

# COVID-19 Pandemic Montréal Region

**Preparedness and management of a  
major emergency response**

**FINDINGS AND KNOWLEDGE ACQUIRED**

*Centre intégré  
universitaire de santé  
et de services sociaux  
du Centre-Sud-  
de-l'Île-de-Montréal*

Québec 

# Disclosure

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I have no financial disclosure or conflict of interest to declare

# Educational goals

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As a result of attending this session, participants will be able to

- Identify the elements of preparedness and coordination structure for a major emergency response to a public health threat
- Understand the major challenges we faced in the first wave of the COVID-19 pandemic, lessons learned and preparations needed for the second phase
- Recognize the conditions that need to be met to keep the population and partners engaged in the pandemic response for the next year

# Pandemic preparedness

Were we ready to deal with the pandemic?

# Legal mandate of the Director of public health

## Health services and social services act

### Section 373

- *Inform the population* on its general state of health
- *Monitor the health* of the population and its determinants
- *Protect* the population from threats to its health
- Ensure expertise in *preventive health and health promotions*
- Conduct *intersectoral actions*

## Public health act

- Develop, implement and evaluate the regional public health action plan
- Establish and implement a surveillance plan
- Exercise her power to conduct an epidemiological investigation and issue an order in situations where the health of the population is or could be threatened

## Occupational health and safety act

- Develop, implement and evaluate specific health programs for establishments
- Conduct investigations of reportable diseases in workplaces
- Provide recommendations for pregnant women

# 13 March – Declaration of the health emergency

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## **Public Health Act**

### **Powers of the Minister and Québec's Director of Public Health**

*Section 118: The Government may declare a public health emergency in all or part of the territory of Québec where a serious threat to the health of the population, whether real or imminent, requires the immediate application of certain measures provided for in section 123 to protect the health of the population*

*Section 123. Notwithstanding any provision to the contrary, while the public health emergency is in effect, the Government or the Minister, if he or she has been so empowered, may, without delay and without further formality, to protect the health of the population*

### **Eight powers of order**


1. **Order compulsory vaccination**
2. **Order the closing of educational institutions or of any other place of assembly**
3. Order any person, government department or body to **communicate with her, or give to her immediate access to, any document or information held**
4. **Prohibit entry into all or part of the area concerned or allow access to an area only to certain persons and subject to certain conditions**
5. **Order the construction of any work**, the installation of sanitary facilities or the provision of health and social services
6. **Require the assistance of any government department or body** capable of assisting the personnel deployed
7. **Incur such expenses and enter into such contracts** as are considered necessary
8. Order any other measure necessary to protect the health of the population

# Response to the pandemic

## *Mission Santé and civil protection*



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# In January: monitoring and preparation

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## Preparation

1. Major emergency response plan
2. Health mission and civil protection command structure
3. Plan for internal mobilization
4. Emergency measures communications plan

## Concrete actions

1. Establishment of the scientific and monitoring unit
2. Development of case investigation and tracing tools
3. Internal coordination framework
4. Beginning of “in-house” computerization of certain tools (e.g. contacts)
5. Links with MSSS and PHAC (definition, tracing of travel contacts)
6. Start building links with the network through the regional emergency measures coordination centre – health mission



# Findings

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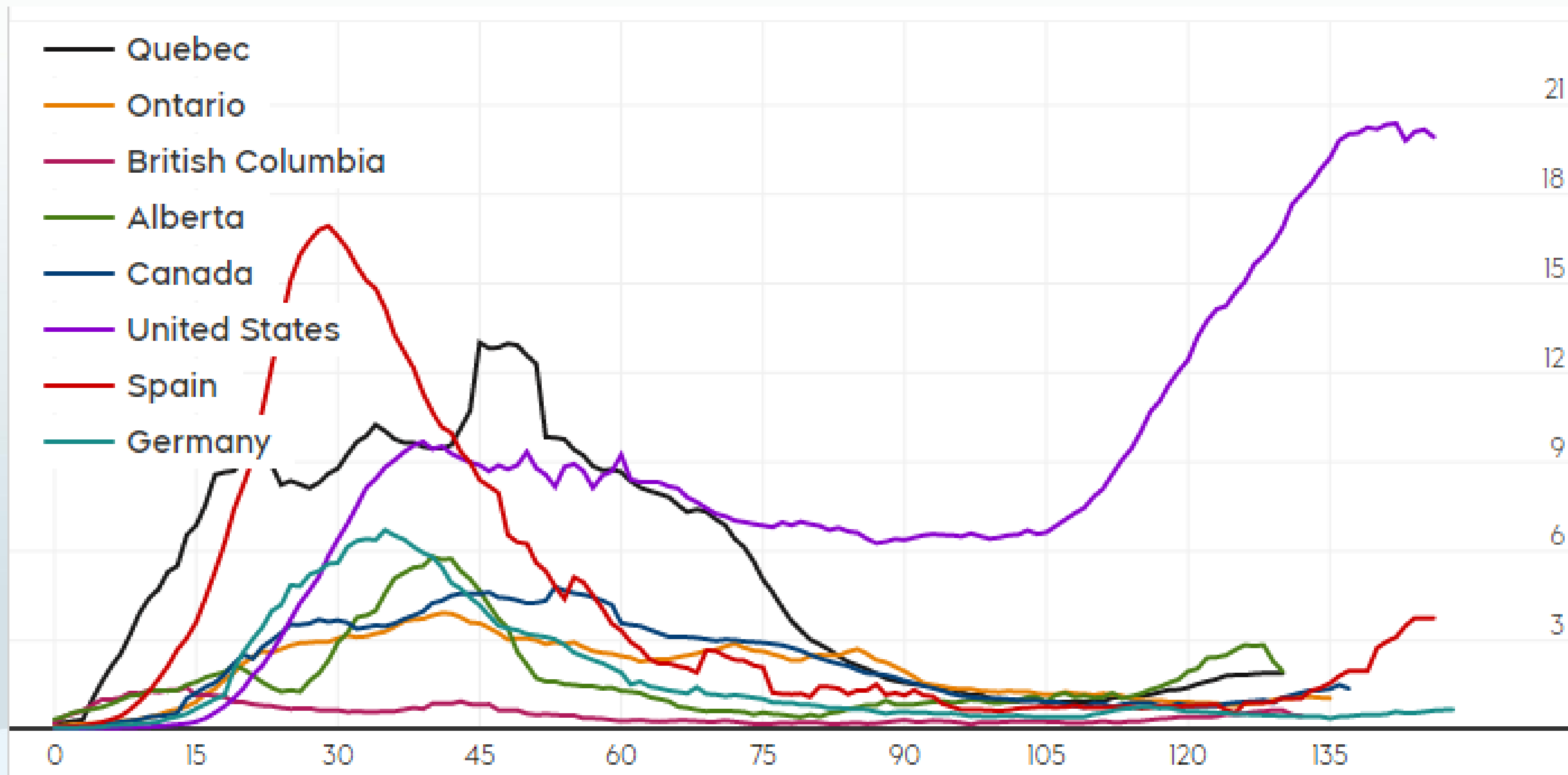
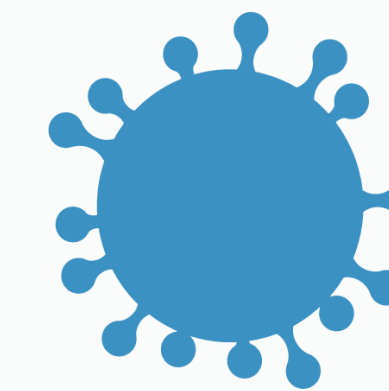
- **Governance:** usual civil protection mechanisms for coordinating major emergencies were not fully used
- **Planning:** a plan to manage the pandemic had not foreseen the scope of the health crisis
- **Network coordination:** Montréal network's usual coordination mechanisms not triggered
- **Capacity:** unprecedented mobilization of public health teams and considerable external contributors – logistics, integration and supervision issues with so many new employees
- **Monitoring system:** little computerization of our processes
- **Capacity of risk analysis:** implementation of a scientific unit from the outset
- **Emergency measures culture:** we had a plan but little simulation practice

# **Assessment of the first wave**

**Successes, findings/issues and improvement projects**

# Nouveaux cas de COVID-19 par 100 000 habitants

## Données canadiennes et internationales



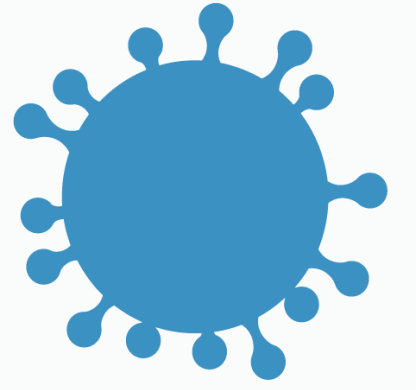
Jours depuis le 100ème cas dans la région

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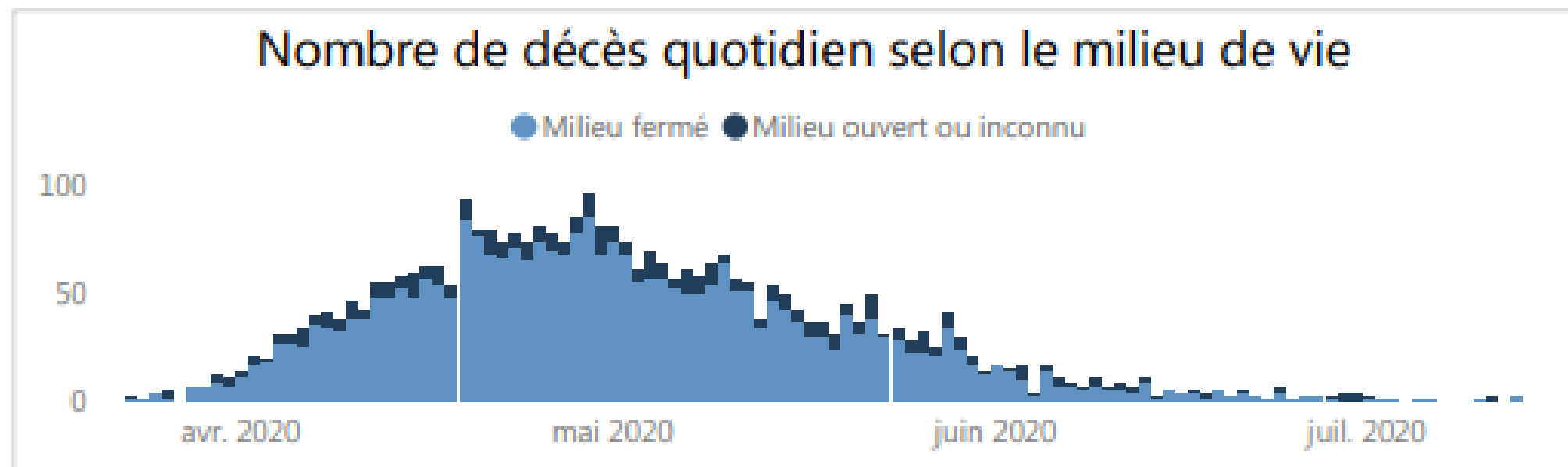
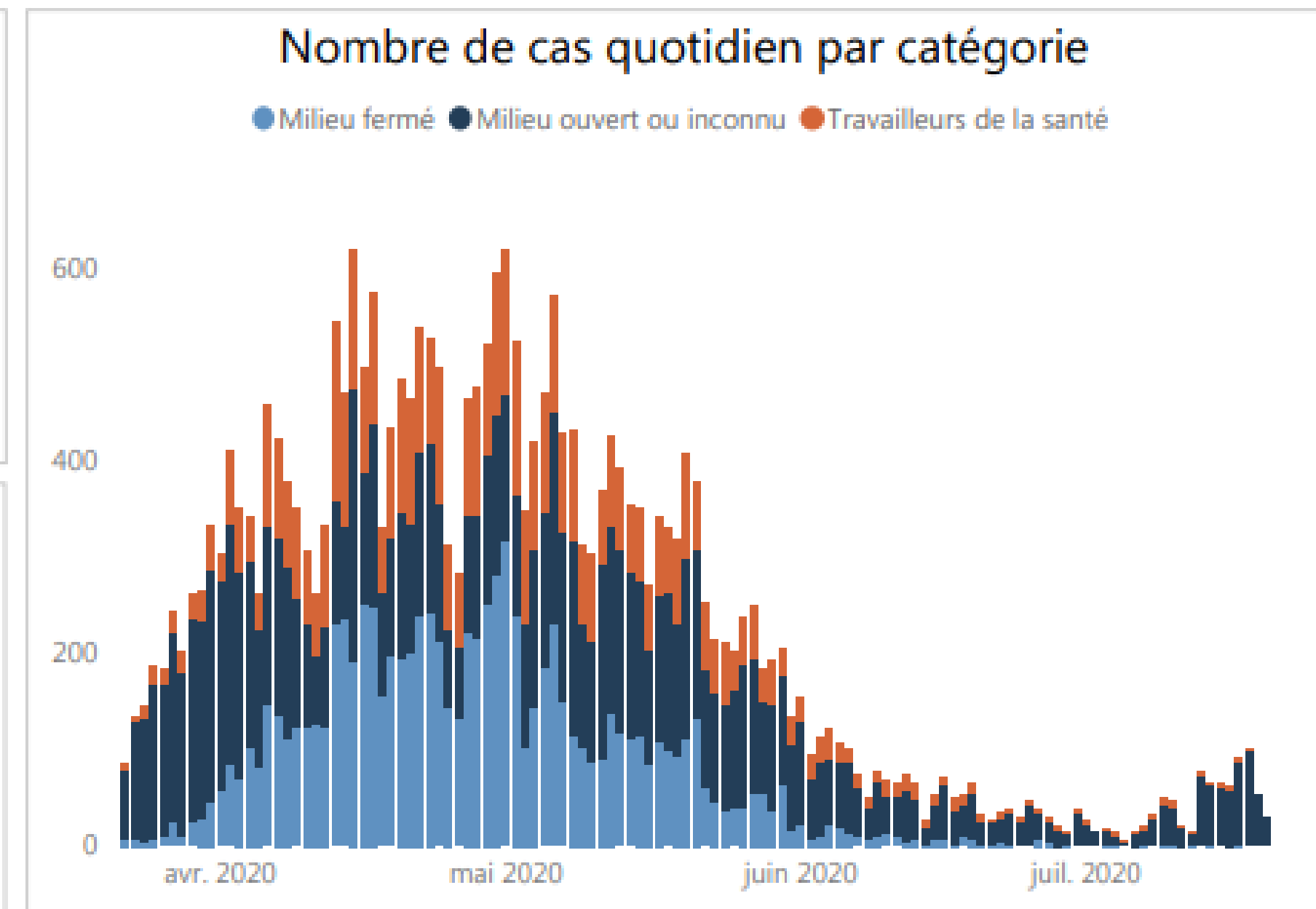
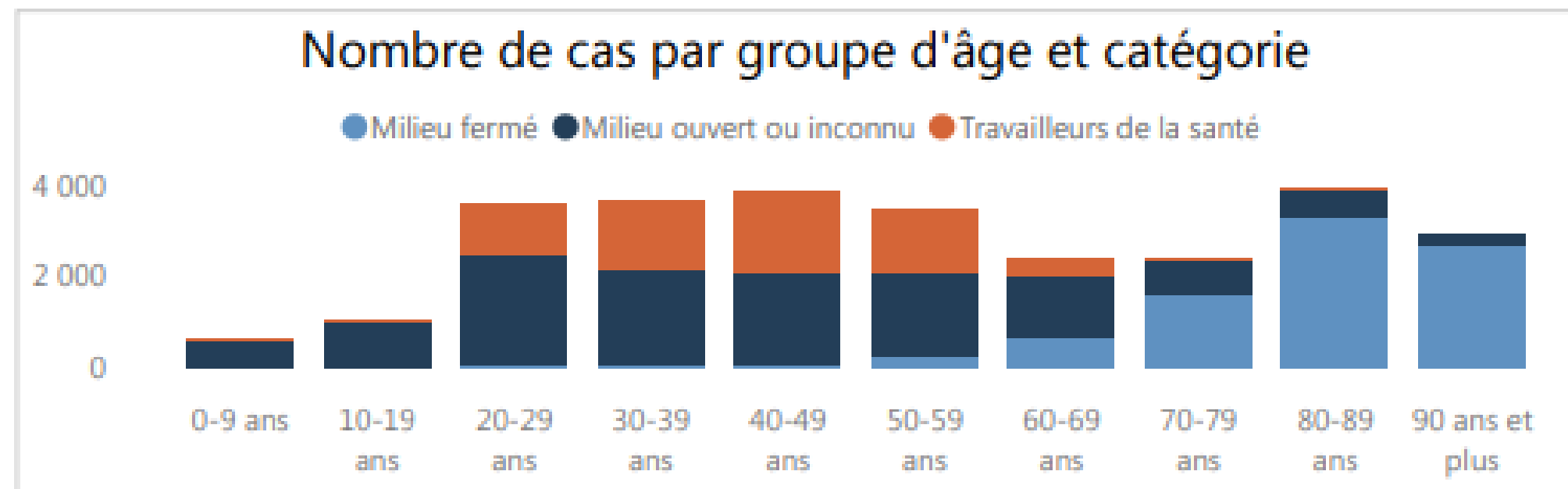
Source: ECDC via OurWorld in Data, infographie par CTV News 27 juillet

# Situation épidémiologique



## Situation COVID-19 sur l'Île de Montréal, le 21 juillet 2020 : Ensemble de l'Île de Montréal

Nombre de cas	Nombre de cas - Travailleurs de la santé	Nombre de décès	Nombre de décès en milieux fermés
<b>28 167</b>	<b>6 268</b>	<b>3 434</b>	<b>3 008</b>
Taux de cas par 100 000 habitants	Pourcentage du total des cas	Taux de mortalité par 100 000 habitants	Pourcentage du total des décès
<b>1 363,6</b>	<b>22 %</b>	<b>166,2</b>	<b>88 %</b>

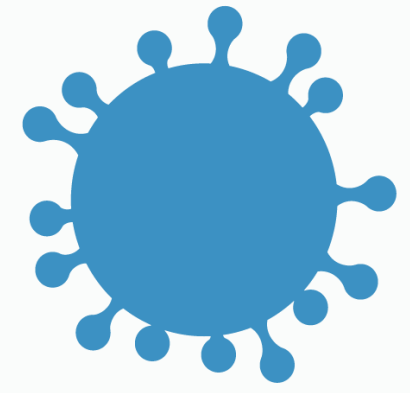


Source : V10, MSSS (MAJ du 20 juillet 2020 18h00). Traitement et analyse : DRSP. Rapports individualisés uniquement pour les arrondissements de Montréal et les villes liées ayant +100 cas.

Note 1 : Les milieux fermés incluent les CHSLD, ressources intermédiaires, résidences privées pour aînés, centres de réadaptation, centres hospitaliers, prison et hébergement communautaire.

Note 2 : Les travailleurs de la santé sont classés dans une catégorie distincte, indépendamment du type de milieu de vie.

# Situation épidémiologique



Early March:  
Travellers

April:  
CHSLDs – Seniors residences  
and  
health workers

End of April – May  
Community transmission,  
CNMTL and CEMTL, essential  
workers, social inequalities  
in health

July  
18- to 30-year olds, parties,  
bars, daycamps, workplace  
outbreaks

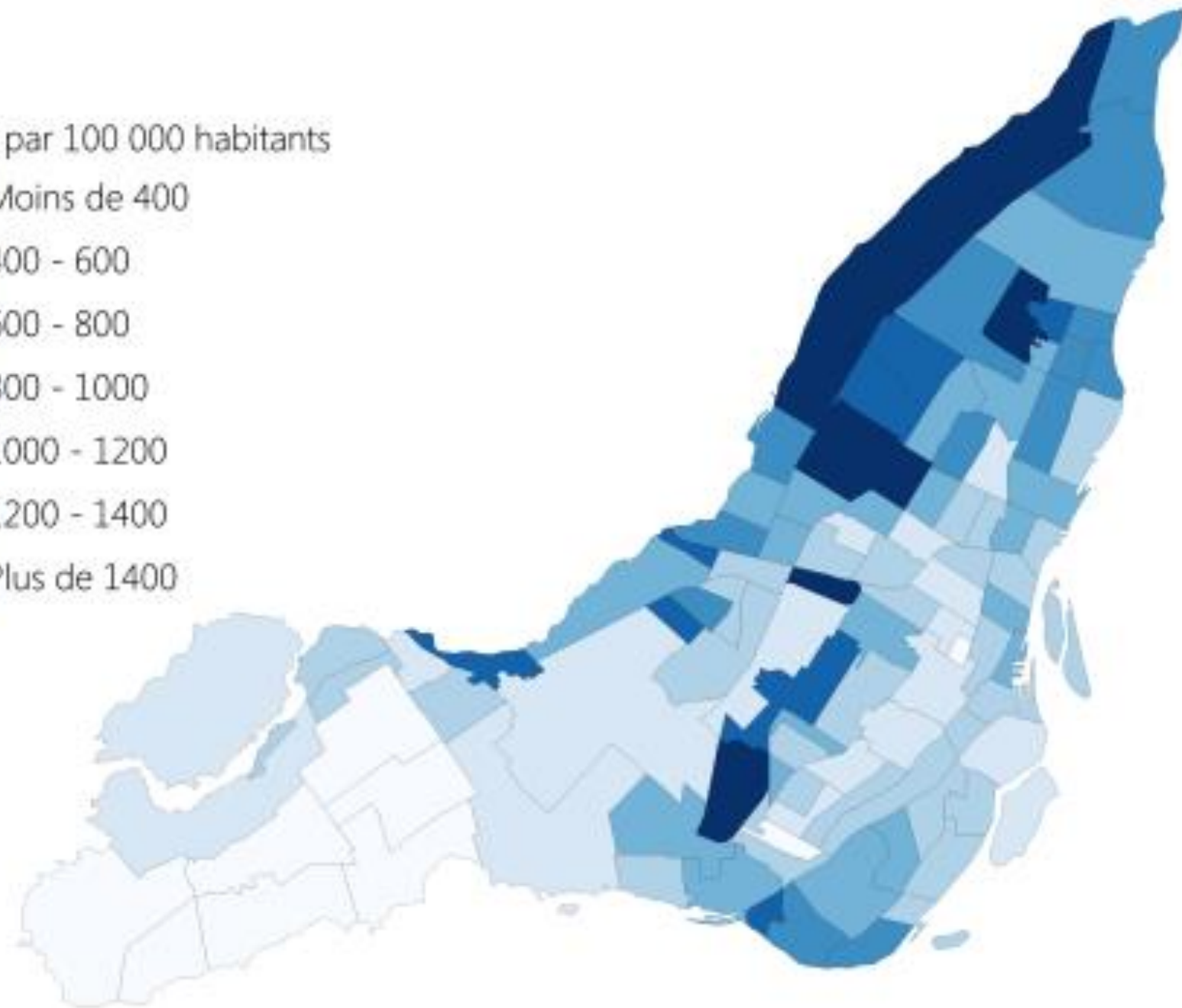
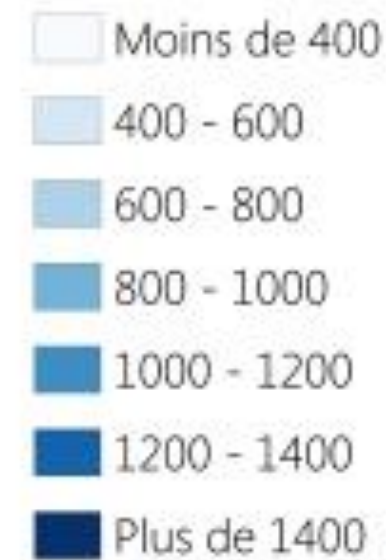
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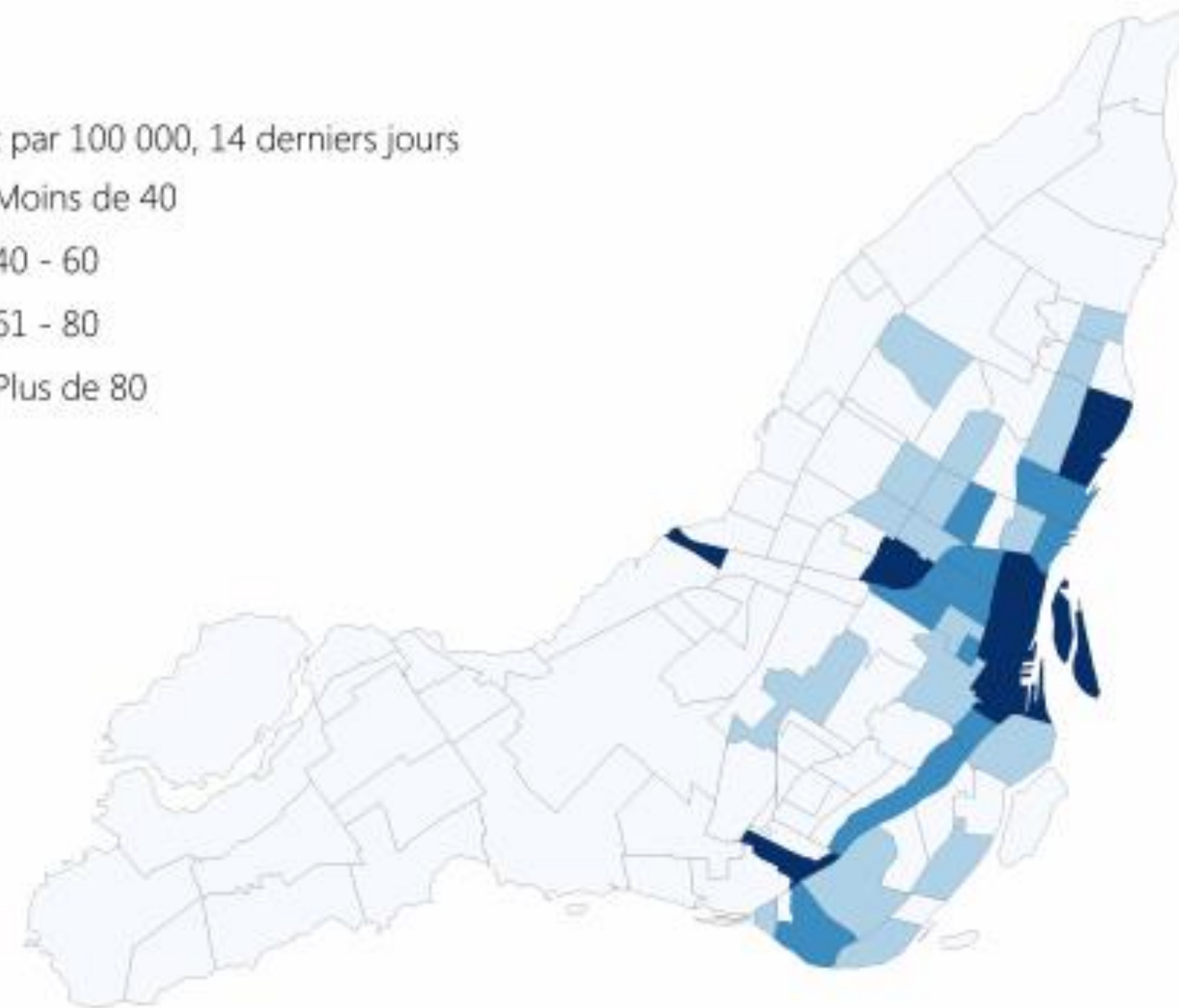
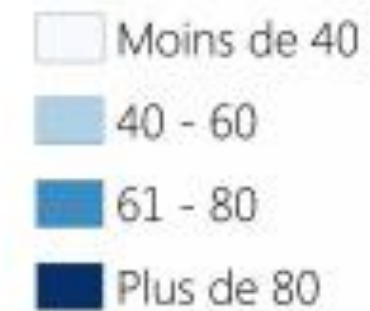
Taux de cas COVID-19 par secteur de voisinage  
(Cumulatif, cas en milieux fermés exclus)

Taux par 100 000 habitants



Taux de cas COVID-19 par secteur de voisinage  
(14 derniers jours, cas en milieux fermés exclus)

Taux par 100 000, 14 derniers jours



Source : V10, MSSS (MAJ du 20 juillet 2020 18h00). Traitement et analyse : DRSP. Les données représentent les cas confirmés COVID-19.

Note 1 : Les milieux fermés incluent les CHSLD, ressources intermédiaires, résidences privées pour aînés, centres de réadaptation, centres hospitaliers, prison et hébergement communautaire.

Note 2 : Les 14 derniers jours représentent la période du 7 au 20 juillet 2020.

# Findings: Lead and coordinate

## **Governance and coordination issues at many levels**

- Governance and regional coordination: 10 facilities – public health – City civil protection
- Internal public health coordination: importance of a pandemic coordination structure that is based in our usual decision-making structure

## **Mobilization issues – managing operations**

- Massive mobilization and recruitment: Over 95% of public health department resources + integration of more than 450 people to meet the needs for contact and case investigations
- Work organization and collaboration among public health department sectors

# Findings

## Monitoring and surveillance

- Shift from era of paper and fax to effective information systems
- Daily charting on a public health intervention continuum (testing, investigations, tracing, outbreaks, etc.)

## Tests

- Improve access (walk-in, local services, opening hours, wait times, mobile units, outreach)
- Avoid equipment shortages
- Classify indications (symptomatic vs. asymptomatic)
- Innovation (rapid tests, saliva tests, etc.)



# Findings

## Case and contact investigations

- Over 28,000 investigations, 11,000 contacts tracked
- Massive mobilization and recruitment: more than 95% of public health resources + integration of nearly 450 individuals
- Capacity to integrate and train new employees
- Need to computerize the entire process
- Isolation support for those who are “unable” to cope

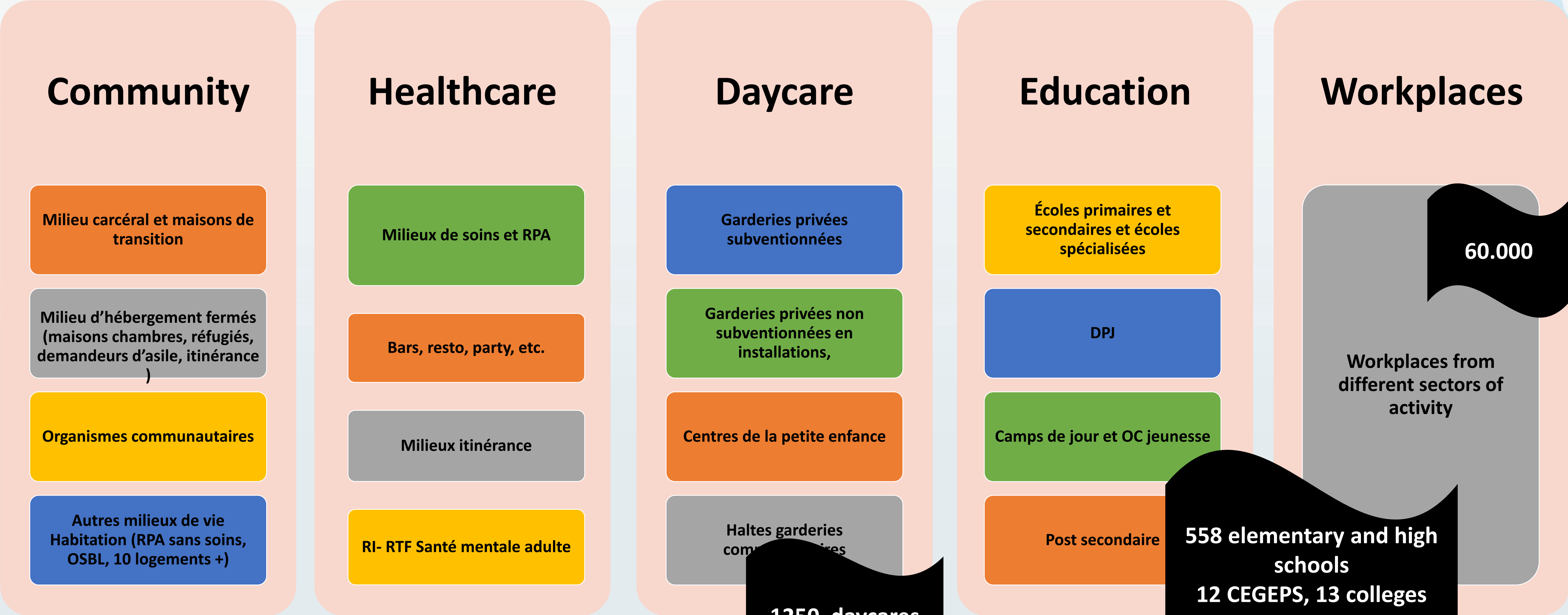
## Prevention and management of outbreaks

- Significant intersectoral effort (workplaces, schools, daycares, community, health)
- Large number of settings to cover = need to build dedicated prevention and outbreak management teams





# Prevention and management of outbreaks in different settings



CIUSSS – Prevention teams in each local territory

# Infection prevention teams in seniors' living environments

- Priority = Protect seniors' living environments
  - Continue prohibiting movement of staff in settings for seniors
  - Availability of personal protective equipment
  - Provide accelerated IPC training and deploy intervention teams and swat teams
  - Systemic testing when there is a case
  - Outbreak preparation and management guide
- 40 prevention officers
- International medical graduates
- Intensive training and support provided by a regional interdisciplinary team
- More than 2000 visits in seniors residences and religious communities
- Training, layout of facility, tools, simulation, outbreak management support



# Findings

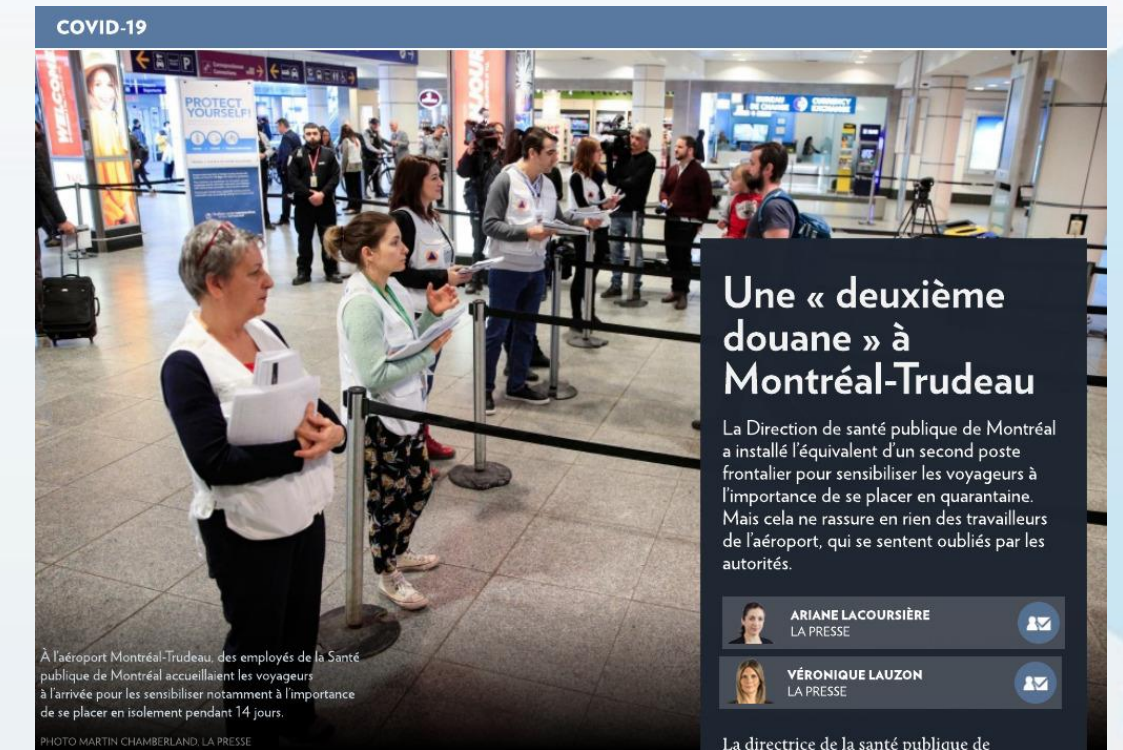
## Communication

### Successes

- Web site
- Media (**1300+** media kits, 30 press conferences)
- MTL airport squad
- Care settings – 1557 answers
- Automated calls to 225,000 seniors
- **Ethnocultural** action plan (translation, vans with loud speakers on roof, multiplying agents)
- Liaison with religious leaders of different denominations
- **Territorial** action plans in some hot neighbourhoods

### To do

- Keep communication open and transparent
- Design a social marketing campaign targeting young people
- Set up a multilingual phone line
- Develop a network of multiplying agents from cultural communities



# Preparation phase 2 Region of Montréal

Coronavirus COVID-19

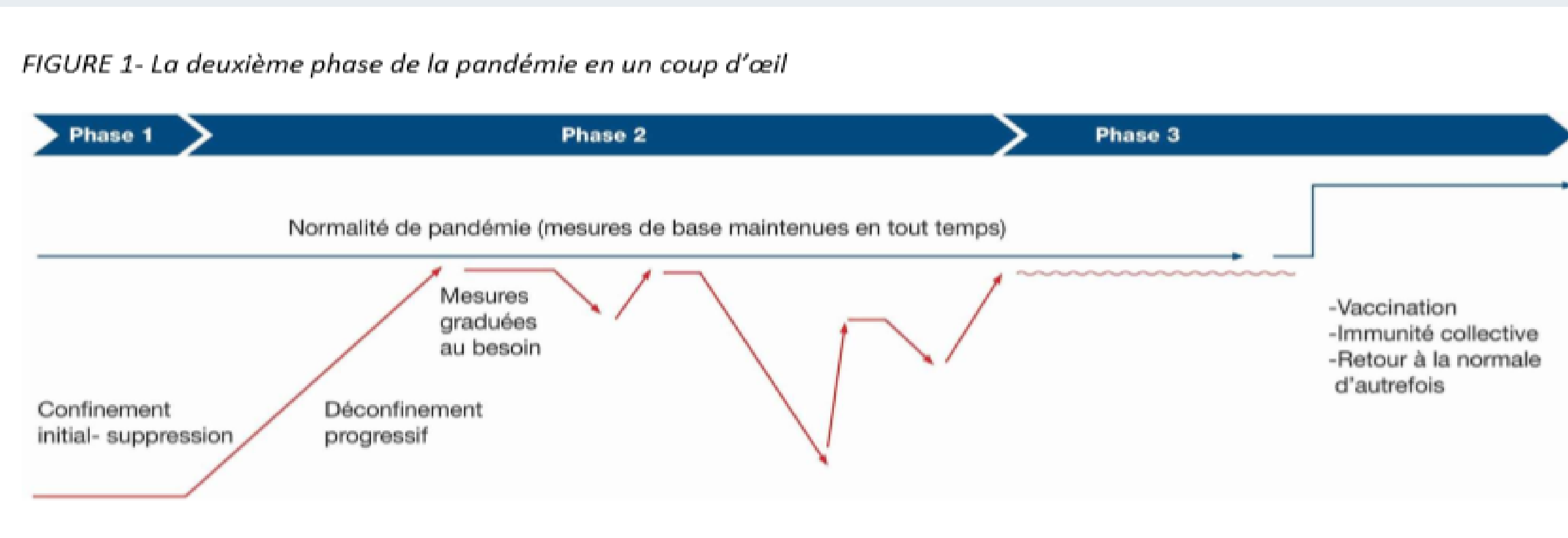


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# Objectives of the pandemic response

- **Maintain COVID-19 transmission at the lowest possible level**, to enable
  - limiting the health, social and economic impacts of COVID-19;
  - protecting vulnerable individuals, who are at higher risk of developing a severe form of the illness;
  - protecting the health system's capacity (hospital care, intensive care)
- **Prevent collateral effects caused by the pandemic and reduce growing social inequalities in health** linked to population-based measures set up to respond to the pandemic



# Action and ethics

Protection and promotion interventions based on public health **EXPERTISE** (evidence-based data and monitoring/surveillance)

**PROPORTIONALITY** of means is essential when evaluating public health measures. Various risks or possible inconveniences of a public health measure should not be disproportionate to the scope of the problem it is helping to resolve.

**TRANSPARENCY** focuses more specifically on information and communicating this information. This requires that the information given to the targeted public is timely, easy to understand and useful.

**EQUITY** refers to fair distribution of benefits and burden among the population.

The search for solutions involves **COLLABORATION** with partners and population **ENGAGEMENT**

# Public health actions

## 1- Diriger le volet santé publique de la réponse pandémique pour la région de Montréal

### 2- Contrôler la transmission

Réaliser une  
vigie et  
surveillance

Détecter  
les cas  
rapidement

Enquêter  
et isoler les  
cas

Identifier,  
isoler et  
suivre les  
contacts

Soutenir  
les milieux  
pour la  
prévention  
et le  
contrôle les  
éclosions

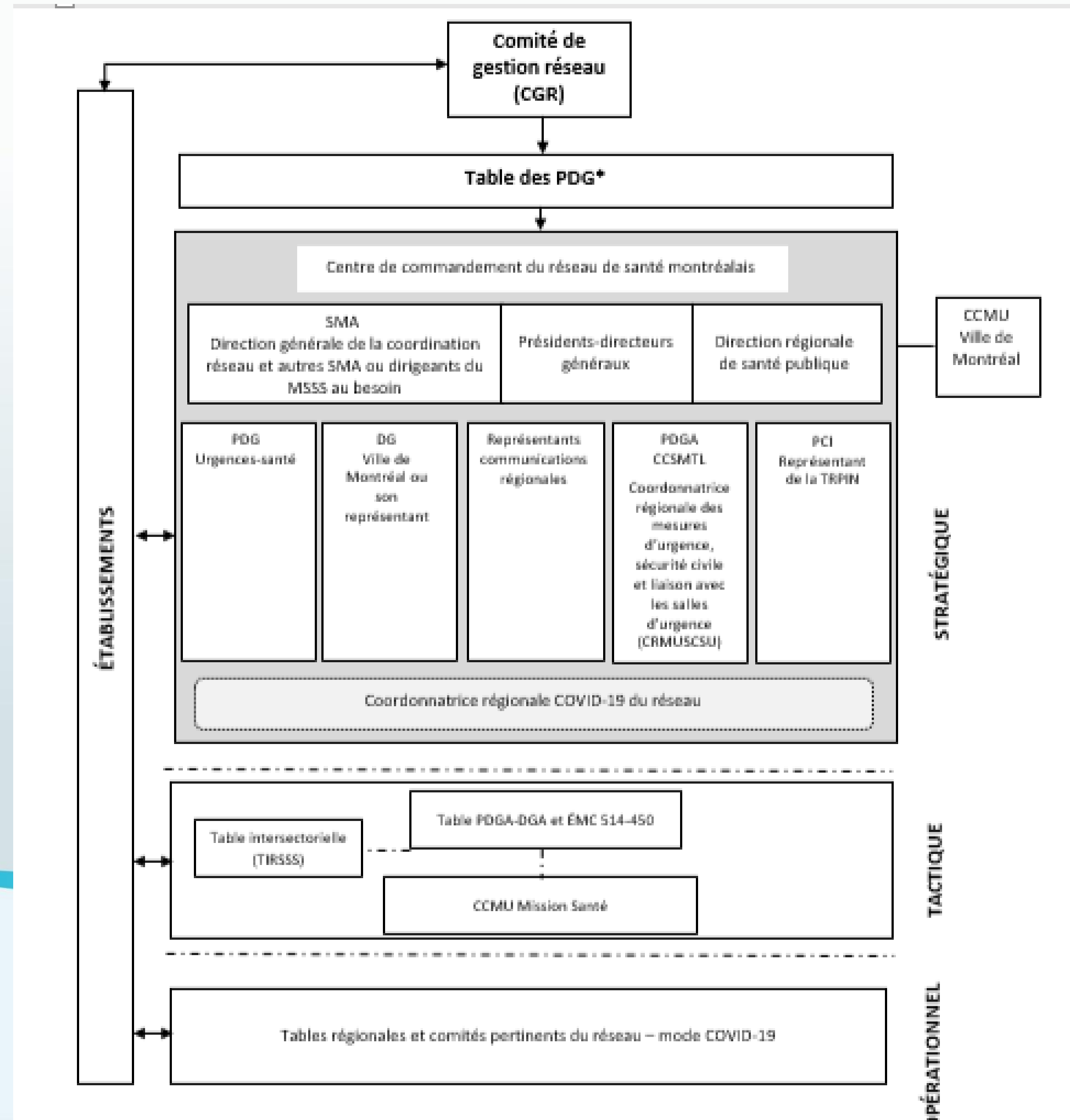
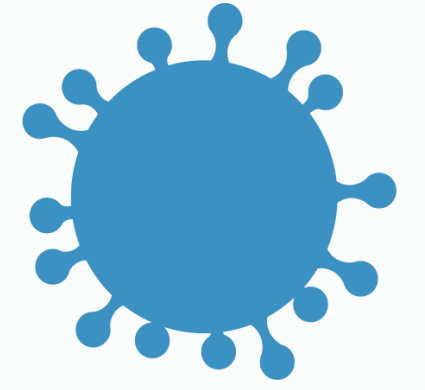
Élaborer  
une  
stratégie  
de  
vaccination

Déployer les mesures populationnelles appropriées face à la situation épidémique

## 3. Communiquer le risque et les recommandations – Engager la population et les partenaires

## 4- Mitiger les impacts collatéraux de la pandémie auprès des groupes vulnérables

# Mission santé coordination – Command centre





# Recovery plan

Reduce collateral effects and population engagement

# Pandemic and collateral effects

## Measures to reduce collateral effects

- *Exacerbation of preexisting inequalities*
- *Direct impact of the virus, and measures to manage cases and contacts*
- *Indirect impacts arising from population-based measures used to reduce virus transmission (mental health, addiction, mistreatment, isolation, deconditioning, etc.)*



AN EQUITY APPROACH TO COVID-19 *Chief Public Health Officer of Canada's Report on the State of Public Health in Canada 2020*. October 2020


Reddy SG. Population health, economics and ethics in the age of COVID-19. *BMJ Global Health* 2020;5:e003259. doi:10.1136/bmjgh-2020-003259

INSPQ pandemic ethical framework <https://www.inspq.qc.ca/publications/2958-enjeux-ethiques-pandemie-covid19> (important : relire pour voir comment citer de façon appropriée)

Society of Travel Medicine 2020 Social consequences of mass quarantine during epidemics: a systematic review

Itai Bavli. Harms of public health interventions against covid-19 must not be ignored *BMJ* 2020; 371 doi: <https://doi.org/10.1136/bmj.m4074> (Published 02 November 2020)

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# Population engagement

## Pandemic fatigue

- Pandemic fatigue is an expected and natural response to a prolonged public health crisis – not least because the severity and scale of the COVID-19 pandemic have called for the implementation of invasive measures with unprecedented impacts on the daily lives of everyone, including those who have not been directly affected by the virus itself (WHO, 2020).
- Pandemic fatigue is defined as demotivation to follow recommended protective behaviours, emerging gradually over time and affected by a number of emotions, experiences and perceptions. Humans have an essential need to feel in control of their own lives, and when this autonomy is threatened, motivation is easily lost (WHO, 2020).

# Conditions to reduce collateral impacts

- Information is key; people who are quarantined need to understand the situation
- Effective and rapid communication is essential
- Supplies (both general and medical) need to be provided. The quarantine period should be short and the duration should not be changed except in extreme circumstances
- Most adverse effects come from imposition of a restriction of liberty; voluntary quarantine is associated with less distress and fewer long-term complications
- Public health officials should emphasize the altruistic choice of self-isolating
- Health care workers deserve special attention

# Findings

- Lack of an advisory group on the collateral effects and exacerbation of social inequalities
- Many national, provincial and local measures (no country-wide plan)
- No mechanisms for discussion with the population
- Difficulty making it a priority during an emergency (need to protect resources for this mandate)
- This is more than a public health issue ... all sectors of society must be involved

# COVID-19 Pandemic Montréal Region



## QUESTIONS AND DISCUSSION



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