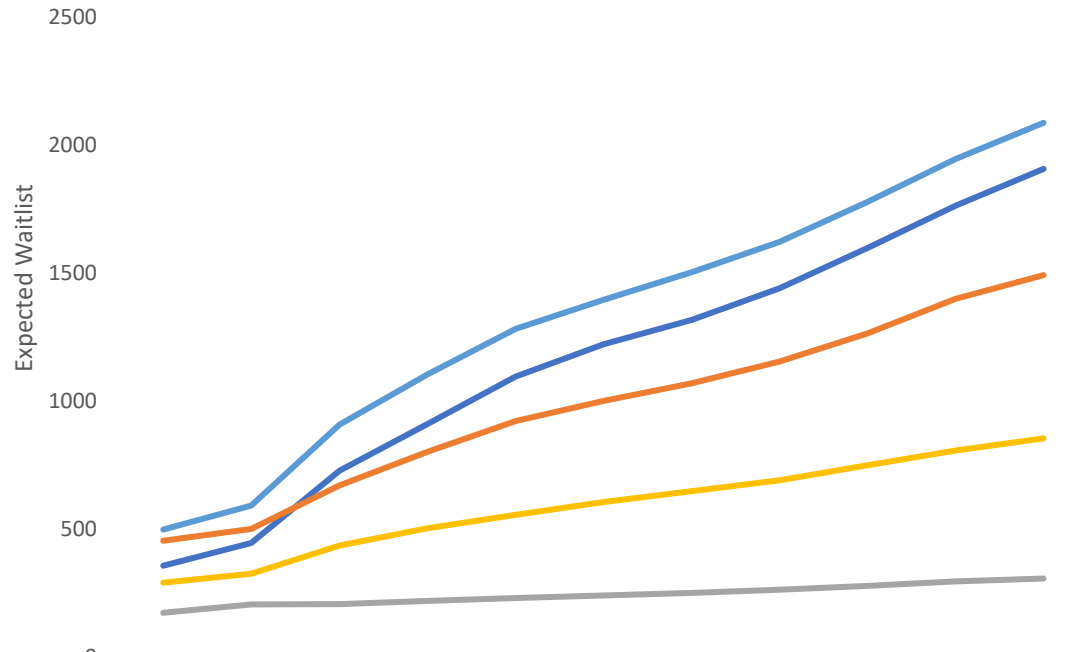
## Additions to backlog:

- Added the baseline (pre-COVID) waitlist of ~1800 to the total vascular backlog
- Inpatient IR volumes, estimated to be ~11% of total IP volumes, factored into the backlog. Outpatient IR volumes currently unknown.

## Other assumptions:

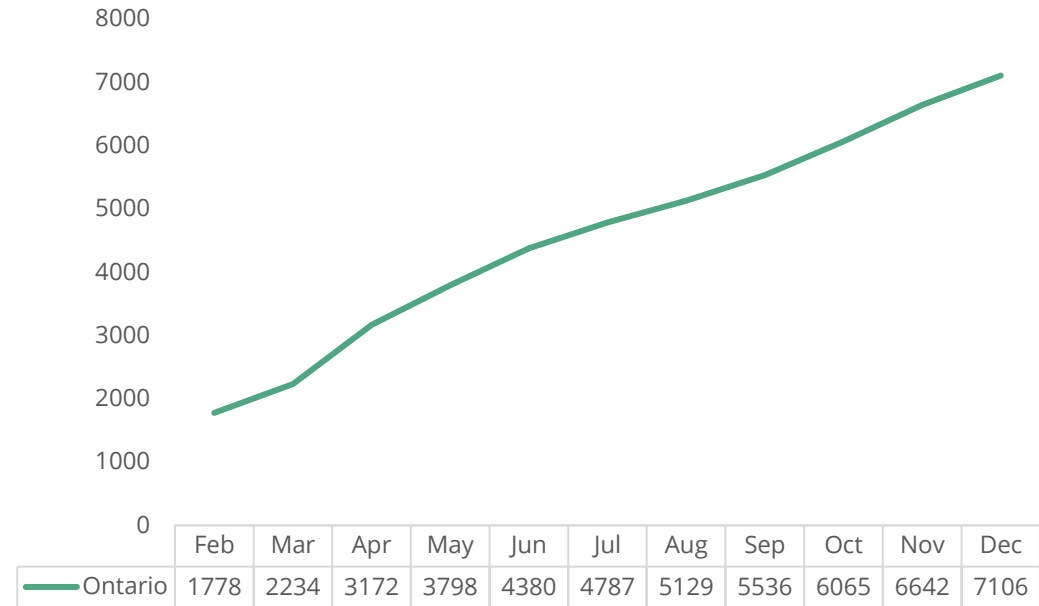
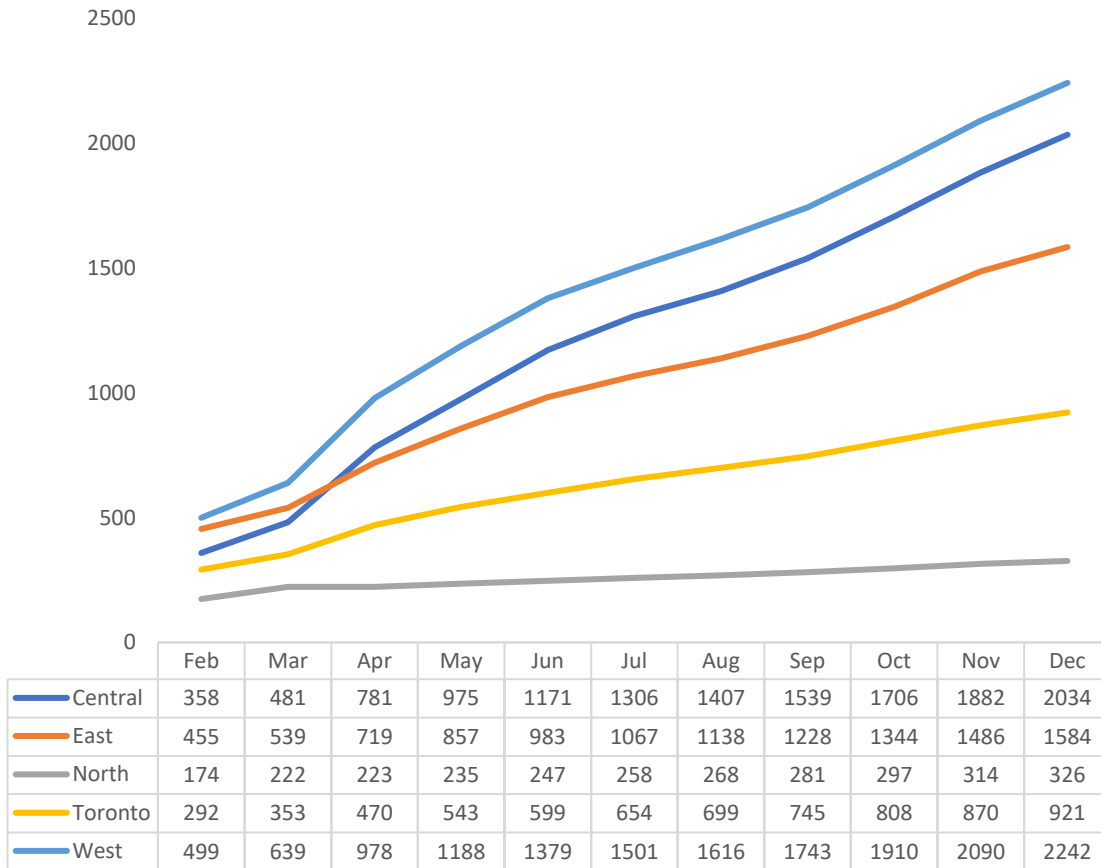
- January 2021: 120% ramp-up
- No change in disease prevalence and service demand relative to 2019

# Expected Wait List Volumes



Under these assumptions, the vascular wait list would grow to over 5,000 by the end of September, and 6,650 by the end of 2020

# Expected Wait List Including IP IR Procedures



With the addition of IP IR procedures, the assumed vascular wait list would grow to ~5,500 by the end of September, and ~7,100 by the end of 2020

# Number of Weeks to return to pre-COVID wait list under 20% surge scenario starting January 2021

## # of Weeks Required to Return to pre-COVID state

Slowdown Lasts Until End Of	Central	East	North	Toronto	West
Jun	57	49	28	65	57
Jul	67	57	33	77	66
Aug	74	64	38	88	73
Sep	84	72	44	99	82
Oct	96	83	52	113	93
Nov	109	97	60	128	105
Dec	119	106	66	140	115

- Assuming an accumulating backlog throughout 2020, and ramp up to 120% of historical volumes starting 2021, it would take **2.7 years** to return to **pre-COVID baseline wait list volumes (~1800)**
- Continued capacity restrictions in 2021, which is the more likely scenario, means that the wait list will continue to grow, unless Ontario shifts towards less resource intensive modes of care delivery



# Resource Estimate

- This table shows the *weekly additional* resources required to reduce the wait list back to pre-COVID levels, under the assumption that ramp down continues to the end of 2020 and surge volumes begin Jan 1<sup>st</sup>, 2021
- To return to the pre-COVID wait list in 3 years, Ontario would need 16 OR days per week, 12 ward beds, 2 ICU beds, 63 N95 masks per weeks, and 167 of each other PPE *in addition* to the resources typically consumed by elective vascular patients
- Estimated PPE requirements for vascular patients is very small compared to Ontario's weekly PPE requirement (0.4M N95 masks, ~2.1M surgical masks/gowns/face shields)

## Time to clear Ontario backlog and return to pre-COVID wait list volumes

Weekly Additional Resources Needed	6 Months	1 year	2 years	3 years
<b>OR Days</b>	102	47	24	16
<b>Ward Beds</b>	74	37	18	12
<b>ICU Beds</b>	13	6	3	2
<b>N95 Masks</b>	409	189	94	63
<b>Surgical Mask, Face/Eye Protection, Gown, Gloves (pairs)</b>	1085	501	250	167

# Model Limitations

- Does not yet factor in mortality on the wait list
  - Historical mortality is 0.3%, which may underrepresent the current situation
- Does not yet account for patients who become urgent while waiting, which would decrease the backlog's growth rate
  - Could be as high as 20-30% of patients
- Does not account for wait list growing differently for different diagnoses
  - Higher risk, more symptomatic patients will grow less
  - Truly elective patients who may decide to forgo care for years (lifestyle decision) or may not be able to receive care due to ballooning wait list
- Does not account for outpatient IR procedures

# Next Steps/Questions for Discussion

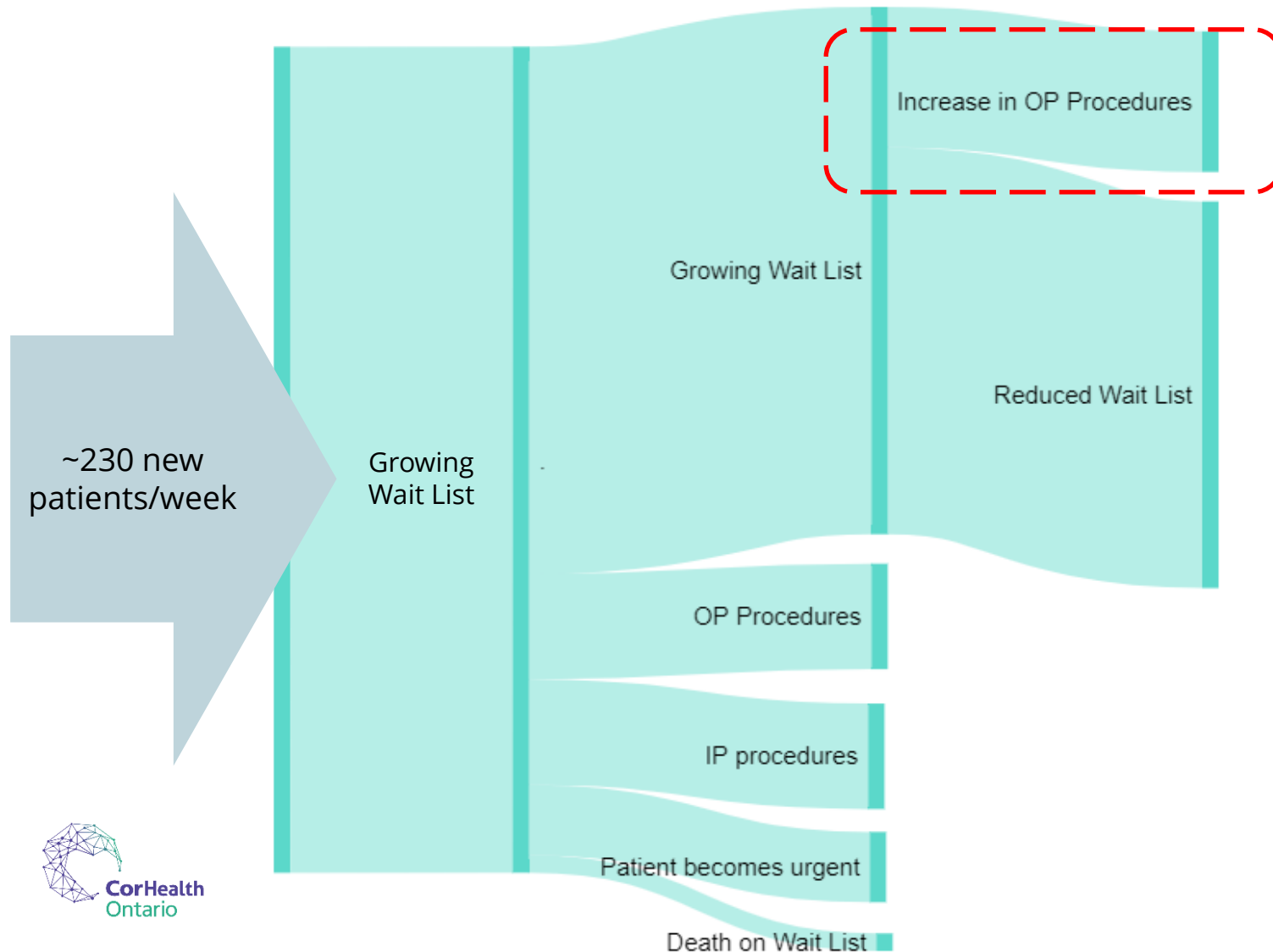
## Approaches to optimize capacity

- Use of increased bed capacity as a starting point
- Model a shift from an open surgical approach to an endovascular approach and from inpatient to outpatient procedures, where clinically appropriate
- Model the effect of reducing LOS and ALC days

## Attrition from Wait List

- Model mortality on the wait list – CORE team
- Estimate the increase in urgent procedures
  - Will decrease the slope of backlog growth
  - May increase the resources used per admission as patient complexity/morbidity could increase with longer wait times
  - May be done using a combination of clinical guestimates, IDS Hamilton data, timely CIHI data, and possibly eCTAS data

# Next Steps/Questions for discussion



Is there an opportunity to shift procedures from surgical to interventional and from inpatient to outpatient (where appropriate) so that more patients can receive timely care while reducing resource requirements and decreasing the wait list?

What other mitigation strategies and solutions should be considered?



# Open Discussion

**DR SUDHIR NAGPAL**

# Open Discussion

- What activities/ steps has your hospital/ vascular program taken to plan for resumption of elective services?



# Wrap Up & Next Steps

**MIKE SETTERFIELD**

# Wrap Up & Next Steps

- Reminder: COVID-19 Stakeholder Forum Survey
  - If you have not yet done so, this is a reminder to please complete the short, six question, anonymous survey by **May 29, 2020** (*click the following link or copy it into your browser*):  
[www.surveymonkey.com/r/COVID19StakeholderForumSurvey](https://www.surveymonkey.com/r/COVID19StakeholderForumSurvey)
- Next COVID-19 Vascular Forum Meeting:
  - **Wednesday June 10, 2020 – 9:00 – 10:00am**

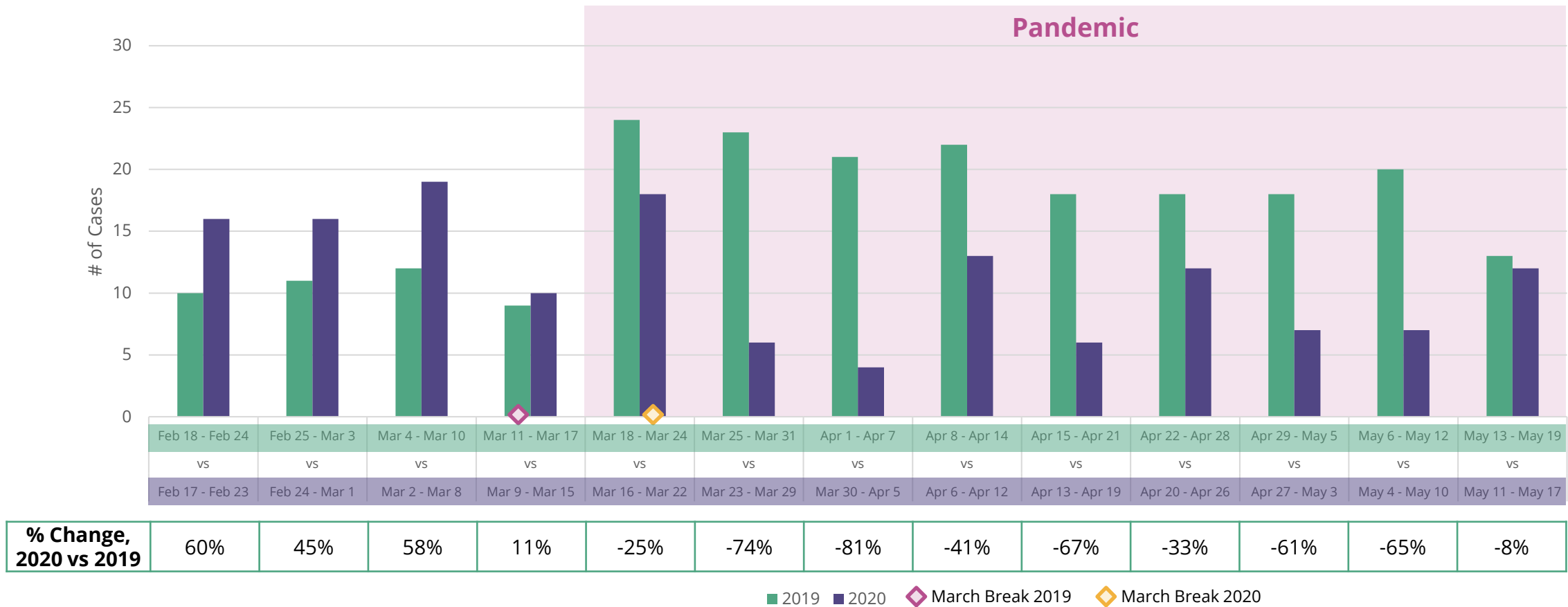




# Appendix

# Amputation Surgery, 2020 vs 2019

## Updated to May 17, 2020

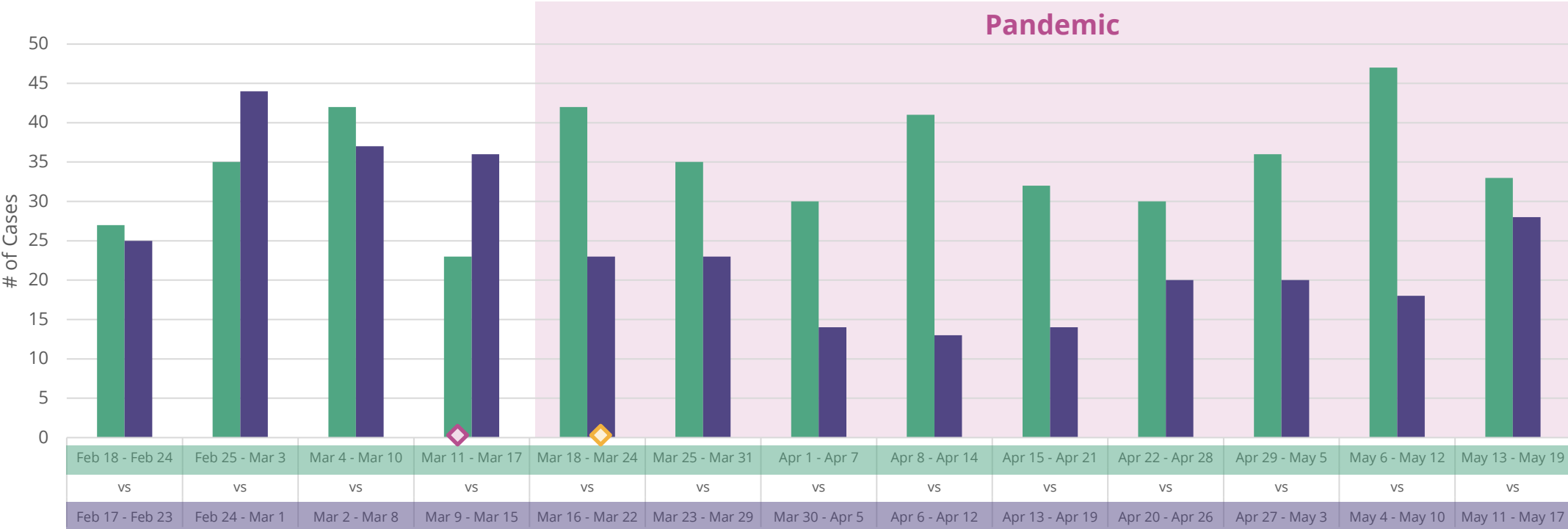


Data Source: Access to Care WTIS CY 2019 & 2020  
Includes vascular procedures in priority levels 2 to 4



# Aneurysm Surgery, 2020 vs 2019

## Updated to May 17, 2020



% Change, 2020 vs 2019	-7%	26%	-12%	57%	-45%	-34%	-53%	-68%	-56%	-33%	-44%	-62%	-15%
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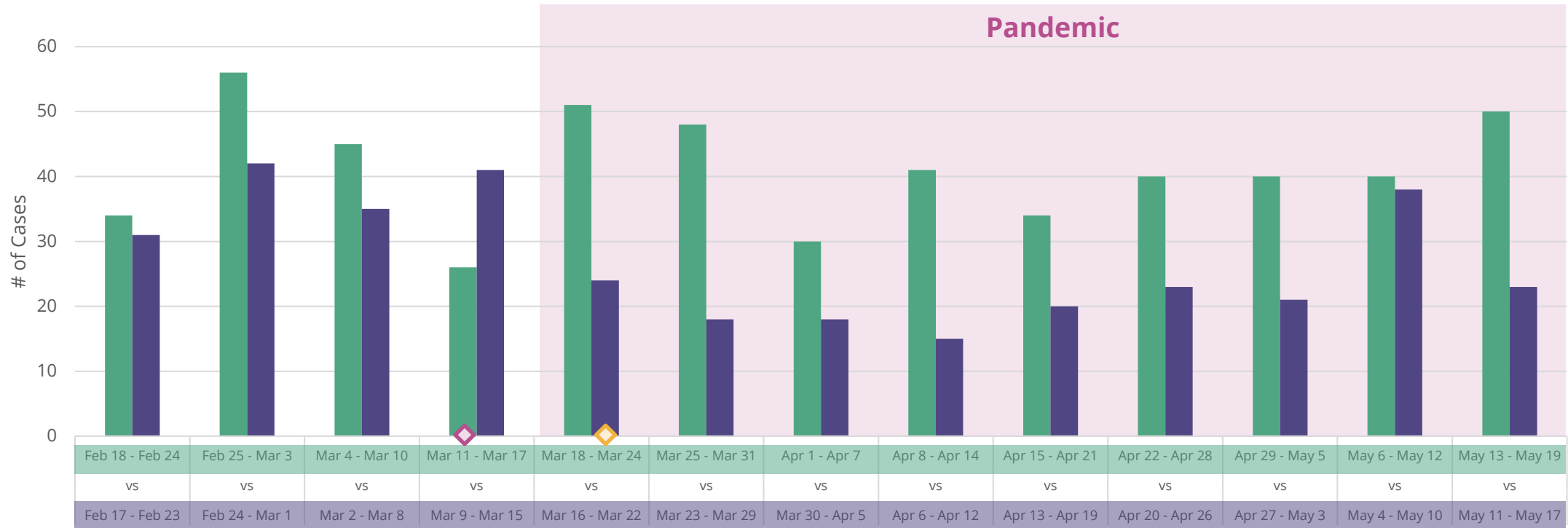
■ 2019 ■ 2020 ◆ March Break 2019 ◆ March Break 2020

Data Source: Access to Care WTIS CY 2019 & 2020  
Includes vascular procedures in priority levels 2 to 4



# Arterial Bypass Surgery, 2020 vs 2019

## Updated to May 17, 2020



% Change, 2020 vs 2019	-9%	-25%	-22%	58%	-53%	-63%	-40%	-63%	-41%	-43%	-48%	-5%	-54%
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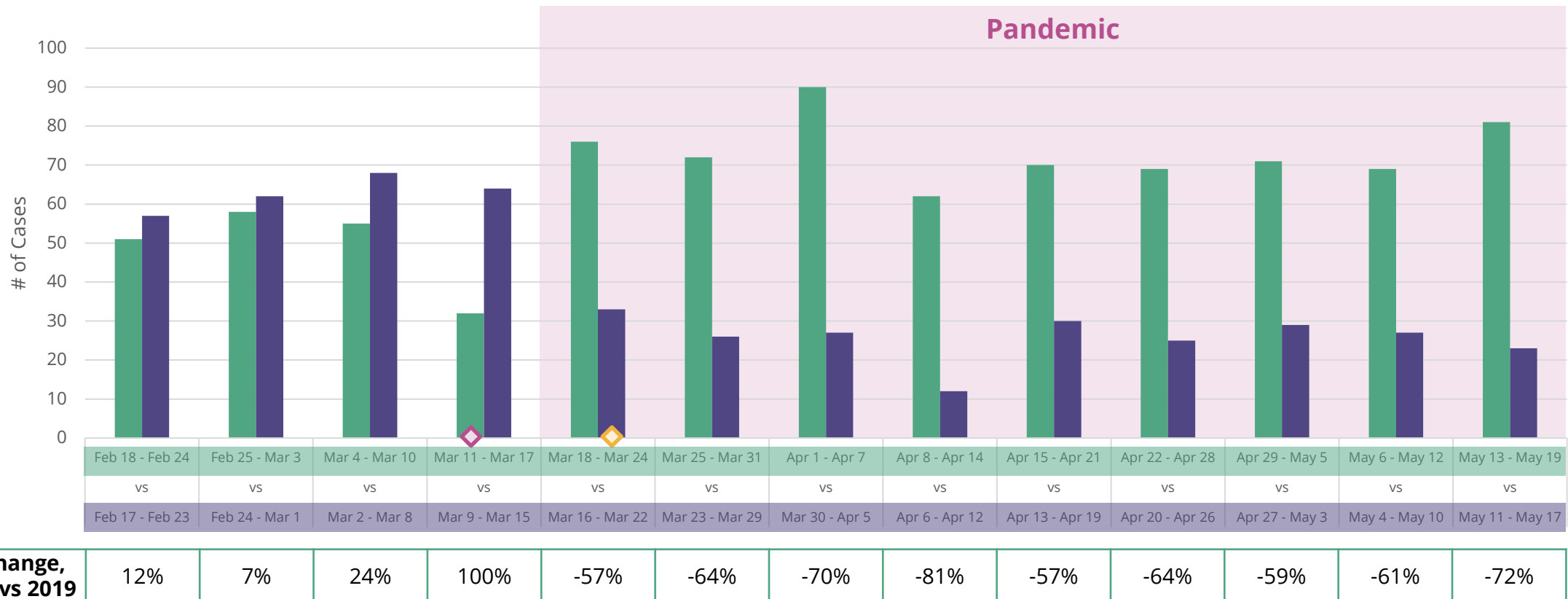
■ 2019 ■ 2020 ◆ March Break 2019 ◆ March Break 2020

Data Source: Access to Care WTIS CY 2019 & 2020  
Includes vascular procedures in priority levels 2 to 4



# Arterial Surgery (Non-Bypass), 2020 vs 2019

## Updated to May 17, 2020



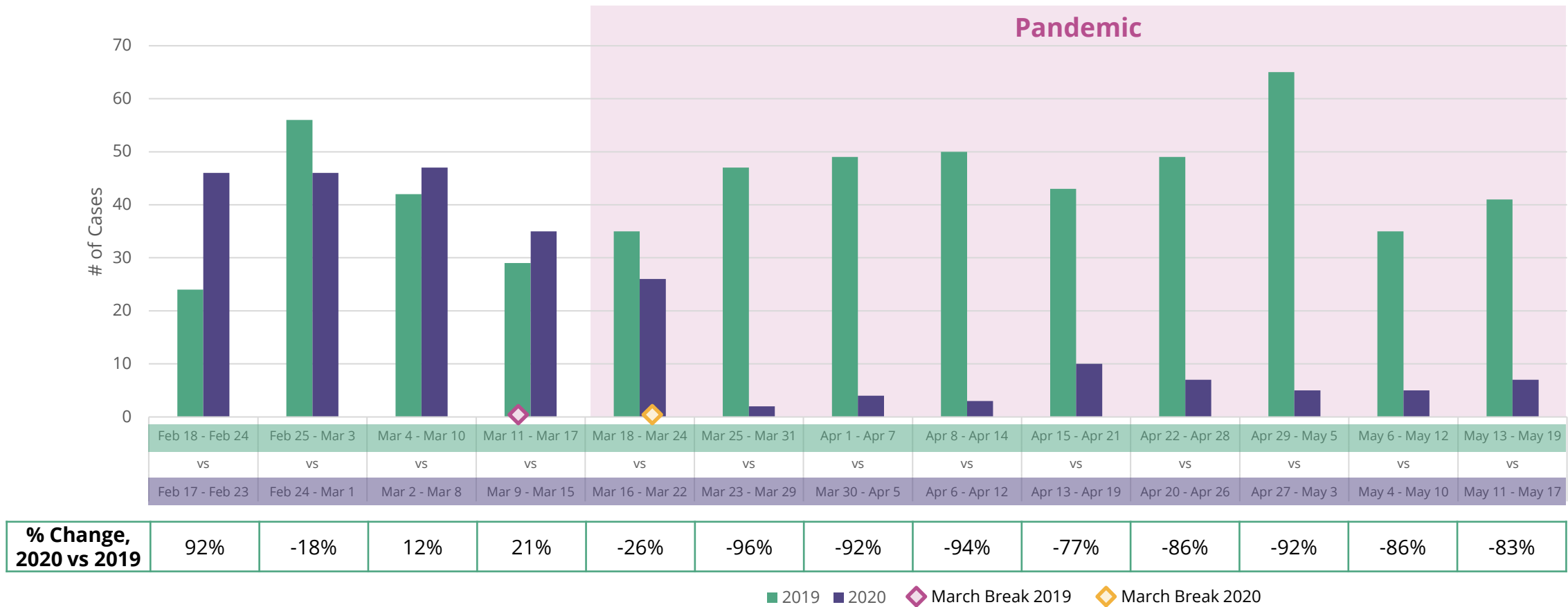
■ 2019 ■ 2020 ◆ March Break 2019 ◆ March Break 2020

Data Source: Access to Care WTIS CY 2019 & 2020  
Includes vascular procedures in priority levels 2 to 4



# Arteriovenous Surgery for Dialysis, 2020 vs 2019

## Updated to May 17, 2020

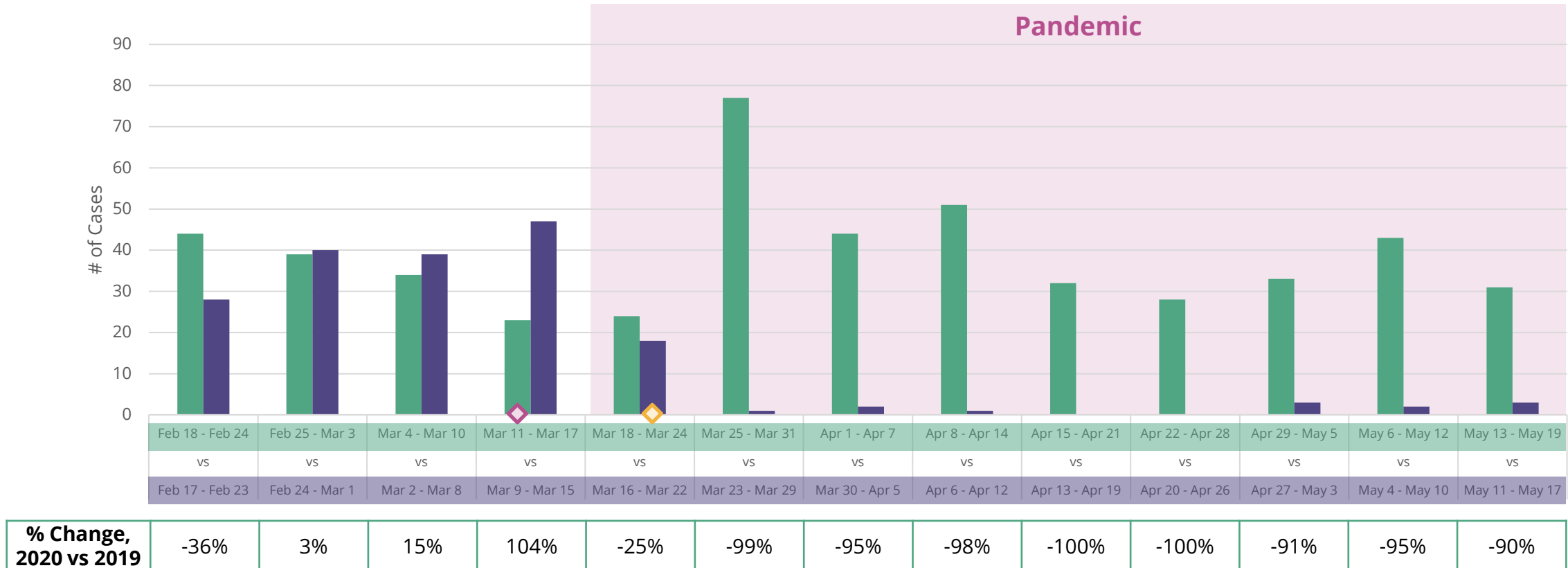


Data Source: Access to Care WTIS CY 2019 & 2020  
Includes vascular procedures in priority levels 2 to 4



# Venous Surgery, 2020 vs 2019

## Updated to May 17, 2020



■ 2019 ■ 2020 ◆ March Break 2019 ◆ March Break 2020

Data Source: Access to Care WTIS CY 2019 & 2020  
Includes vascular procedures in priority levels 2 to 4



# Vascular Hospital Change in Bed Capacity

Vascular Hospital Level	Pre-Pandemic			Post-Pandemic			Change		
	Ward Beds (Mar 14, 2020)	Available Ward Beds (Mar 14, 2020)	ICU Beds (FY 18/19)	Ward Beds (Apr 16, 2020)	Available Ward Beds (Apr 16, 2020)	ICU Beds (Apr 19, 2020)	Ward Beds	Available Ward Beds	ICU Beds
Level 1	6,820	587	48	6,616	2,099	1,614	-204	1,512	1,566
Level 2	4,002	418	180	4,098	1,370	865	96	952	685
Level 3	969	157	26	980	451	169	11	294	143
Non-Vascular	8,292	1,049	1,756	8,661	3,521	1,503	369	2,472	-253
<b>Grand Total</b>	<b>20,083</b>	<b>2,211</b>	<b>2,010</b>	<b>20,355</b>	<b>7,441</b>	<b>4,151</b>	<b>272</b>	<b>5,230</b>	<b>2,141</b>

## Data Sources:

Ward bed data – Daily Bed Census, IntelliHealth;

ICU bed data – MOH HIT Tool (pre-pandemic) and SAS tool (post-pandemic)