

THE CHURCH AND COVID-19

ECCLESIA SUA

DRE VALÉRIE J BROUSSEAU

- ▶ Lay consecrated, surgeon in Montréal
- ▶ Molecular Biology, Acadia University, Medecine McGill University, Otolaryngology - head and neck surgery McGill University, Endoscopique ear surgery British Columbia University
- ▶ Certificate in management Harvard Business School and Global Clinical Research Scholar Harvard Medical School

PLAN

- ▶ Why this presentation?
- ▶ Scientific, medical and epidemiological data
- ▶ Recommendations and solutions
- ▶ Questions

WHY?

LEADERSHIP

- ▶ Protect life
 - ▶ Beginning
 - ▶ End
 - ▶ During the whole life
- ▶ UNIQUE leadership during this pandemic
- ▶ Civil regulations vary but the **virus is the same everywhere!**
- ▶ Up to us to lead according to our values

CRITERIA

- ▶ Civil authorities
 - ▶ Economy
 - ▶ Access to healthcare
 - ▶ Societal values
- ▶ Church
 - ▶ Protect life
 - ▶ Protect those most vulnerable
 - ▶ Christian values - sharing, cooperation

CHALLENGES FOR THE CHURCH

- ▶ Number of individuals
- ▶ Individuals
 - ▶ age
 - ▶ co-morbidities
 - ▶ ministry
 - ▶ group confinement

SO FAR

- ▶ Over 80 priests have died from COVID 19 in Italy alone
 - ▶ many were already confined
- ▶ 1 bishop deceased, a few others positives ou in quarantine
- ▶ 1 Canadian Seminary with COVID 19
- ▶ Religious communities, not serving the sick
 - ▶ 4 Italy
 - ▶ 1 France, longterm care house for religious women
- ▶ Explosions of cases in jails everywhere

PROPOSITION

- ▶ This is not about elitism, protectionnism
- ▶ We have to share these recommendations with everyone
- ▶ Our presence, our behavior, our decisions will have a major impact on all members of the Church and the world
- ▶ We have to protect those who have been given to us and ourselves
- ▶ Missionary role

SCIENCE

BASIC SCIENCE

- ▶ Coronavirus:
 - ▶ a family of viruses
 - ▶ 4 common subtypes - catch in winter
 - ▶ 3 rare subtypes - killers
 - ▶ SARS-COV2 causes the disease COVID-19
 - ▶ Not a biochemical weapon
 - ▶ Few genetic variations

BIOLOGY AND TESTING

- ▶ RNA Virus
- ▶ Tests by amplifications (PCR)
- ▶ **10-15 % false negatives**
 - ▶ testing is not 100% precise
 - ▶ hence we only test people
 - ▶ at risk
 - ▶ clinical signs
- ▶ A negative test today does not preclude one from contracting the virus tomorrow!

TRANSMISSION

- ▶ Virus is found in secretions
 - ▶ nasal, saliva
 - ▶ stool
 - ▶ *not in urine*
- ▶ Contamination
 - ▶ eyes, nose, mouth
 - ▶ Wounds on the hands, skin

VIRAL PERSISTANCE – TRUE OR FALSE



- ▶ Full survival length - No
 - ▶ clinically inexact
- ▶ Half-lives - better approximation
 - ▶ stainless steel 5 h 28 min
 - ▶ plastic 6 h 19 min
 - ▶ cardboard 3 h 30 min
 - ▶ copper 46 min

CLINICAL SIGNS

- ▶ Incubation
 - ▶ symptoms begin 3 to 10 days after exposure
 - ▶ average 6 days
- ▶ Major symptoms:
 - ▶ Dry cough
 - ▶ Fever
 - ▶ Breathing difficulty
 - ▶ Gastro-intestinal problems
 - ▶ Loss of smell - often in less acute patients

COVID-19

- ▶ Disease caused by the virus
 - ▶ 80% few or no symptoms
 - ▶ 20% need health care
 - ▶ 2.4% -5% mortality worldwide (10% in Italy, 0.9% South Korea)
 - ▶ Those who need respiratory support
 - ▶ Up to 62% mortality
 - ▶ Intensive care with ventilator
 - ▶ Up to 81% mortality

AGE AND MORTALITY – CHINA

Age	décès-cas	CFR %	CI 95%
< 9 ans	0-416	0	0.03-1.02
10-19	1-549	0.18	
20-49	63-19790	0.32	0.25-0.41
50-59	130-10 008	1.3	1.1-1.5
60-69	309-8583	3.6	3.2-4.0
70-79	312-3918	8.0	7.2-8.9
> 80	208-1408	14.8	13.0-16.7

MEDICAL RISK FACTORS FOR COVID 19 MORTALITY

- ▶ CFR 10.5% Cardiovascular disease
- ▶ CFR 7.3% Diabetes
- ▶ CFR 6.0% Hypertension
- ▶ CFR 6.3% Chronic pulmonary disease - includes asthma and allergic asthma
- ▶ CFR 5.6% Cancer
- ▶ Chronic renal disease
- ▶ CFR 0.9% No active disease

MORTAL RISK FACTORS IN ITALY

- ▶ On 355 deceased patients
 - ▶ 49% hypertension
 - ▶ 36% diabetes
 - ▶ 33% cardiac condition

TREATMENTS

- ▶ Vital support: oxygen, ventilator, etc
- ▶ Chloroquine - Plaquenil
 - ▶ in vitro data only, in vivo studies ongoing
 - ▶ no clinical benefit shown at this time
- ▶ Blood serum transfusion from patients who have recovered
 - ▶ used during the Spanish flu pandemic of 1918
 - ▶ several studies ongoing worldwide
 - ▶ in the short term our best bet for a quick solution

TRANSMISSION RISKS

- ▶ Viral concentration: method, timing of infection, severity of infection
- ▶ Transmission by asymptomatic individual, COVID ?
 - ▶ unknown % risk
- ▶ Transmission by person who is COVID +
 - ▶ 1% to 5%
- ▶ After clinical resolution, the virus is **still** detectable and being shed
 - ▶ for 8 to 37 days - average 20 days
 - ▶ **uncertain** if it is still transmissible or not

SECOND INFECTION?

- ▶ Viral particles are still detected in some individuals who seem cured
- ▶ Uncertain to know if they have a second infection
- ▶ Uncertain if the clinical symptoms could recur
- ▶ We need to continue to observe these patients

HOW TO PROTECT YOURSELF

- ▶ Do NOT touch your face!!!
- ▶ Wash your hands
- ▶ Wash food items, store items
 - ▶ A bit of soap and water, rub, rinse
 - ▶ Wait 4 hours before putting dry goods away
- ▶ Clean surfaces, especially common areas
 - ▶ door knobs, light switches, sink taps
 - ▶ dining tables, church benches, etc

HOW TO PROTECT MYSELF – OTHERS

- ▶ Do not act as if you are afraid to catch it
- ▶ Act as if you were **positive!**
 - ▶ Active individuals
 - ▶ Distancing and strict separation from others who are 'fixed'
 - ▶ Inactive individuals 'fixed' - alone or group
 - ▶ Strict confinement of **all**
- ▶ **Close to half of the planet is under confinement!**

COVID STATUS WORLDWIDE – CANADA

▶ World

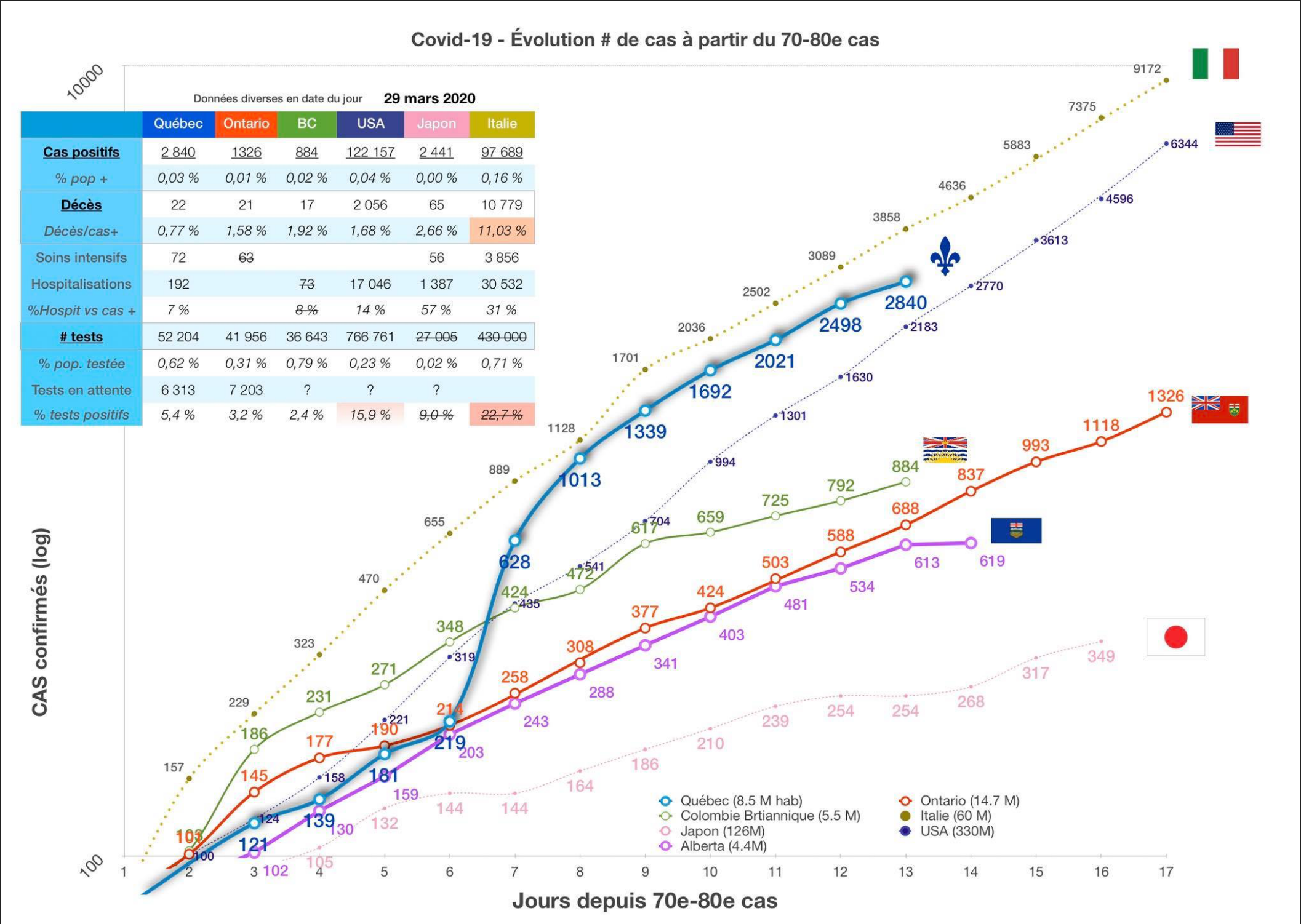
- ▶ 718 685 total
- ▶ 33 881 deaths
- ▶ 149 076 remissions

▶ Canada

- ▶ 6 280 total
- ▶ 64 deaths
- ▶ 466 remissions

▶ <https://coronavirus.jhu.edu/map.html>

STATUS QUÉBEC - ONTARIO MARCH 29TH



TRANSMISSION MODES

- ▶ Surfaces

- ▶ <https://www.facebook.com/Corporatebytes/videos/198646281440723/?t=63>

- ▶ Air

- ▶ sneeze: 35 m/sec - 10 meters
 - ▶ cough - 3 to 5 meters
 - ▶ suspension in air
 - ▶ transmission through ventilation, surfaces
 - ▶ infection of 1 to 2 individuals - silent
 - ▶ 15 to 20 individuals in 7 to 10 days

EPIDEMIOLOGICAL PREDICTIONS

- ▶ Population Canada: 37.59 millions
- ▶ Currently 6 280 cases
- ▶ Effect of the intervention
- ▶ <http://gabgoh.github.io/COVID/index.html>

STATUS IN HOSPITALS

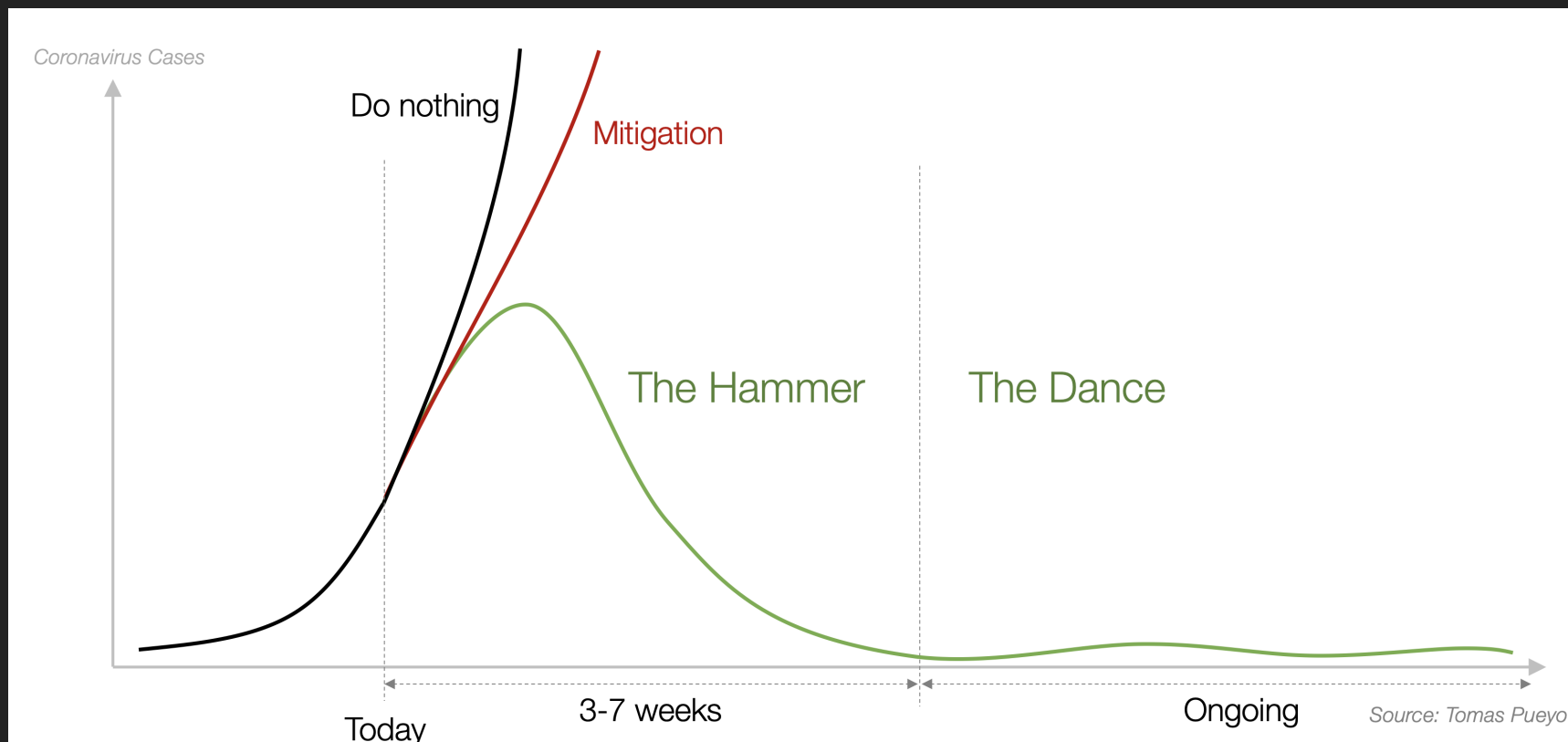
- ▶ All patients treated like COVID + until proven otherwise
- ▶ Huge weight on the system
- ▶ Manage resources as if all patients were COVID +
 - ▶ whatever the health condition, prioritise beds, ventilators, etc
 - ▶ priority algorithms in place

PRIORITY OF CARE

Table 2. Ethical Values to Guide Rationing of Absolutely Scarce Health Care Resources in a Covid-19 Pandemic.	
Ethical Values and Guiding Principles	Application to COVID-19 Pandemic
Maximize benefits	
Save the most lives	Receives the highest priority
Save the most life-years — maximize prognosis	Receives the highest priority
Treat people equally	
First-come, first-served	Should not be used
Random selection	Used for selecting among patients with similar prognosis
Promote and reward instrumental value (benefit to others)	
Retrospective — priority to those who have made relevant contributions	Gives priority to research participants and health care workers when other factors such as maximizing benefits are equal
Prospective — priority to those who are likely to make relevant contributions	Gives priority to health care workers
Give priority to the worst off	
Sickest first	Used when it aligns with maximizing benefits
Youngest first	Used when it aligns with maximizing benefits such as preventing spread of the virus

QUARANTINE

- ▶ Objective: reduce mortality rate and improve access to healthcare
- ▶ Depends on every single individual's compliance
- ▶ Does not make the virus disappear...



QUARANTINE : HOW LONG?

- ▶ Debate
- ▶ Depends on compliance, economy, research
- ▶ Most agree 6 to 12 weeks
- ▶ We need more than just a plan
 - ▶ short term
 - ▶ medium term
 - ▶ long term

PROPOSITIONS

RISK FACTORS – CHURCH

- ▶ Age, co-morbidity, health status
- ▶ Risk of transmission increases **exponentially** with:
 - ▶ number of individuals under the same roof
 - ▶ number of individuals leaving and re-entering
 - ▶ total number of individuals entering: community members, employees, visitors, etc

CARE LEVELS

- ▶ Each member of the community, irrespective of health status should determine their level of care
 - ▶ No CPR
 - ▶ Treatment of morbid conditions only
 - ▶ Full care
- ▶ **DO NOT** reduce the level of care without valid reason!
- ▶ The pandemic **must not** change the care level!

CATEGORIES OF MEMBERS

- ▶ Identify 'fixed' and 'active' individuals

- ▶ fixed

- ▶ **never** leave the facility or sector within facility - **CONFINEMENT**
 - ▶ **are never** in contact with people from the outside
 - ▶ form a unit - a house
 - ▶ can interact between themselves without social distancing

- ▶ active

- ▶ are in contact with the outside - shopping, meetings, employees
 - ▶ must do social **DISTANCING** at all times
 - ▶ must remain separate '**quarantined**' from the 'fixed' group
 - ▶ are **dangerous** for the 'fixed' group

INDIVIDUALS

- ▶ Maximize the number of 'fixed' individual
- ▶ Minimize the number of 'active' individuals
- ▶ Make sure the two **DO NOT** come in contact with one another!
 - ▶ otherwise there is NO POINT in confinement!
 - ▶ au moins prendre toutes les mesures possibles pour réduire au maximum les contacts

RISK CATEGORIES

- ▶ Small group: up to 10 or so
 - ▶ easy and efficient prevention
- ▶ Large groups: 10+
 - ▶ danger increases exponentially with the # of individuals
 - ▶ reduce risk by group fragmentation into smaller units
 - ▶ isolation of smaller units
 - ▶ complete closure of common areas
 - ▶ absolutely no contact with employees unless for medical reason

DANGEROUS PLACES IN THE HOUSE

- ▶ Places to close completely for larger houses (10+)
 - ▶ Cafeteria
 - ▶ Common chapel
 - ▶ Shared spaces
 - ▶ living room
 - ▶ television room
 - ▶ parlours
 - ▶ Shared bathrooms - reserve for personnel?

GATHERINGS : STOP!

- ▶ Close all churches, chapels, etc
- ▶ Discontinue all gatherings, even small ones
 - ▶ Encore to **all members** even authorities
- ▶ Hot spots in Montreal linked directly to faith-related gatherings
- ▶ We do not want to be the source of transmission
 - ▶ moral reasons
 - ▶ financial reasons : tickets, law suits

MINISTRY : STOP!

- ▶ **Always start from the position: I am infected!**
- ▶ Isolation
 - ▶ Minimize personal exposure
 - ▶ Minimize other people's exposure
- ▶ Shortage of medical protective gear
- ▶ Discontinue
 - ▶ all ministry requiring to leave your home
 - ▶ receiving people home
- ▶ Transform the ministry

SOCIAL DISTANCING

- ▶ 2 meters
- ▶ Pertinent for:
 - ▶ society
 - ▶ large groups (10+)
 - ▶ inevitable situations - 'calculated dangers' nursing homes employees
 - ▶ groups with several groups of people giving services: medical, kitchen, maintenance
- ▶ Wash hands, surfaces

MEDICAL STAFF

- ▶ In and Out with protocols
 - ▶ Restricted entrance location - separate - and restrict access to space, floor, unit
 - ▶ Personal hygiene at entrance and departure
 - ▶ Cleaning surfaces at entrance and departure
- ▶ Regularity in the personnel
 - ▶ same floor, same patients, restrict access
 - ▶ **DO NOT WORK AT MULTIPLE CARE CENTERS!**
 - ▶ minimize footprint - treatment space

NON MEDICAL STAFF

- ▶ In and Out with protocols at specific entrance points
- ▶ A minimal number of individual get in contact with them
- ▶ Minimize all contacts
- ▶ Do not let them get into common spaces
- ▶ Establish a protocol for cleaning tools, spaces, etc
- ▶ Separate wash rooms
- ▶ Require disinfection prior to leaving

ACTIVE MEMBERS – SOLITARY ISOLATION

- ▶ For 'active' individuals who are obliged to continue to go out or have outside contact or contact with employees, etc
 - ▶ must be vigilant and wash their hands, change, protect others
 - ▶ act as if their are COVID +!
 - ▶ maintain a quarantine **separate** from the group
 - ▶ social distancing **not enough**
- ▶ If all members of your group have been in completely closed quarantine for more than 14 days - no employees or outside contact - no need for distancing!

ACTIVE MEMBERS : CONTROL OF ENTRANCES – EXITS

- ▶ Minimize entrances - exits
 - ▶ Criteria:
 - ▶ medical, food, obligation
- ▶ Keep a register of entrances - exits with names and names of contacts if possible - will greatly help in case of contamination
- ▶ Reduce risks:
 - ▶ isolation
 - ▶ private bathroom
 - ▶ private dining area

CONTINGENCY PLAN : ADMINISTRATION

- ▶ Objective: if an administrator gets sick, replacement is prepared
- ▶ Administrators should **not** get in contact with one another
- ▶ Ensure that the hierarchy of responsibilities is clear
- ▶ Ensure that people know where to get the information
- ▶ **DO NOT** enter in direct contact with nurses, medical staff, employees, unless you are the beneficiary of their care!

CONTINGENCY PLAN : WHERE TO PLACE THE SICK?

- ▶ Many houses are already full
- ▶ Where should you place your 'new' patients?
 - ▶ COVID +
 - ▶ COVID -
- ▶ How to protect your house? The other members?
- ▶ How to re-integrate the group?

INCREASED RISK : CARE CENTRES

- ▶ The larger the house, the higher the risks
- ▶ The more employees, the higher the risks
- ▶ Every single day, the health care system is more saturated, with less capacity
- ▶ COVID + in a house with 100 members
 - ▶ 20% hospitalized = 20 members
 - ▶ In itself your house risks saturating the local hospital
 - ▶ That means no care for other patients irrespective of COVID status
 - ▶ Prevention is the only way to prevent a disaster

CONTINGENCY PLAN : CARE CENTER

- ▶ Objective: protect patients and all members
- ▶ Fragment areas into smaller units
 - ▶ fragment the center into subunits, isolate each one and keep them separate: separate personnel, etc
 - ▶ restrict to a strict minimum entrances-exits of each wing - personnel, patients, members
 - ▶ by creating isolated care units, you reduce the risk of massive infection and ease intervention

CONTINGENCY PLAN : CARE CENTRES

- ▶ Ideal group:
 - ▶ always the same personnel, minimal number
 - ▶ personnel serves only one group
 - ▶ patients by risk category
 - ▶ number of patients ?
 - ▶ eat in their room
 - ▶ distribution of meals by medical personnel: **not kitchen!**

CONTINGENCY : HOSPITAL CARE

- ▶ Do not hesitate to send a patient to hospital if needed
- ▶ Consider
 - ▶ the patient will be considered COVID + until proven otherwise
 - ▶ care is more complex to deliver
 - ▶ access to visitors will be restricted - impossible
 - ▶ return could be rapid and sudden - be ready

CONTINGENCY PLAN : RETURN FROM HOSPITAL

- ▶ Objective: avoid contamination the group by external return
 - ▶ The hospital cannot guarantee COVID status!
 - ▶ Predetermined space, separate, private
 - ▶ Designated and restricted personnel
 - ▶ Private bathroom, private meals
- ▶ Observe a 14 day quarantine before entering the group observer une quarantaine de 14 jours avant de réintégrer le groupe ? ceci n'est pas une garantie!
- ▶ ? 30 days ? research is unclear

CONTINGENCY PLAN : COVID +

- ▶ Objectives:
 - ▶ protect the community
 - ▶ avoid transmission
- ▶ Absolute isolation between the person and the group
- ▶ Quarantine:
 - ▶ positive person
 - ▶ any person who got in contact with her
- ▶ Closure to all other members
 - ▶ Unit closure? easier if already segmented

CONTINGENCY PLAN : COVID +

- ▶ Pre-determined space, room, private bathroom
- ▶ No external contact
- ▶ Remove quarantine accord to public health
 - ▶ do not forget that the virus continues to shed for an average of 20 days after symptom resolution
- ▶ Desinfection of the space after the quarantine
 - ▶ ideally for the person herself
 - ▶ otherwise, professionnall

IN EXTREMIS MINISTRY

- ▶ Minimal: avoid using scarce resources
- ▶ Dedicated individuals only
 - ▶ isolated from the group
 - ▶ conscious of the risks
 - ▶ knows about prevention measures
- ▶ Preserve the clergy: common ecclesial need

REFERENCES

- ▶ Health Canada

- ▶ <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html>

- ▶ WHO

- ▶ <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

- ▶ CDC

- ▶ <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

REFERENCES

- ▶ Université Oxford - Medical evidence
 - ▶ <https://www.cebm.net/covid-19/>
- ▶ Université Johns Hopkins - Internal data
 - ▶ <https://coronavirus.jhu.edu/map.html>
- ▶ Université Harvard - Medical ressources
 - ▶ <https://www.health.harvard.edu/diseases-and-conditions/coronavirus-resource-center>
- ▶ London School of Hygiene and Tropical Diseases
 - ▶ <https://www.lshtm.ac.uk/research/research-action/covid-19>

QUESTIONS ?