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CorHealth COVID-19 Vascular Stakeholder Forum #5

May 13, 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 • Forum Objectives	Information	Sheila Jarvis
9:05	2. Ontario Health Memo: A Measured Approach to Planning for Surgeries and Procedures During the COVID-19 Pandemic	Information & Discussion	Dr. Chris Simpson *Vice-Dean (Clinical) in the Faculty of Health Sciences at Queens University and Chair, Ontario Health COVID-19 Health System Response Oversight Table*
9:30	3. Update on Vascular Activity Level • Magnitude of the reduction in vascular activity during the COVID-19 pandemic 4. Planning for Surgery Backlog Mitigation Post-COVID • Estimating the size of the vascular backlog and the resources required to clear the backlog post COVID	Information & Discussion	Mirna Rahal
9:45	5. Open Discussion	Information & Discussion	Dr. Sudhir Nagpal
9:55	6. Next Steps	Discussion	Mike Setterfield

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Welcome

SHEILA JARVIS

Meeting Objectives

1. Highlights from the Ontario Health Memo: “A Measured Approach to Planning for Surgeries and Procedures During the COVID-19 Pandemic”

2. Update on vascular activity levels, 2020 compared to 2019

3. Review planning for vascular surgery backlog mitigation during COVID-19

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Ontario Health Memo

A Measured Approach to Planning for Surgeries and Procedures During COVID-19 Pandemic

DR CHRIS SIMPSON

A Measured Approach to Planning for Surgeries and Procedures During the COVID-19 Pandemic

MAY 13, 2020

Ontario Health

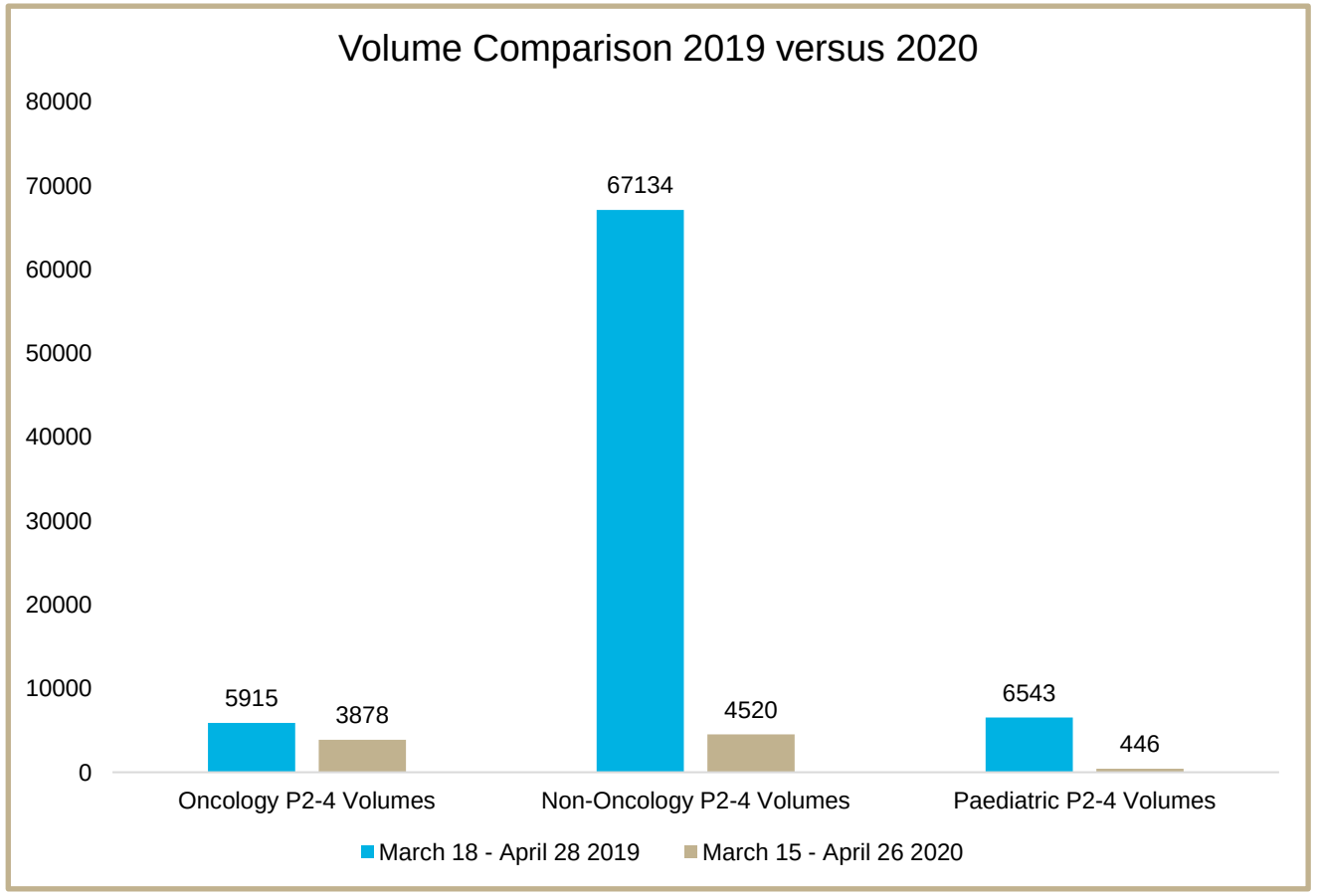
Background

- On March 15, 2020, following the release of a memorandum from the Ministry of Health and then Directive #2 by the Chief Medical Officer of Health, hospitals began to significantly decrease scheduled surgical and procedural work to create capacity to care for patients with COVID-19
- Not only are surgeries and procedures delayed, but also many other services such as diagnostic imaging, laboratory services, and anesthesia services
- As the COVID-19 pandemic evolves, it is important to consider the impact of deferred care and develop a plan to resume services while maintaining COVID-19 preparedness

Context: Surgeries Completed Since March 15, 2020

The cumulative impact to patients from delayed care is growing. Fewer surgeries were completed in this time period in 2020 compared to 2019. For example:

- 3,878 adult oncology surgeries (34% fewer)
- 4,520 adult non-oncology surgeries (e.g., hip and knee replacement, eye, and hernia surgeries) (93% fewer)
- 446 paediatric surgeries (93% fewer)



Source: Ontario Health – CCO Wait Time Information System (WTIS) for March 18 to April 28, 2019 (42 days) and March 15 to April 26, 2020 (43 days)

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A Measured Approach

- "**A Measured Approach to Planning for Surgeries and Procedures During the COVID-19 Pandemic**" identifies criteria for safely reintroducing scheduled surgical and procedural care
- While the spread of COVID-19 continues to be a challenge for residents in long-term care and other group living facilities, it may now be possible for hospitals to begin planning for the gradual resumption of surgeries and procedures that have been postponed, as long as plans are executed to assist with the situation in long-term care
- Although Ontario may be very slowly gaining the upper hand in this pandemic, there is an ongoing risk of local, rolling mini-surges in either community or congregate settings
- A pre-condition for increasing surgical and procedural activity is the requirement that *regional or sub-regional COVID-19 Steering Committees* and hospitals **jointly sign-off** on the hospital's plan to resume elective surgeries and procedures and this plan is reviewed and reconfirmed on a weekly basis by the hospital and region/sub-region
- In addition, this is about **planning for resumption**. While Directive #2 is still in effect, **no hospital should be resuming scheduled surgery and procedural care**

Core Assumptions

- The pandemic and its impacts in Ontario may last many months to years
- Emergent surgical and procedural care has been continuing during the pandemic
- Urgent surgical and procedural care has been continuing at reduced volumes during the pandemic
- Capacity has been appropriately created in hospitals during the acceleration phase of the pandemic, and this capacity should be considered for use when planning to increase surgical and procedural activity if we ensure ongoing capacity to care for patients with COVID-19
- Changes to surgical and procedural activity (including increasing and decreasing activity) will be asymmetrical between organizations and regions based on their local context
- Hospitals may have staff redeployed to other settings and this may impact planning to increase surgical and procedural activity
- The need for emergent or urgent surgery or procedures for patients with COVID-19 is determined on a case-by-case basis, weighing the risk of further delay of treatment against the risk of proceeding and the risk of virus transmission
- Plans for increasing surgical and procedural care includes existing backlog and delays since March 15, 2020

Expectation of Hospitals

- Reserve 15% of acute care capacity (i.e., 85% occupancy or ability to immediately create an additional 15% capacity when needed), subject to any alternate agreement at the regional or sub-regional tables for securing sufficient regional capacity
- Attain sign off from the Regional COVID-19 Steering Committee on planned resumption
- Planning for the resumption of elective surgeries and procedures at any hospital must consider:
  - Conventional in-patient space is available for care, and this space is evaluated in the context of physical distancing for both patient flow and outpatient activity. This space cannot include care in hallways
  - Confirmed critical supplies, including PPE, swabs, reagents, and medications, exceed both current usage and projected requirements for elective surgical and procedural work. **There should be no dependence on emergency escalation to source any of the above while providing elective care**. Stock of critical supplies needs to be confirmed with your regional or sub-regional table weekly. The target for PPE is a rolling 30-day stock on-hand, that includes the current usage rate plus forecasted additional requirements
  - Health human resources that are available for urgent and emergent care are not unduly impacted. This includes consideration of overall workforce availability, as well as health human resources being directed to support long-term care

Expectation of Regions/Sub-Regions

- A regional or sub-regional approach is taken for managing surge capacity *and* the resumption of elective surgeries and procedures:
  - Maintain an aggregate 15% percent of acute care capacity
  - Take a regional or sub-regional approach for managing surge capacity **and** the resumption of elective surgeries and procedures
  - Collaborate across hospitals to arrive at coordinated and committed plans
  - Ensure the hospital remains committed in their plan to support long-term care
  - Monitor surgical and procedural activity across their territories, working to balance:
    - Wait lists
    - Equitable access to care
    - Regional resource availability in primary care, home and community care and rehabilitation with a view to virtual care options

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Objectives of the Recommendations

- To ensure an equitable, measured, and responsive approach to planning decisions for expanding and contracting surgical and procedural care, while continuing to reserve capacity for any COVID-19 surge

The recommendations recognize:

- The priority of the health, well-being, and safety of both patients and health care workers
- The need to weigh the therapeutic benefit of treatment against the potential risk for COVID-19 transmission to both health care workers and patients
- The importance of following guiding ethical principles (i.e., proportionality, non-maleficence, equity, and reciprocity) when making decisions

Recommendations

1. Use the **existing regional or sub-regional COVID-19 steering committee** to provide oversight in partnership with an **organizational (hospital) surgical and procedural oversight committee**
2. Conduct a **feasibility assessment at the hospital level** and communicate results to regional leadership before increasing surgical or procedural activity
3. **Attain joint sign-off** from both the regional or sub-regional COVID-19 steering committee and hospital surgical and procedural oversight committee
4. **Review and re-conduct the feasibility assessment on a weekly basis** to identify changes in the assessment and recognize when a change in direction is required
5. Follow a **fair process for case prioritization** that is grounded by a set of ethical principles as a part of the implementation plan
6. Consider how to **leverage opportunities to redesign care**

Feasibility Assessment Decision Criteria

1. The community has a manageable level of disease burden or has exhibited a sustained decline in the rate of COVID-19 cases over the past 14 days
2. The organization has a stable rate of COVID-19 cases
3. The organization and region have a stable supply of PPE
4. The organization and region have a stable supply of medications
5. The organization and region have adequate capacity of inpatient and ICU beds
6. The organization and region have adequate capacity of health human resources
7. The organization has a plan for addressing pre-operative COVID-19 diagnostic testing (where appropriate, in consultation with local IPAC)
8. The organization has confirmed the availability of post-acute care outside the hospital that would be required to support patients after discharge (e.g., home care, primary care, rehabilitation)
9. The organization and region have a wait list management mechanism in place to support ethical prioritization

Process for Case Prioritization

- Follow ethical principles to guide a fair process
- Criteria for surgical and procedural case prioritization include:
  - Patient factors (e.g., condition, co-morbidities)
  - Disease factors (e.g., non-operative treatment options, risk of surgery delay)
  - Procedure factors (e.g., inpatient vs. outpatient or day procedures, operating room time, length of stay, anticipated blood loss, intubation probability)
  - Use of resources (e.g., PPE, medications, ICU and other postoperative care needs)
  - COVID-19 exposure/virus transmission risk
- In the context of resource constraints, consider a staged or stepwise approach to begin the resumption of services gradually
  - A hospital may choose to begin by offering services that require none, or a minimal amount, of a constrained resource e.g., a hospital may choose to begin with outpatient procedures, followed by day surgeries, followed by inpatient surgeries as resources become available

Implementation Considerations

- Consider the interdependence of our health care system and assess and monitor health care utilization impacts to ensure there are no unintended community-wide consequences
- Ensure continuous communication and follow-up with patients
- Leverage opportunities to improve care
  - What do we want to keep doing?
  - What do we want to stop doing?
  - What we are leaving behind?

Opportunities to Improve Care Delivery for Scheduled Surgical and Procedural Care

- Use services that reduce patient time spent in acute care settings
  - Virtual care, post-op remote monitoring programs, care in the community, outpatient care
- Ensure the appropriate use of tests, treatments, and procedures
  - Choosing Wisely Canada recommendations, e-consults services, virtual medical assessments and triaging
- Consider redesign of care
  - Designate hospitals/units for surgical and procedural care (COVID-protected sites)
  - Centralize waitlists for surgeries and procedures, if feasible
  - Extend operating room schedules
  - Organize the pre- and post-operative care pathway, leveraging virtual care solutions

Conclusion

- This is about a measured approach to planning for resumption of scheduled surgeries and procedures
- This planning must take place at a hospital level in collaboration with and sign off by the already established Regional COVID-19 Steering Committee
- Due to many of the pre-conditions required, resumption of services may be asymmetrical due to local context
- No actual activity should start until such time that Directive #2 is revoked or amended

Appendix

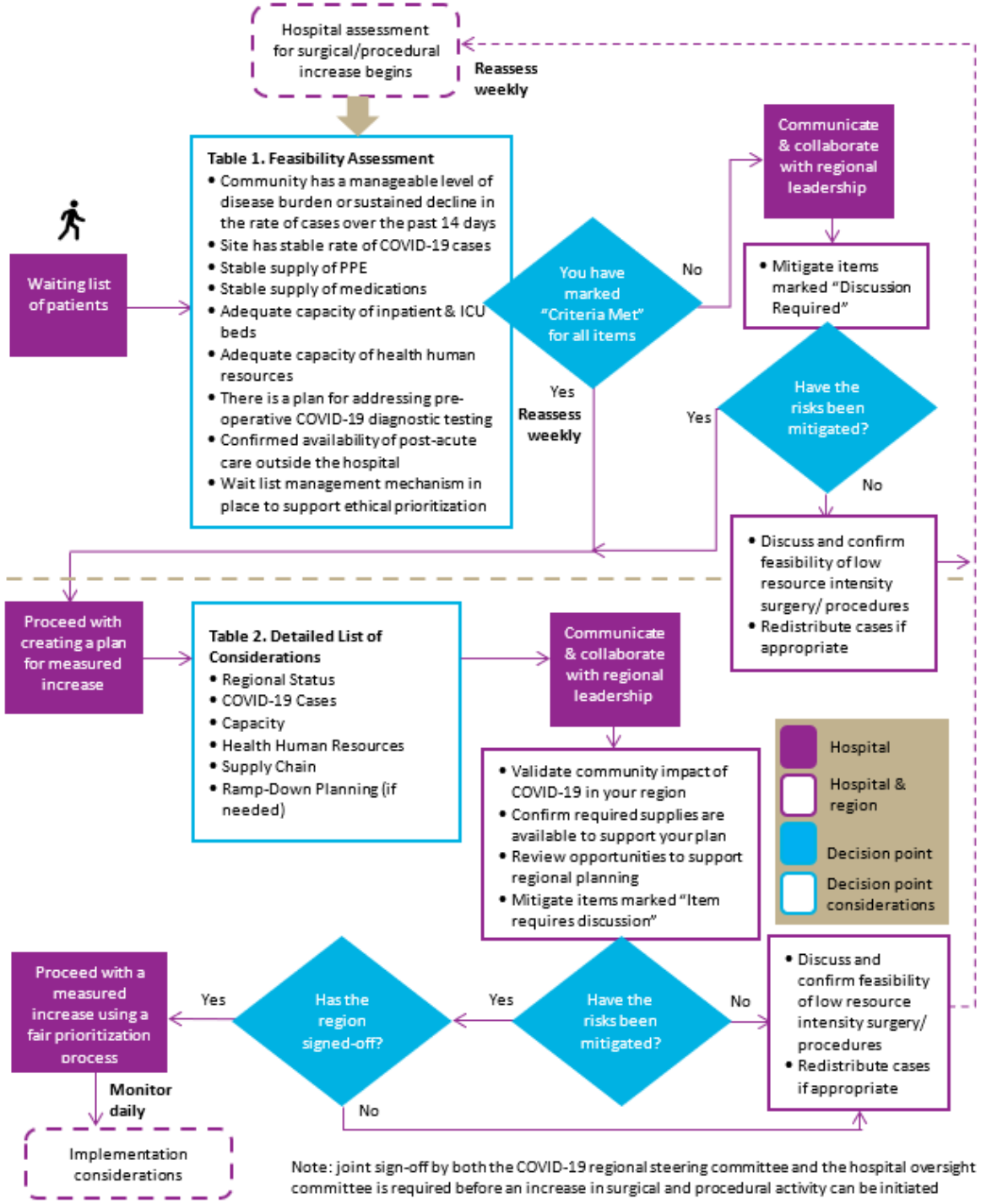
Surgical and Procedural Planning Committee

Name	Title(s) and Institution(s)
Chris Simpson (Chair), BSc, MD, FRCPC, FACC, FHRS, FCCS, FCAHS	Vice-Dean (Clinical), School of Medicine, Queen's University
Connie Clerici, RN, BScN	Executive Chair, Closing the Gap Healthcare
David Musyj	President & CEO, Windsor Regional Hospital
David Pichora, MD, FRCSC	President & CEO, Kingston Health Sciences Centre
Derek McNally, RN, MM	Executive VP Clinical Services and Chief Nursing Executive, Niagara Health
Garth Matheson, MBA	Interim President & CEO, Ontario Health (Cancer Care Ontario)
Howard Ovens, MD, FCFP(EM)	Chief Medical Strategy Officer, Sinai Health System Professor, Department of Family and Community Medicine, University of Toronto and Sr. Fellow, IHPME Ontario Provincial Lead for Emergency Medicine
Janet Van Vlymen, MD, FRCPC	Anesthesiologist, Program Medical Director, Perioperative Services, Kingston Health Sciences Centre Associate Professor, Department of Anesthesiology and Pain Medicine, Queen's University
Janice Skot, MHSc, CHE	President & CEO, Royal Victoria Regional Health Centre
Jennifer Everson, BScN, MD, CCFP, FCFP	Vice-President, Clinical, Ontario Health (West)
Jim Rutka, MD, PhD, FRCSC	R.S. McLaughlin Professor and Chair, Department of Surgery, University of Toronto Director, Arthur and Sonia Labatt Brain Tumour Research Centre, The Hospital for Sick Children

Surgical and Procedural Planning Committee

Name	Title(s) and Institution(s)
Jonathan Irish, MD, MSc, FRCSC, FACS	Provincial Head, Surgical Oncology, Ontario Health (Cancer Care Ontario) Clinical Lead, Access to Care, Ontario Health (Cancer Care Ontario)
Julian Dobranowski, MD, FRCPC	Chief, Diagnostic Imaging, Provincial Lead, Niagara Health, Ontario Health (Cancer Care Ontario)
Karen Devon, MD, FRCSC	Assistant Professor, Department of Surgery and Joint Centre for Bioethics, University of Toronto Endocrine Surgeon, Women's College Hospital and University Health Network
Michael Gardam, MSc, MD, CM, MSc, FRCPC	Chief of Staff, Humber River Hospital
Mike Heenan	Assistant Deputy Minister (Hospitals and Capital), Ministry of Health
Neva Fantham-Tremblay, MD, FRCSC	Medical Director of Surgery and Head of Obstetrics and Gynecology, North Bay Regional Health Centre
R. Sacha Bhatia, MD, MBA, FRCPC	Chief Medical Innovation Officer, Women’s College Hospital
Sarah Downey	President & CEO, Michael Garron Hospital
Shaf Keshavjee, MD, MSc, FRCSC, FACS	Surgeon-in-Chief, Program Medical Director, Surgery, Anaesthesia, and Critical Care, University Health Network Director, Toronto Lung Transplant Program
Tim Jackson, BSc, MD, MPH, FRCSC, FACS	General Surgeon, University Health Network Provincial Surgical Lead, Ontario Health (Quality) President, Ontario Association of General Surgeons
Wendy Hansson, BSc, MHA, CHE	President & CEO, Sault Area Hospital

A Measured Approach to Planning for Surgeries and Procedures during the COVID-19 Pandemic Flow Chart



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A Measured Approach to Planning for Surgeries and Procedures During COVID-19 Pandemic

The Ontario Health Framework - *A Measured Approach to Planning for Surgeries and Procedures During COVID-19 Pandemic* can be found here:

- https://www.corhealthontario.ca/OH-Framework-A-Measured-Approach-to-Planning-for-Surgeries-and-Procedures-During-the-COVID-19-Pandemic-(May-7-2020).pdf

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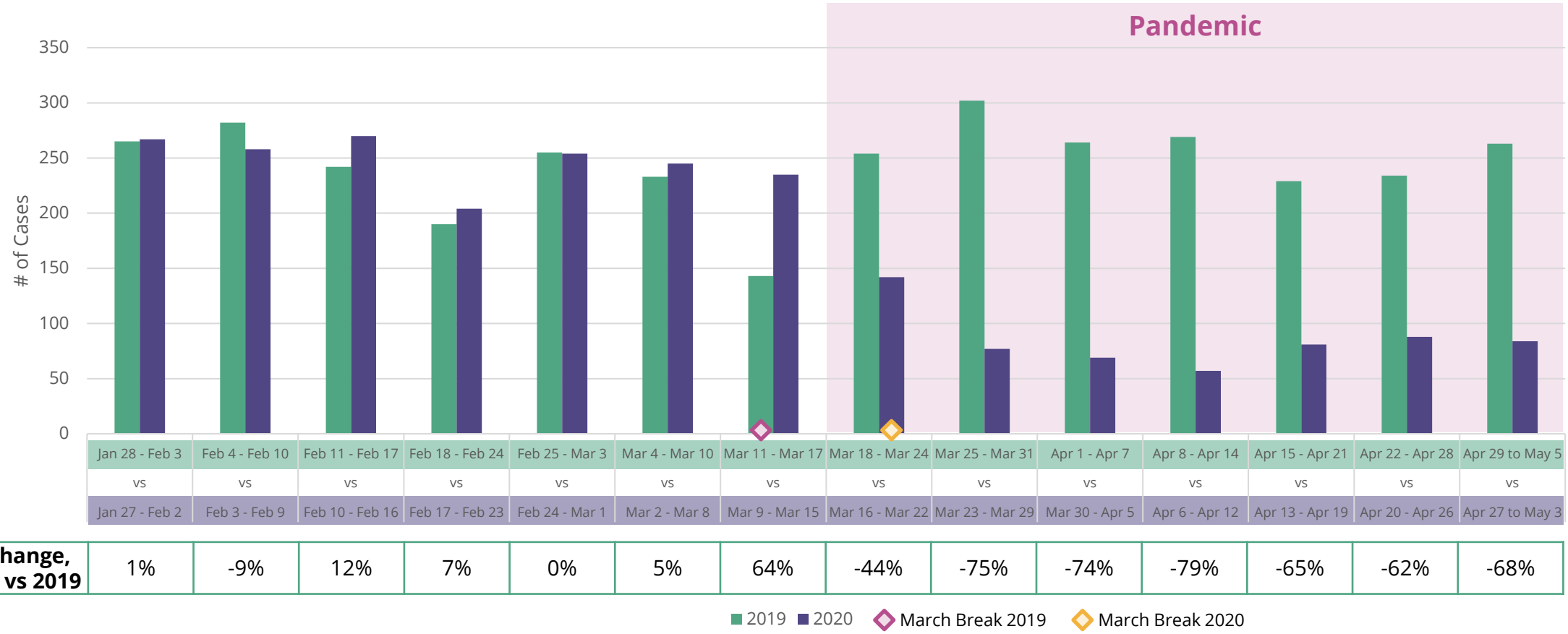
Update on Vascular Activity Level

2020 Compared to 2019

MIRNA RAHAL

Vascular Surgery Volumes, 2020 vs 2019



% Change, 2020 vs 2019	1%	-9%	12%	7%	0%	5%	64%	-44%	-75%	-74%	-79%	-65%	-62%	-68%

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

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Percentage Change in Activity Compared to Prior Year and Prior Week

Procedure	Apr 27 to May 3, 2020 compared to Apr 29 to May 5, 2019 (Prior Year)	Apr 27 to May 3, 2020 compared to Apr 20 to Apr 26, 2020 (Prior Week)
Amputation Surgery	-61%	-42%
Aneurysm Surgery	-44%	0%
Arterial Bypass Surgery	-48%	-9%
Arterial Surgery (Non-Bypass)	-61%	12%
Arteriovenous Surgery for Dialysis	-92%	-29%
Venous Surgery	-91%	+ (<5) cases
All Vascular Surgery	**-68%**	**-5%**

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

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Planning for Vascular Surgery Backlog Mitigation Post-COVID

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

MIRNA RAHAL

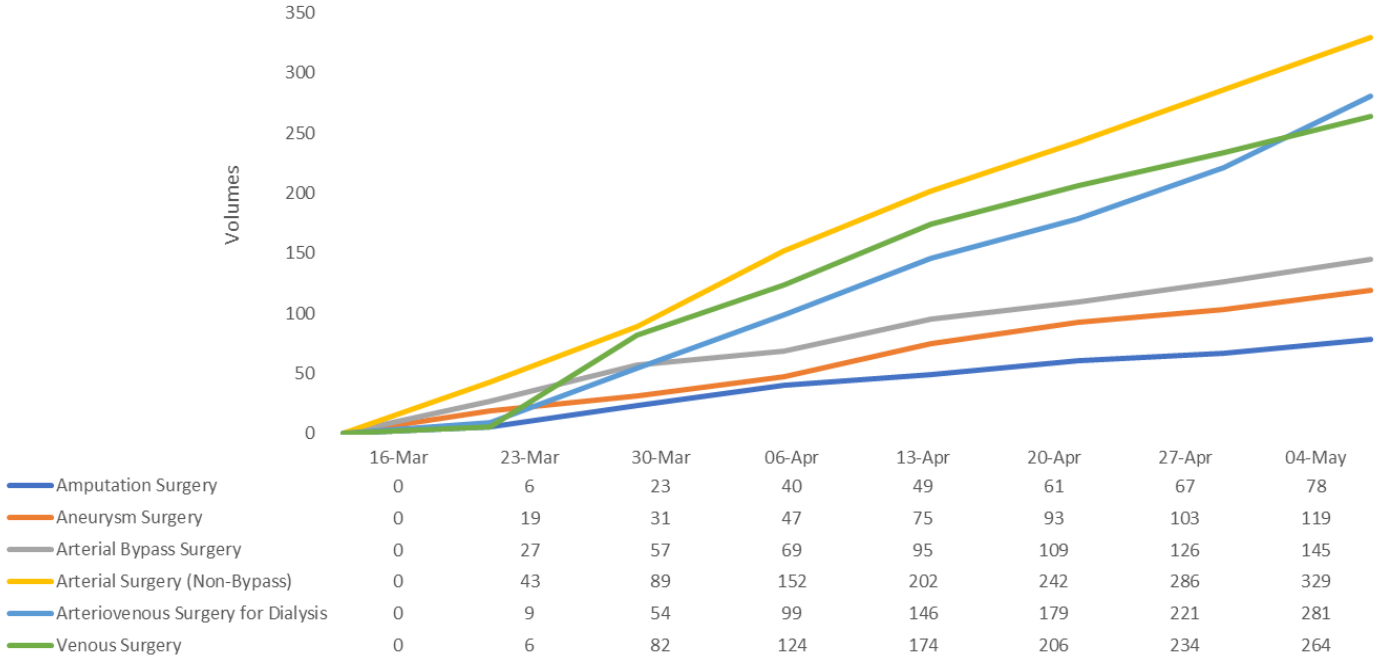
Approach

1. Based on OH – ATC's Wait Time Information System (WTIS) data and corresponding types of vascular procedures
2. Backlog is calculated as 2019 WTIS volumes minus 2020 volumes in corresponding weeks between March 16th to May 3rd
   - Assumes no changes in disease prevalence and service demand from last year
3. Surge capacity scenarios assume 20%, 40% or 60% increase on average total scheduled/non-emergent vascular procedures completed per week in 2019
4. Estimated hospital resource requirements based historic use of OR, ward days, ICU days and PPE by vascular procedure
   - OR time incorporates additional time needed for COVID protection and OR turnover time
5. PPE requirements based on assumed average PPE per surgery for each procedure type

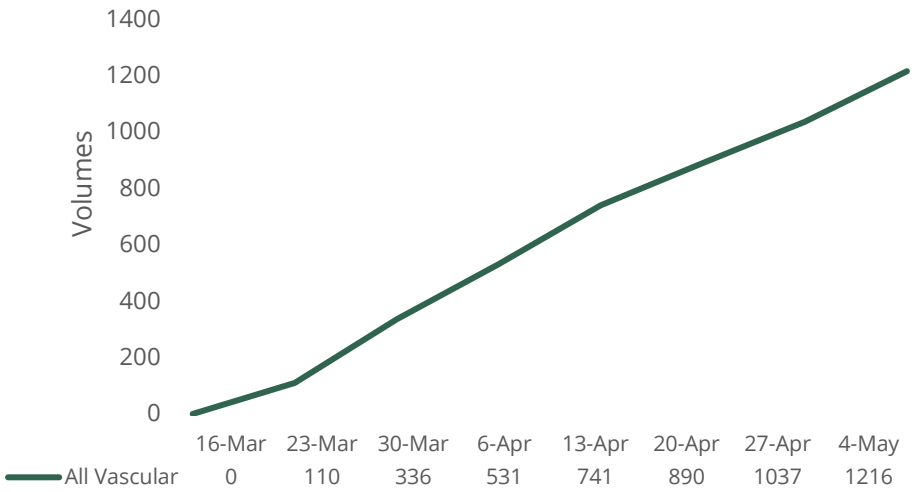
Assumptions

1. Baseline wait list prior to COVID-19 not included in the backlog calculation
2. For demonstration purposes only, assumed reduced surgery levels stop on May 3rd, and ramp up starts on the week of May 4th
3. Ramp-up assumes hospitals have additional capacity to clear backlog
4. Since backlog volume is based on ATC WTIS data, it does not incorporate vascular procedures done outside of a fully equipped OR
   - Based on initial analysis of DAD data, around 20% of elective inpatient vascular procedures are performed in the Interventional Radiology (IR) suite
   - Backlog associated with ambulatory vascular procedures done in IR may be harder to quantify as these procedures may not be captured in NACRS data

Provincial Incremental Backlog Accumulation March 16 to May 3, 2020



	16-Mar	23-Mar	30-Mar	06-Apr	13-Apr	20-Apr	27-Apr	04-May
Amputation Surgery	0	6	23	40	49	61	67	78
Aneurysm Surgery	0	19	31	47	75	93	103	119
Arterial Bypass Surgery	0	27	57	69	95	109	126	145
Arterial Surgery (Non-Bypass)	0	43	89	152	202	242	286	329
Arteriovenous Surgery for Dialysis	0	9	54	99	146	179	221	281
Venous Surgery	0	6	82	124	174	206	234	264



	16-Mar	23-Mar	30-Mar	6-Apr	13-Apr	20-Apr	27-Apr	4-May
All Vascular	0	110	336	531	741	890	1037	1216

- These graphs shows the estimated cumulative growth of the incremental backlog for vascular surgeries
- The incremental vascular backlog is expected to grow to 1,200+ by May 3rd

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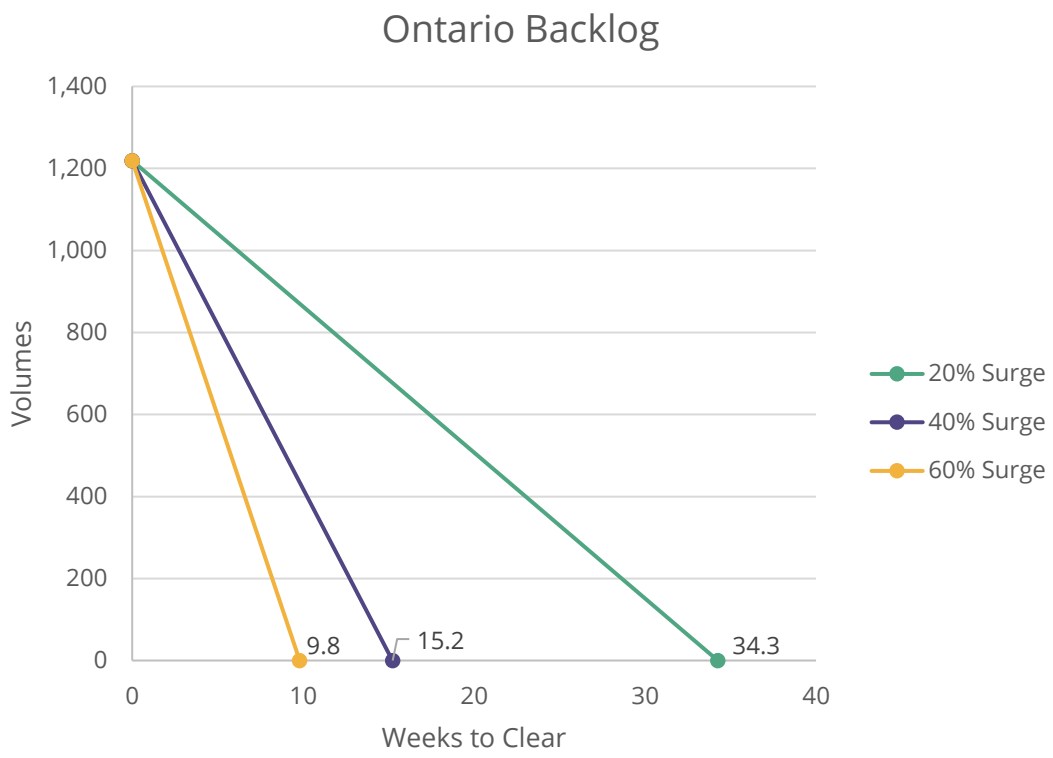
Time and Hospital Resources Required to Clear Provincial Vascular Backlog



	Surge scenarios		
	20%	**40%**	**60%**
Estimated backlog clearance time			
Total backlog size (number of patients)	1,219	1,219	1,219
Max regional time to clear (weeks)	34	15	10
Weekly Incremental Resource Requirements			
Average # patients per week	*43*	*90*	*136*
OR days per week	21	43	64
Ward beds	13.5	28.2	42.6
ICU beds	2.0	4.3	6.4
N95 masks per week	86	180	272
Surgical Mask, Face/Eye Protection, Gown, Gloves (pairs) per week	222	464	702

This graph shows the estimated length of time to clear the incremental backlog of time-urgent patients in all regions in Ontario

1. The duration to clear is the **maximum among all regions**
2. Required resources are summed up across all regions

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PPE Required to Clear Provincial Vascular Backlog

Vascular Procedure Type	N95	Surgical Mask	Face/Eye Protection	Gown	Gloves (pairs)
Amputation Surgery	164	410	410	410	410
Aneurysm Surgery	246	738	738	738	738
Arterial Bypass Surgery	304	912	912	912	912
Arterial Surgery (Non-Bypass)	680	2,040	1,700	1,700	1,700
Arteriovenous Surgery for Dialysis	562	1,405	1,124	1,124	1,124
Venous Surgery	534	1,602	1,335	1,335	1,335
Total	**2,490**	**7,107**	**6,219**	**6,219**	**6,219**

Table 2: Total PPE requirements for the Ontario acute care setting for suspected and confirmed COVID-19 patients (April 6-May 6, 2020)

Type of PPE	10 Day (April 6-15)	30 Day (April 6-May 6)
Surgical Mask	2,593,919	5,727,636
N95	610,582	1,527,088
Gloves	10,689,279	27,809,859
Gloves (extended)	18,521	37,844
Face Shield	3,195,240	7,235,802
Face Shield with drape	9,261	18,922
Gown	3,204,500	7,254,724

- Estimated PPE requirements to clear vascular surgery backlog is very small compared to Ontario's monthly PPE requirement

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Open Discussion

DR SUDHIR NAGPAL

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Wrap Up & Next Steps

MIKE SETTERFIELD

Wrap Up & Next Steps

- Next COVID-19 Vascular Forum Meeting: TBD

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