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CorHealth COVID-19 Cardiac Stakeholder Forum Meeting #16

July 23, 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	**1. Welcome** • Meeting Objectives • System Planning Updates	**Sheila Jarvis**
8:05	**2. Function of the Ontario Regions During COVID-19**	**Mr. Renato Discenza** *CEO of South West LHIN, Transitional Regional Lead in Eastern Ontario*
8:35	**3. eCTAS Data Update** • A Glimpse into the Emergency Departments for Cardiac Presentations	**Mirna Rahal**
8:40	**4. Treatment of STEMI in Quebec during the COVID-19 pandemic**	**Dr. Laurie Lambert** *Coordinator, Department of Cardiovascular Evaluation, INESSS*
08:55	**5. Other Updates and Next Steps** • Cardiac Imaging Guidance Document • Cardiac Activity Report	**Jana Jeffrey**

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Welcome

SHEILA JARVIS

Meeting Objectives

- Highlight and discuss the function of the Ontario regions during COVID-19
- Provide an update on emergency department data for cardiac presentations through the eCTAS Data
- Highlight and discuss the Quebec experience during COVID-19; specifically, the treatment of STEMI in Quebec during the COVID-19 pandemic

System Planning Updates

- Meetings with Dr. Chris Simpson will be reinstated this week to discuss gradual ramp-up / ramp-down activities as COVID-19 progresses.

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Function of the Ontario Regions During COVID-19

MR. RENATO DISCENZA

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eCTAS – Cardiac ED Presentations Dec 1st 2019 – July 19th 2020

A Glimpse into the Emergency Departments for Cardiac Presentations

MIRNA RAHAL

Cardiac ED Volumes: Summary of Activity Trends

Provincial trends in cardiac ED activity :

- Cardiac ED Presentations include Chest Pain and Cardiac Arrest. Chest Pain accounts for 98% of cardiac ED presentations.
- Overall, Chest Pain related ED presentations decreased by 30% in the first ten weeks of the pandemic. Volumes then gradually increased in subsequent weeks, going to 15% below pre-COVID levels in the most recent four weeks.
- Cardiac arrest related ED presentations had a relatively smaller degree of slowdown. In the first ten weeks following the pandemic activity went down by 25%, and in the most recent four weeks, volumes have been at 8% below pre-COVID levels.

Cardiac ED activity trends across age groups:

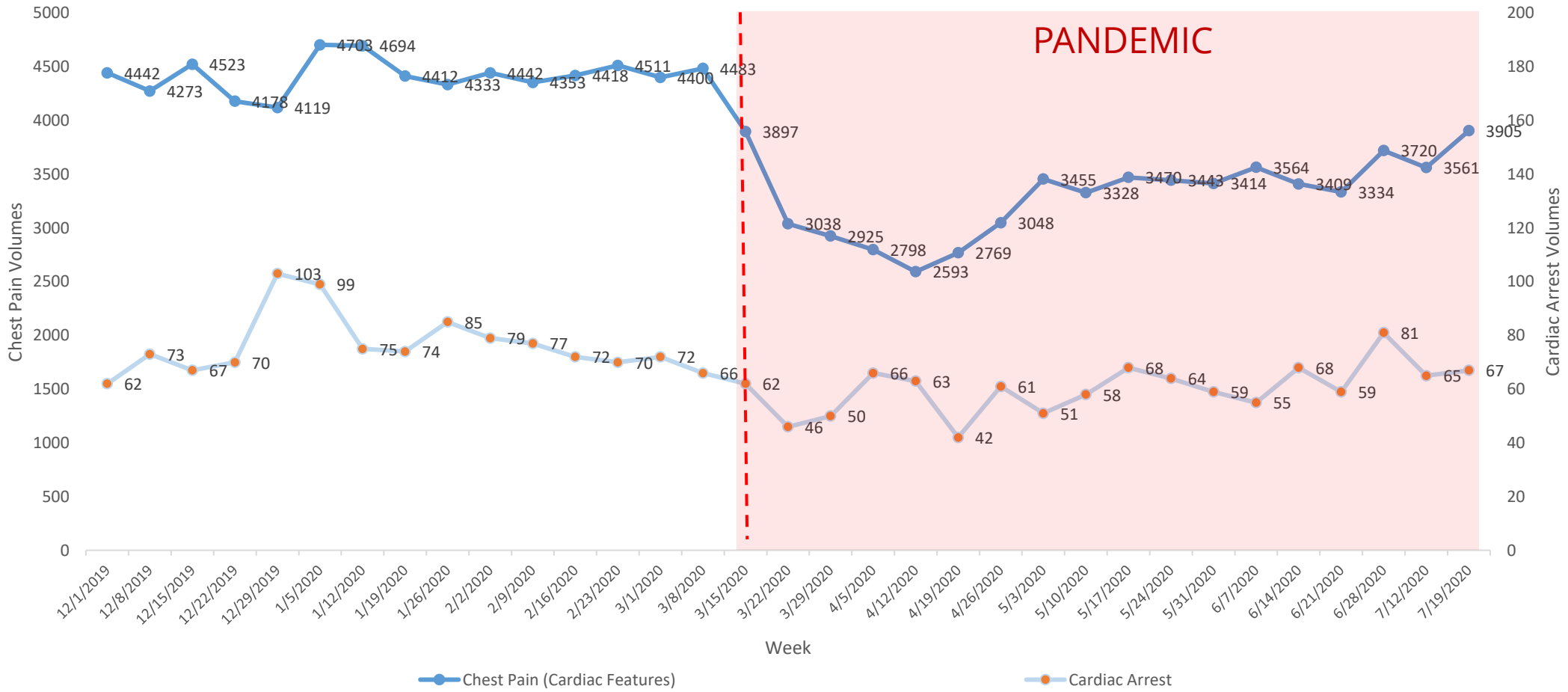
- Patients aged 70+ and 50-69 had relatively larger ED activity decrease in the first ten weeks of the pandemic: 45% and 35% compared to 30% across all age groups

Cardiac ED activity trends across OH Regions

- The West and East Regions noted the largest decrease of 39% and 37% in the first 10 weeks of the pandemic, with gradual increases in activity levels in subsequent weeks. In the with most recent four weeks, ED volumes have been at 13% and 12% lower relative to pre-Covid levels
- The Toronto Region* ED activity had a relatively smaller decrease compared to other regions in the first 10 weeks of the pandemic (29%) with a relatively slower recovery in subsequent weeks. Toronto region cardiac ED volumes are currently 18% below pre-COVID levels

**Not all Toronto Region hospitals ED activity is represented in this trend, which could be affecting the observed trends in this region.*

Cardiovascular Related Volumes

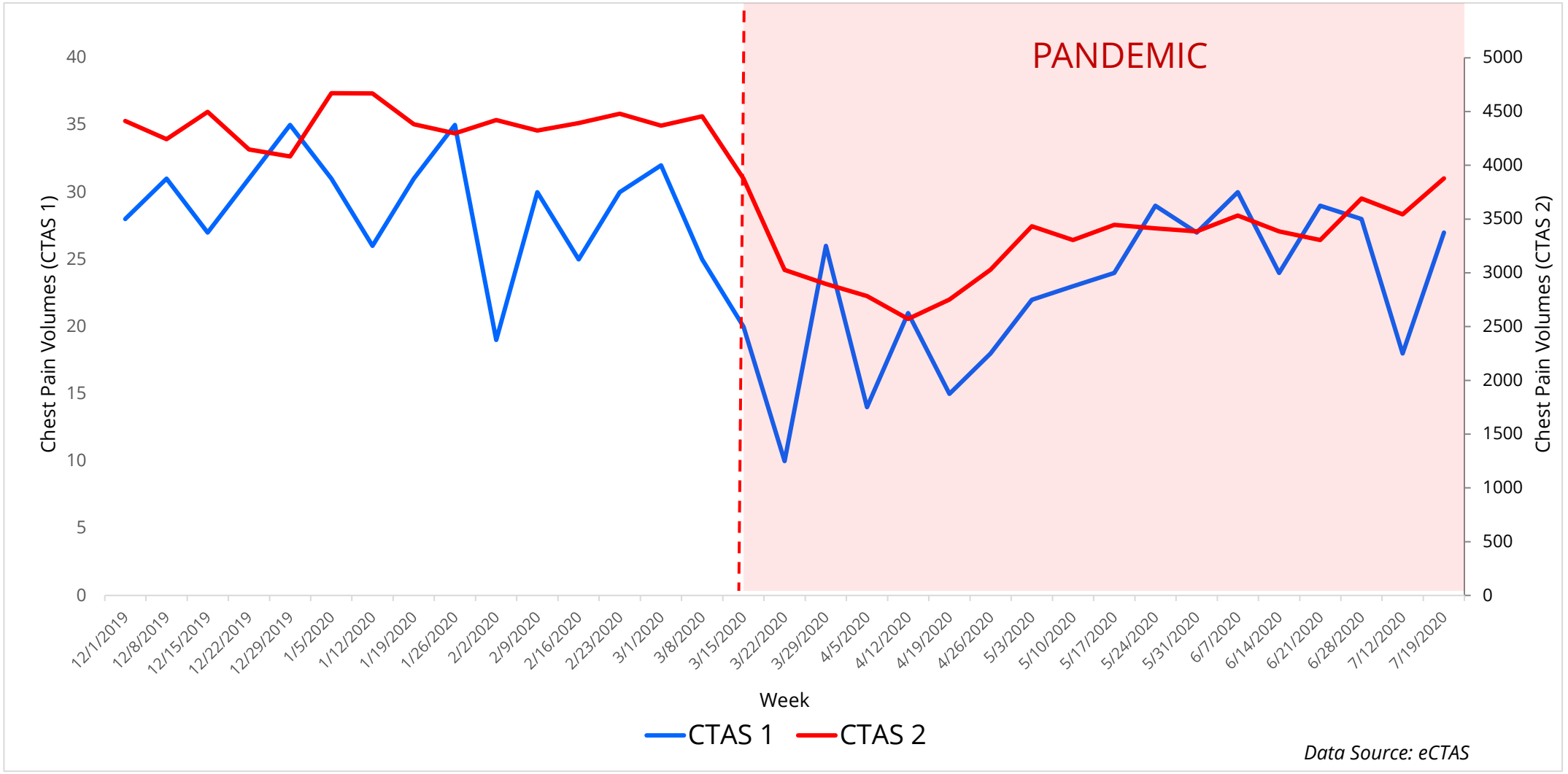


Data Source: eCTAS

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.

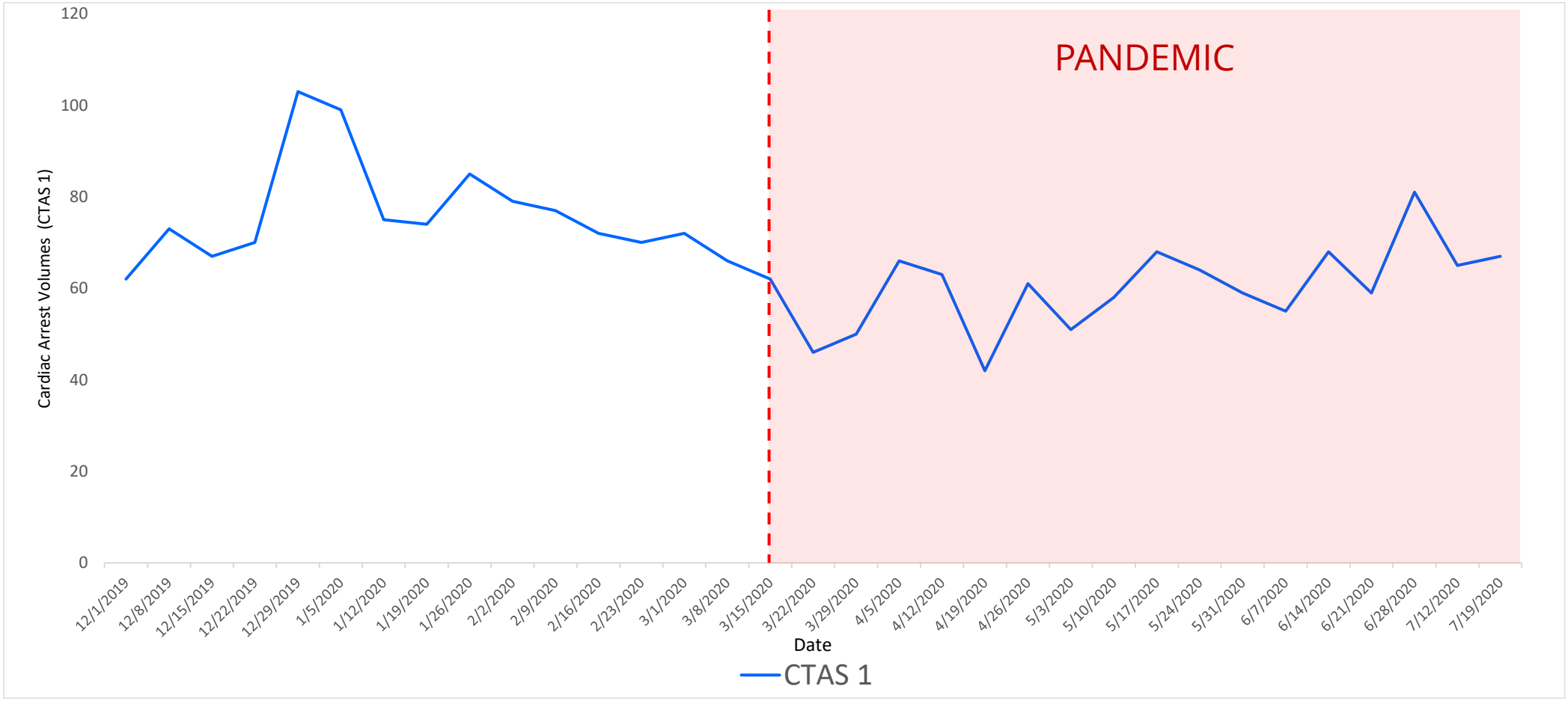
Data excludes Sunnybrook Hospital due to recent eCTAS implementation

Chest Pain (Cardiac Features), By CTAS Level



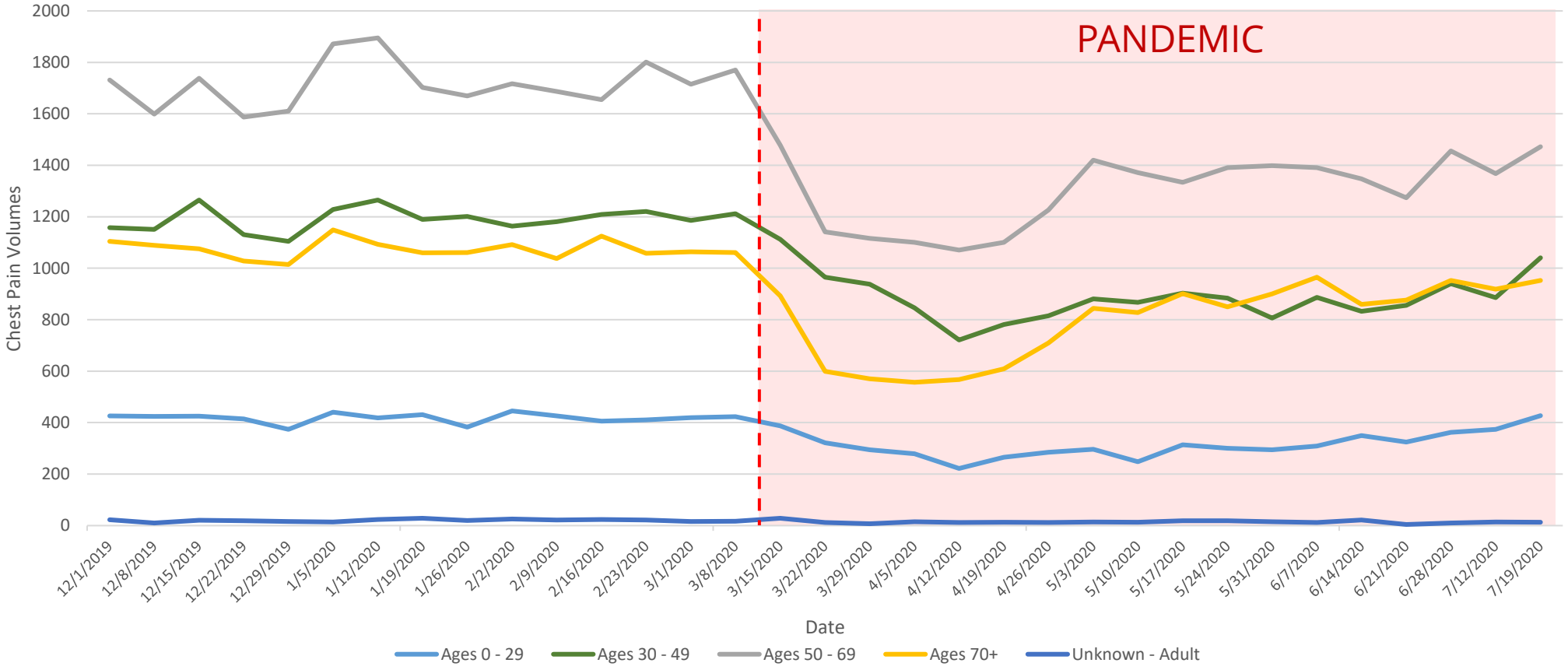
Data Source: eCTAS

Cardiac Arrest, By CTAS Level



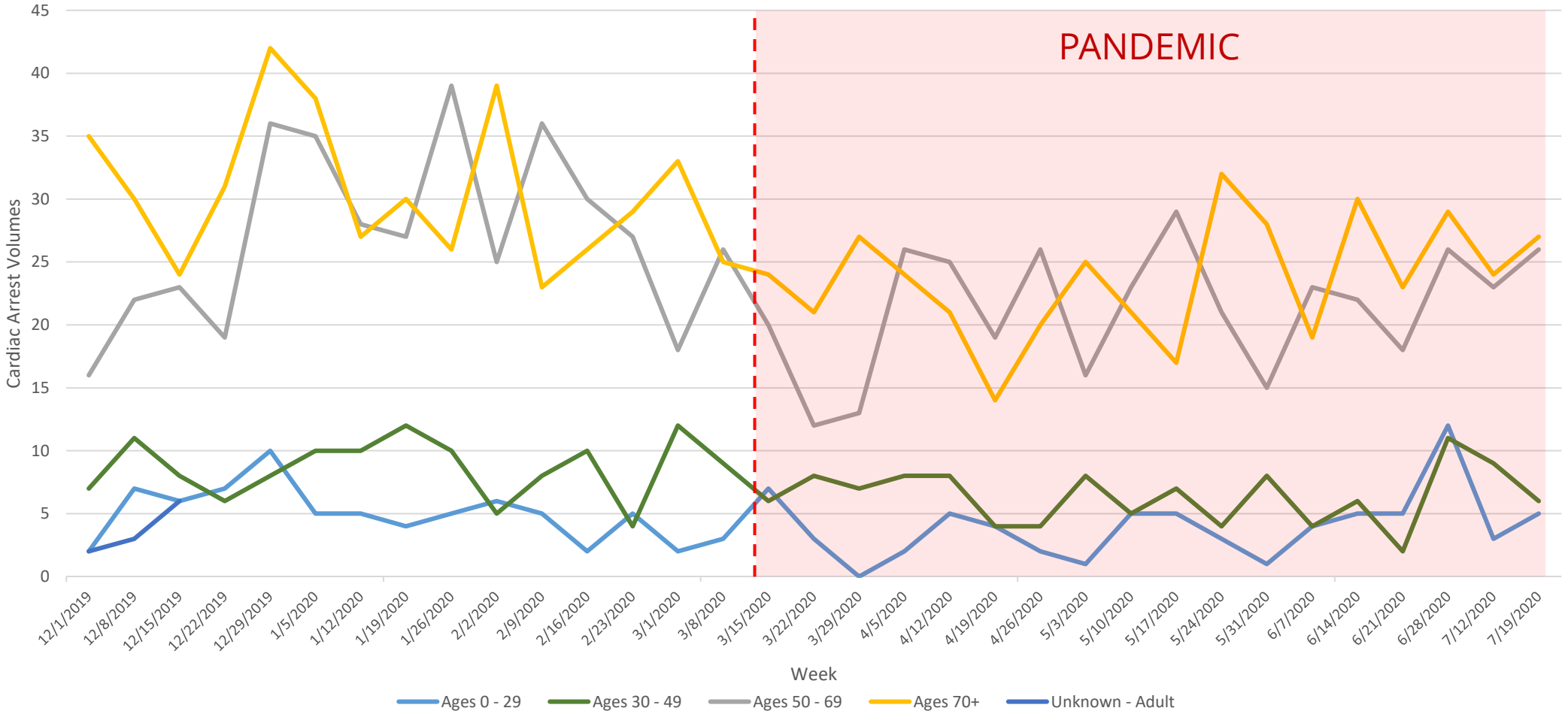
Data Source: eCTAS

Chest Pain (Cardiac Features), By Age Group



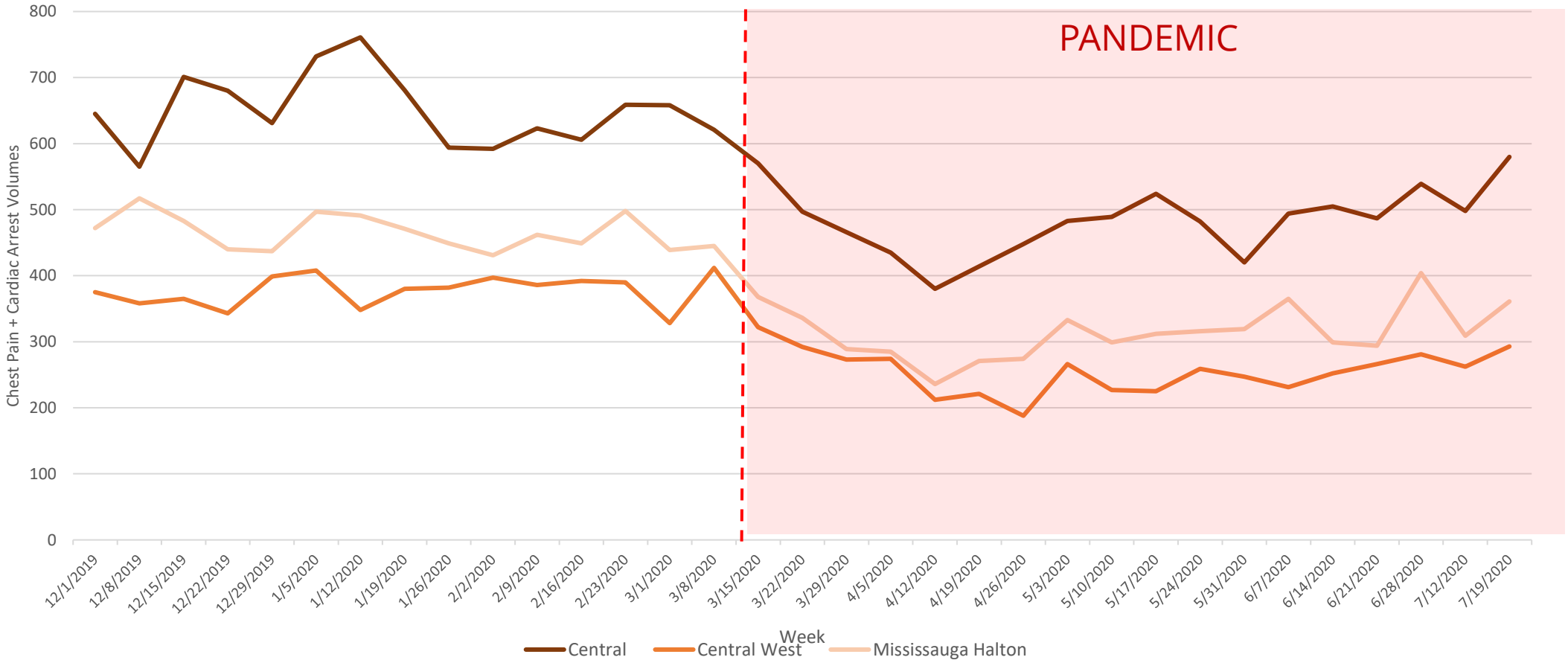
Data Source: eCTAS

Cardiac Arrest, By Age Group



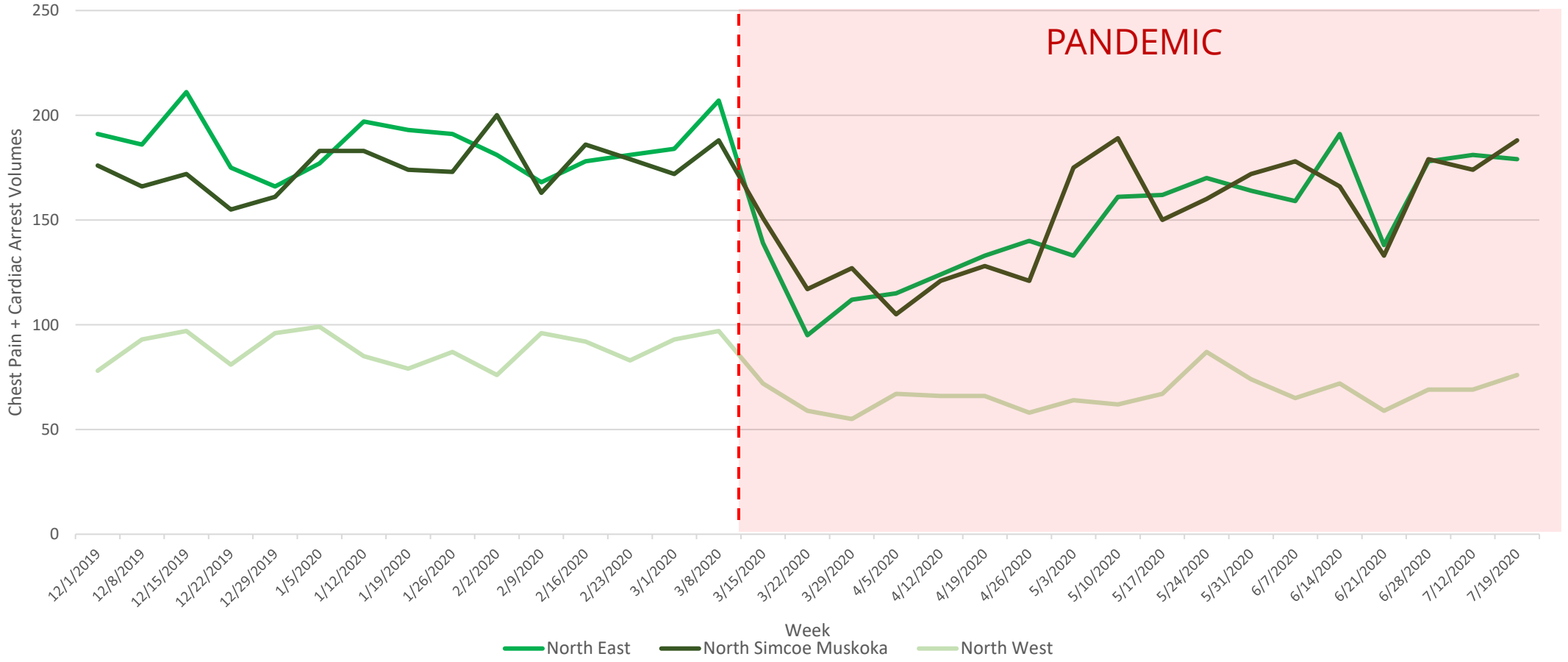
Data Source: eCTAS

Central Region – Chest pain + Cardiac arrest



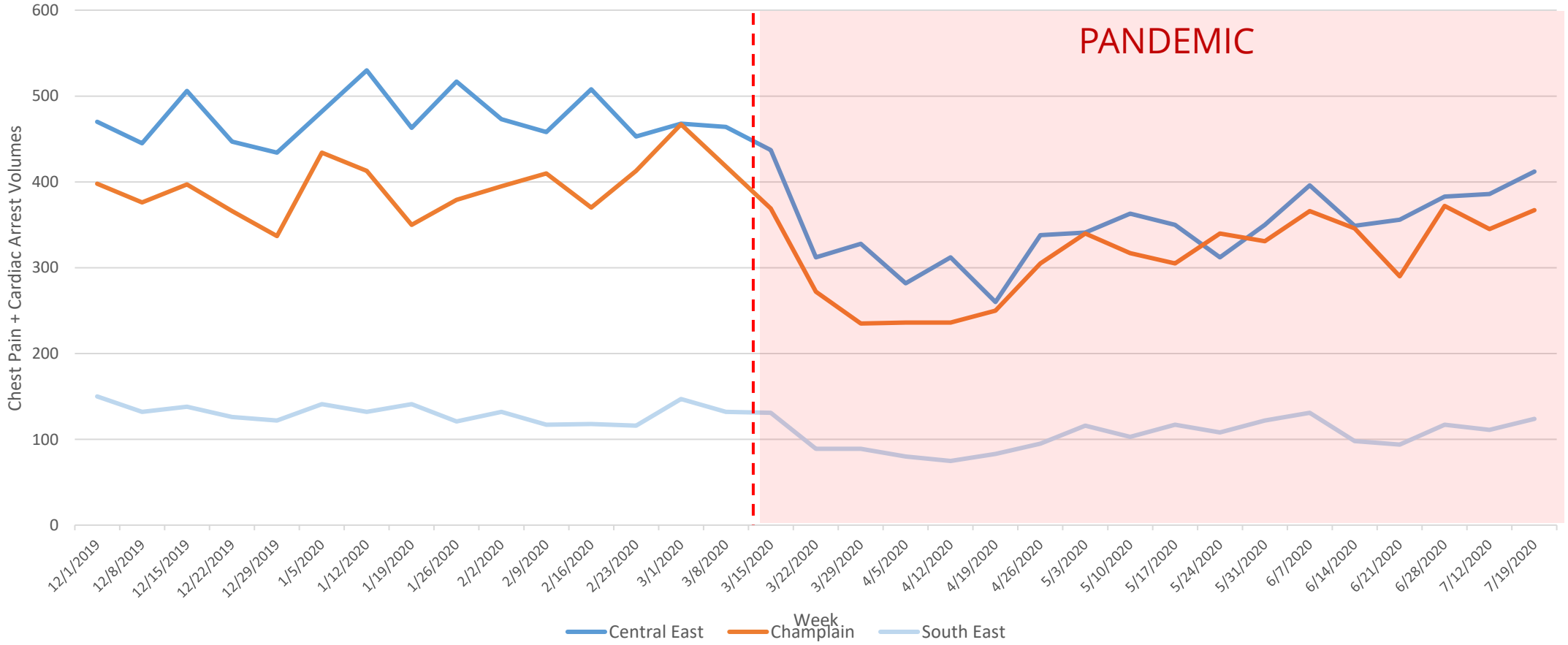
Data Source: eCTAS

North Region - Chest pain + Cardiac arrest



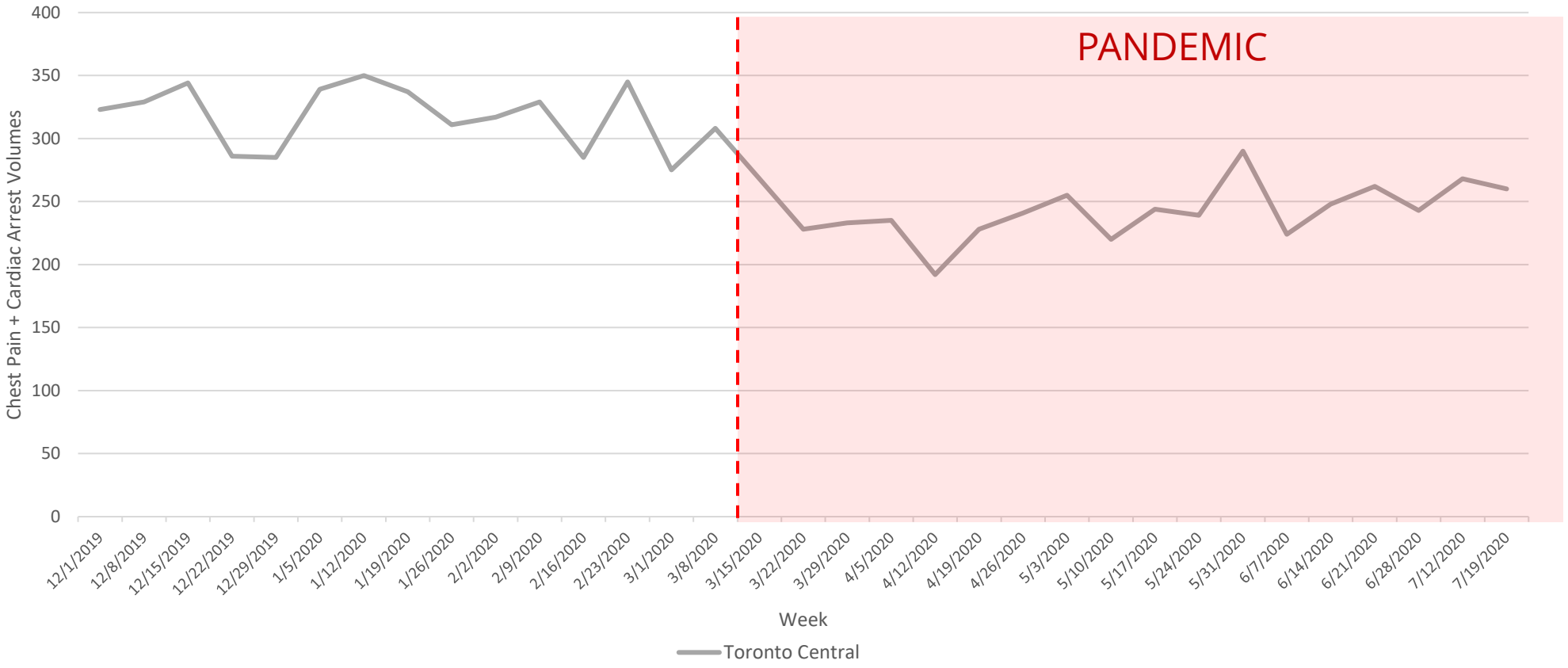
Data Source: eCTAS

EAST Region – Chest pain + Cardiac arrest



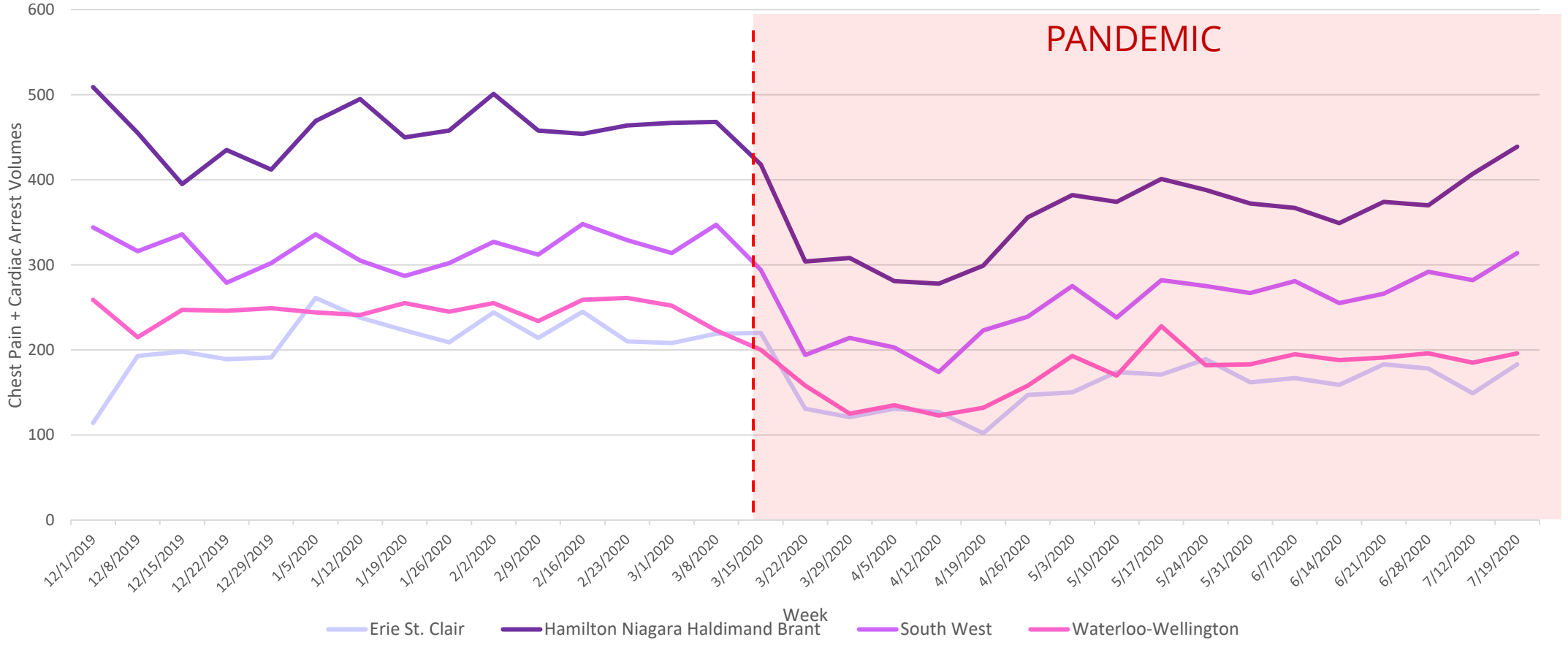
Data Source: eCTAS

Toronto Region – Chest pain + Cardiac arrest



Data Source: eCTAS

West Region – Chest pain + Cardiac arrest



Data Source: eCTAS

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Quebec Experience & Lessons Learned

Treatment of STEMI in Quebec during the COVID-19 pandemic

DR. LAURIE LAMBERT

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MISSION

Promote clinical excellence and the efficient use of resources in the health and social services sector

VISION

Be the reference to inform decisions and practices

VALEURS

Excellence
Independence
Openness
Scientific rigour
Transparency
Integrity
Equity

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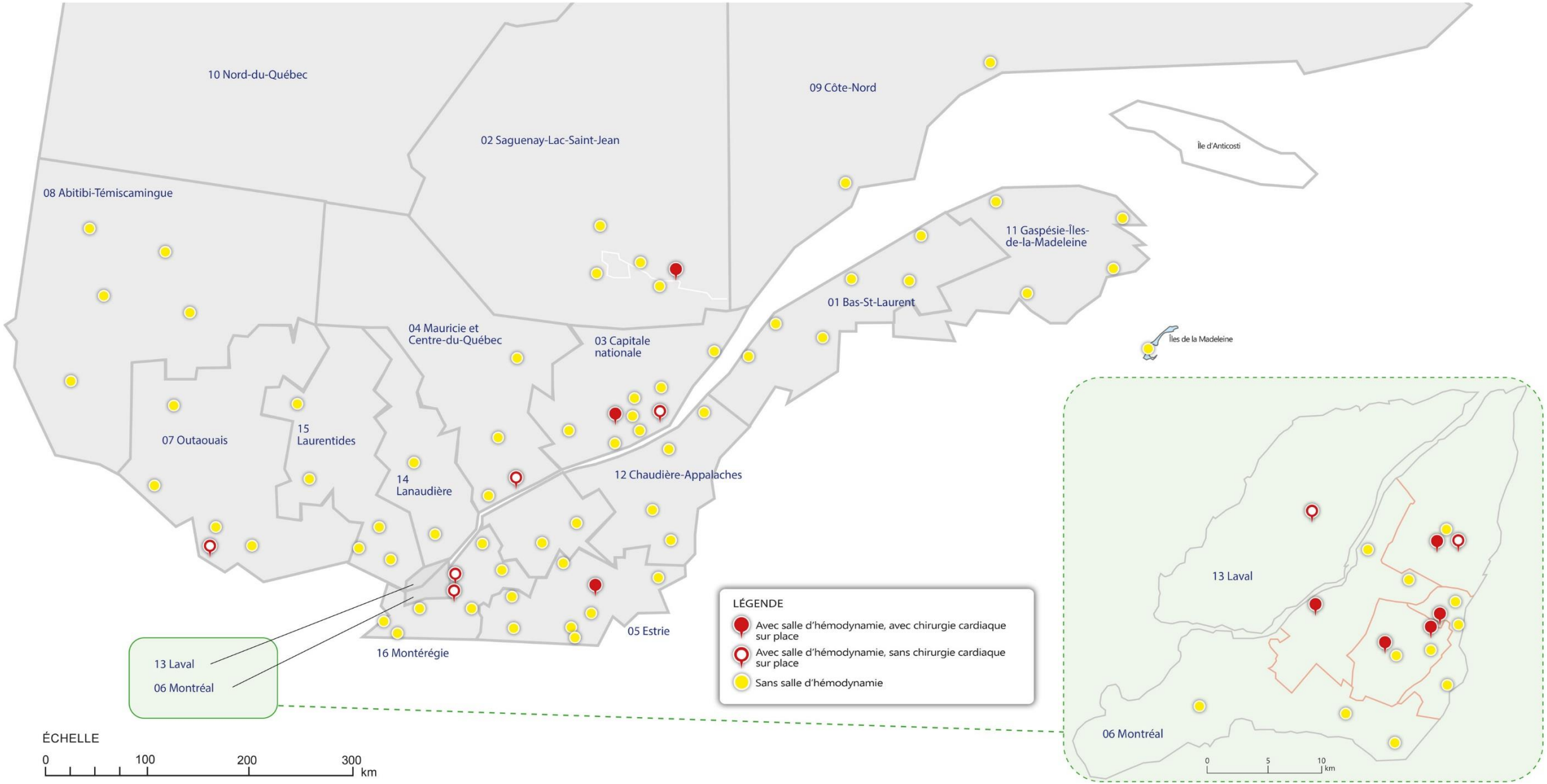
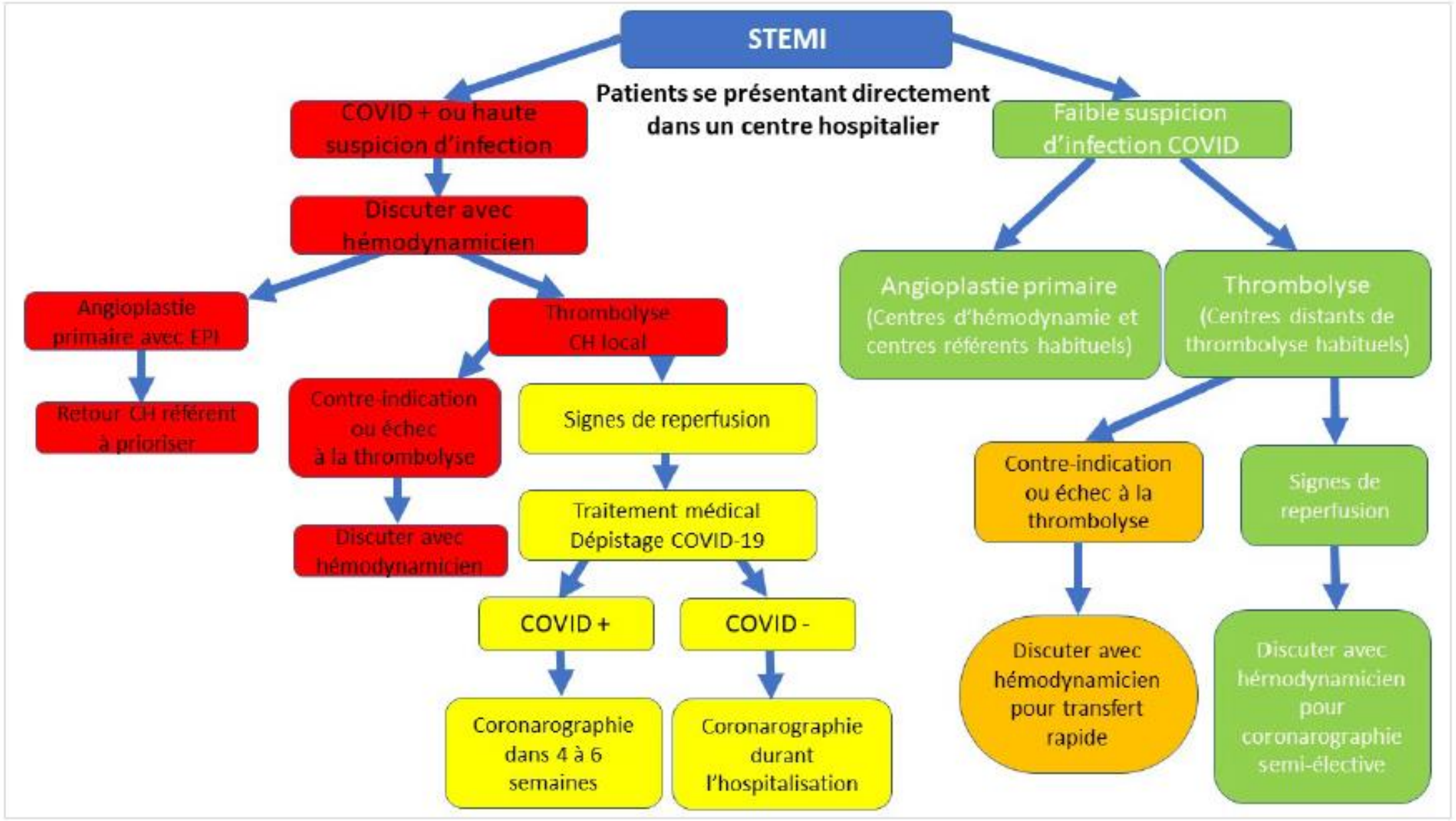

10 Nord-du-Québec
02 Saguenay-Lac-Saint-Jean
09 Côte-Nord
Île d'Anticosti
08 Abitibi-Témiscamingue
11 Gaspésie-Îles-de-la-Madeleine
01 Bas-St-Laurent
Îles de la Madeleine
04 Mauricie et Centre-du-Québec
03 Capitale nationale
07 Outaouais
15 Laurentides
14 Lanaudière
12 Chaudière-Appalaches
05 Estrie
16 Montérégie
13 Laval
06 Montréal
LÉGENDE
Avec salle d'hémodynamie, avec chirurgie cardiaque sur place
Avec salle d'hémodynamie, sans chirurgie cardiaque sur place
Sans salle d'hémodynamie
ÉCHELLE
0 100 200 300 km
0 5 10 km

Treatment strategy pre-COVID

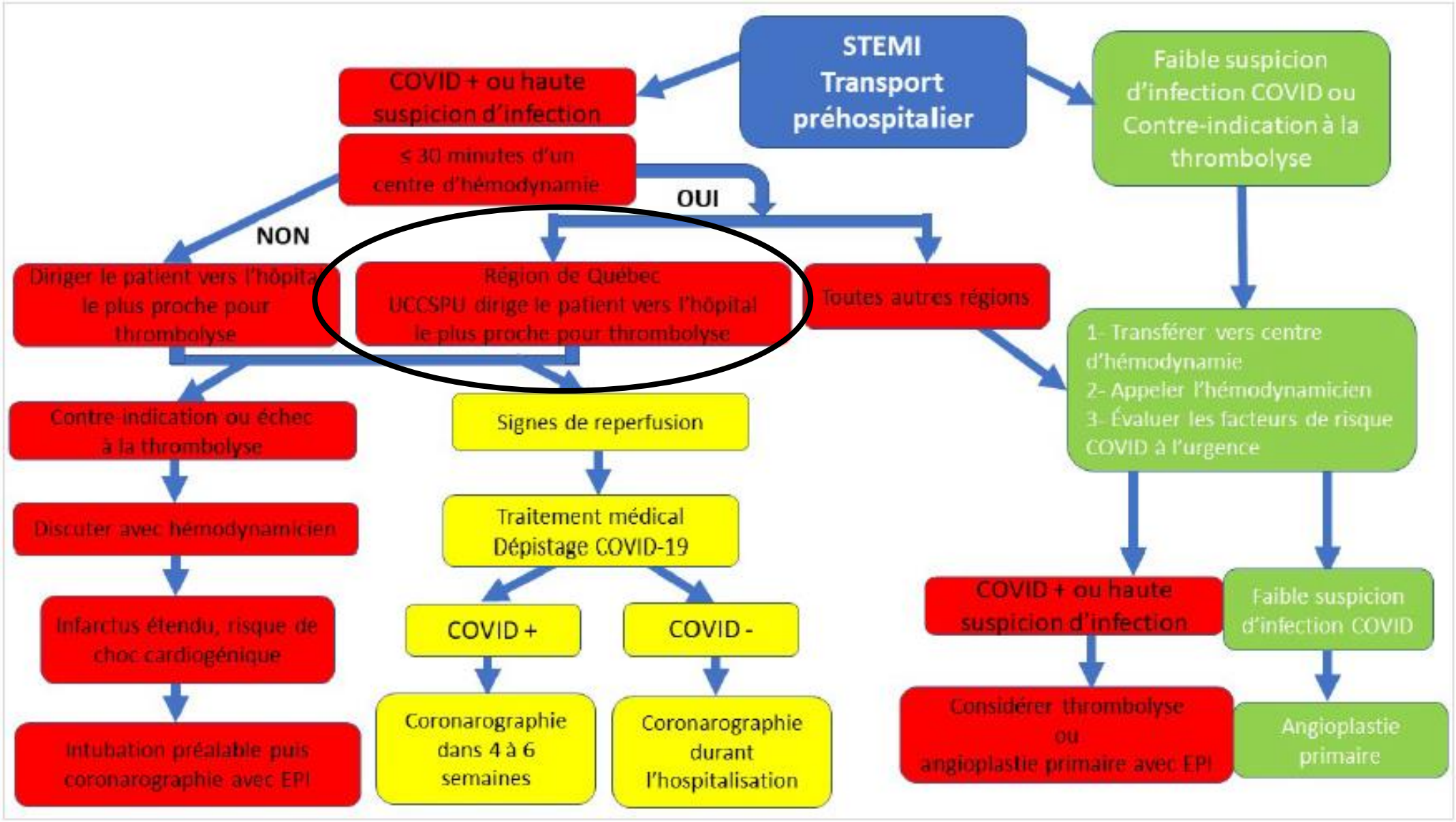
- 15 PCI hospitals
  - 8 with on-site cardiac surgery
- 14 hospitals
  - exclusive use of fibrinolysis
- 50 hospitals
  - transfer most or all their patients for PPCI

Decision algorithm during the pandemic : Self presenters



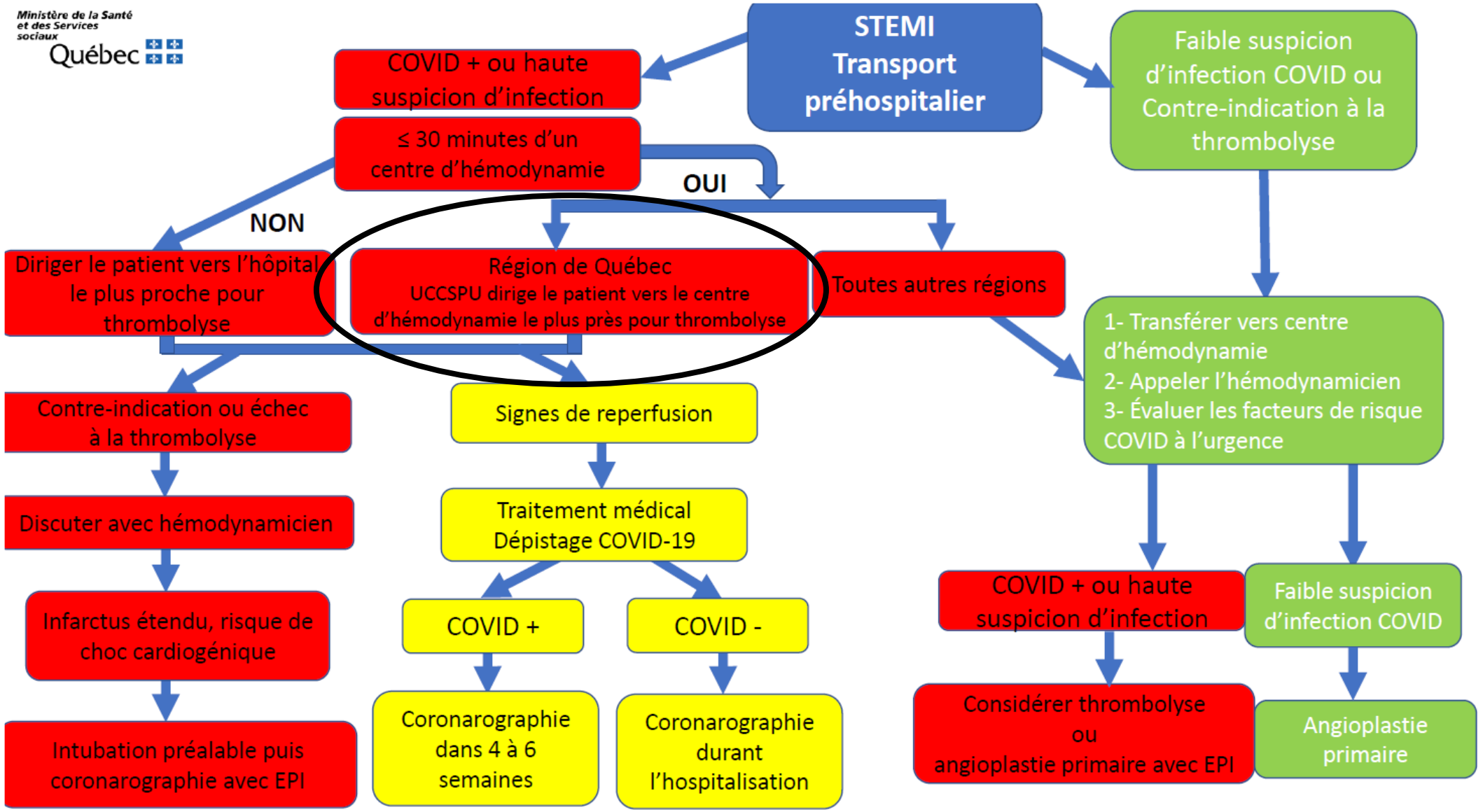
https://cardioquebec.ca/wp-content/uploads/2020/04/20-MS-02502-33_COVID-19_pj_Consignes-H%C3%A9modynamie.pdf

1st decision algorithm : ambulance transport



https://cardioquebec.ca/wp-content/uploads/2020/04/20-MS-02502-33_COVID-19_pj_Consignes-H%C3%A9modynamie.pdf

2nd decision algorithm : ambulance transport



Montreal Heart Institute

- Designated as COVID-free hospital in order to maintain cardiac surgery program
- Committee of infectious disease experts, surgeons, cardiologists, anesthesiologists and pharmacists to develop protocols
- Separate entrance for hospital staff
- Triage tent outside the hospital for patients
- 4 cardiologists designated as COVID officers who acted as ‘gatekeepers’ of patient entry
- No decrease in surgical volume during the pandemic
- Of the first 300 patients who underwent surgery, six tested positive for the virus after they were discharged
  - 3 potentially caught the virus at MHI
  - 3 caught virus after inter-hospital transfer

https://www.cbc.ca/news/canada/montreal/montreal-heart-institute-covid-19-1.5599365

INESSS update of STEMI quality standards

- Rapid review of the literature concerning STEMI treatment during pandemic
- '*Delphi*' process with inter-disciplinary group of experts
  - Rounds of voting with anonymous sharing of comments and proposed revisions
- Publication autumn 2020

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Preliminary synthesis of recently published recommendations for STEMI care during the COVID-19 pandemic

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STEMI Networks

1. All patients should be considered potentially COVID-19 positive, unless ruled out with appropriate testing, and HCWs should adopt all appropriate protective measures

2. All HCWs should be routinely trained in the correct and appropriate use of PPE

3. Donning/doffing (the process of putting on and removing PPE) manoeuvres should be supervised by a trained observer who reads the correct sequence of PPE use to minimize the risk of contamination

4. All STEMI patients should undergo testing for SARS-CoV-2 as soon as possible following first medical contact irrespective of reperfusion strategy, at the latest upon admission to the ICU post primary PCI. Until the result of the test is known, all precautionary measures should be taken to avoid potential infection of other patients and HCWs

5. It is critical to ensure PPE and rapid sterilization procedures are prioritized throughout the entire system of care and that communication occurs among transfer hospital, EMS, ED, and CCL providers regarding COVID-19 status

6. Each regional STEMI network should closely monitor transfer processes and times with active adjustment to a fibrinolysis-first approach if delays ensue that might not have been present prior to the pandemic.

7 . At the regional level, teams should continue to closely monitor the impact of COVID-19 on regional STEMI care, and communicate new and emerging issues that require provincial guidance

EMS

1. Patients must be reassured that appropriate precautions are being taken to protect them and health care workers from COVID-19
2. Triage callers should utilize a series of questions to identify patients (and anyone in the home) who may be experiencing coronavirus signs and symptoms and share this information with prehospital first responders
3. EMS should assume that all patients, regardless of reported symptoms, may have COVID-19
4. Prior to arrival at the scene, EMS should don the appropriate PPE that must be available to all EMS personnel
5. Once on scene, the EMS provider should screen the patient to identify high risk COVID features
6. Limit the number of EMS providers evaluating the patient
7. Prehospital ECG should be expedited with subsequent interpretation and prompt notification of findings (as well as likelihood of COVID19 infection) to the Emergency Department (ED)
8. For diagnostic ST elevation, prehospital cath lab activation should occur immediately
9. STEMI patients accessing care by ambulance should be directly transported to COVID-19 hospitals with 24/7 catheterization laboratory facilities

Non PCI centers

1. Patients with STEMI self-presenting at the ED of hospitals without cath labs should be transferred to designated COVID-19 hospitals with 24/7 primary PCI facilities. If a timely primary PCI cannot be achieved, fibrinolysis should be considered

2. If the target PPCI time cannot be met and fibrinolysis is not contraindicated, it should then become the first-line therapy

3. Prior to transfer to a PCI center of a patient with STEMI and established COVID-19 infection, there should be a discussion with the PCI center. Fibrinolysis within 30 min of STEMI diagnosis, and transfer for rescue PCI when necessary, may be preferable for all COVID-19-positive STEMI patients who are at a referral hospital provided the diagnosis of a true STEMI is highly likely

4. In the presence of an unclear diagnosis of a STEMI in a COVID-19-positive or probable patient, additional noninvasive imaging should help determine if the patient is likely to have ST elevation associated with an occluded coronary artery, and therefore might benefit from a fibrinolysis reperfusion approach.

5. In COVID-19 positive or probable patients, with classic clinical symptoms and ECG findings, a point of care ultrasound (POCUS) evaluation of cardiac function to assess for a regional wall motion abnormality (WMA) consistent with the ECG finding could be considered

PCI centers

1. For STEMI patients presenting via EMS from the field, there should be a standard brief stop in the receiving hospital ED prior to proceeding to the cath Lab, with clear communication between the ED physician and the interventional cardiologist

2. STEMI patients should be managed as COVID-19 positive

3. Hospital pathways should be redesigned in order to allocate patients to COVID or non-COVID wards and ICUs according to their symptoms, clinical presentation and stability at admission and SARS-COV-2 test result

4. The ED might be divided into areas for receiving patients that are ‘hot’ or suspected COVID-19 and ‘cold’ for patients with other emergencies. It would be ideal to have a dedicated entry point and triage for cardiovascular emergencies, with separate teams providing care in each of these areas

5. It is recommended to dedicate at least one cathlab for the invasive treatment of suspected or confirmed COVID-19 patients with all interventional materials stored inside the cathlab

6. Consideration should be given to use of a negative pressure room, limiting staff in the room, and performing terminal cleaning

PCI centers

7. Only HCWs involved in the procedure should remain inside the cathlab; cathlab doors should be kept closed at all times.
8. Patients can wear a surgical mask during transfer and entry to the cathlab (when breathing spontaneously)
9. Complete PPE should be used for HCWs involved in the cathlab intervention
9. Patients requiring mechanical ventilation should be intubated before transport to the catheterization lab
11. Treatment within recommended maximum delay from STEMI diagnosis to reperfusion should remain the goal for reperfusion therapy
12 . PPCI should remain the reperfusion therapy of choice if feasible within the recommended time frame and if performed in facilities approved for the treatment of COVID-19 patients in a safe manner for both healthcare providers and other patients

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THANK YOU FOR THE OPPORTUNITY TO PARTICIPATE IN YOUR MEETINGS

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Other Updates and Next Steps

JANA JEFFREY

Other Updates and Next Steps

- Cardiac Imaging Guidance Document – *In Progress*
- Next COVID-19 Cardiac Forum Meeting – *Thursday, Aug 13th, 8:00 – 9:00 AM*

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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

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