TRAINING ► THE RIGHT THING. THE RIGHT WAY.

Workers Health & Safety Centre

COVID-19: Stopping the spread and opening workplaces - safely

July 23, 2020

11:00 am

cope: 343

What we'll look at today

- concept of "basic reproductive number" – or R
- use of closings to reduce the COVID-19 virus' reproduction – "flatten the curve"
- how workplace precautions contribute to lowering the virus' reproduction
- creating trade-offs: increasing workplace safety to allow workplace openings
- effect of different work and social activities on reproduction
- is "return to normal" a return to shutdowns?
- if we can't have it all, we need to discuss what we need

What is a reproduction number?

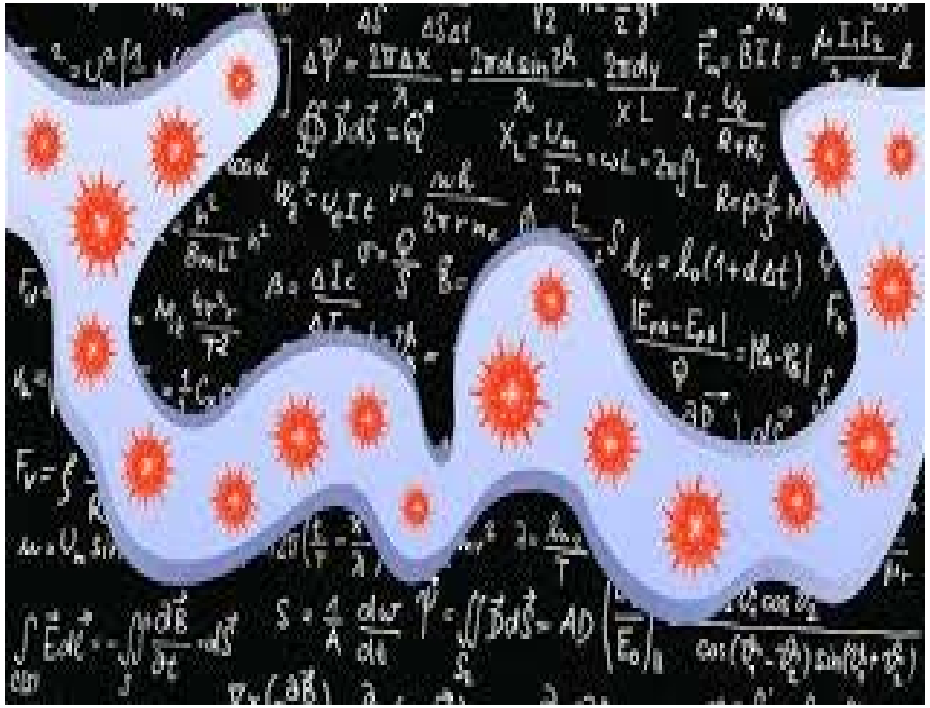
- reproduction number, R_o (pronounced R nought)
- reproduction number is a measure of infectiousness
- basic reproduction number (R_o) is an epidemiologic matrix, using many inputs
- provides expected number of cases directly generated by one case in a population where all individuals are susceptible to infection

What is COVID-19's reproduction number?

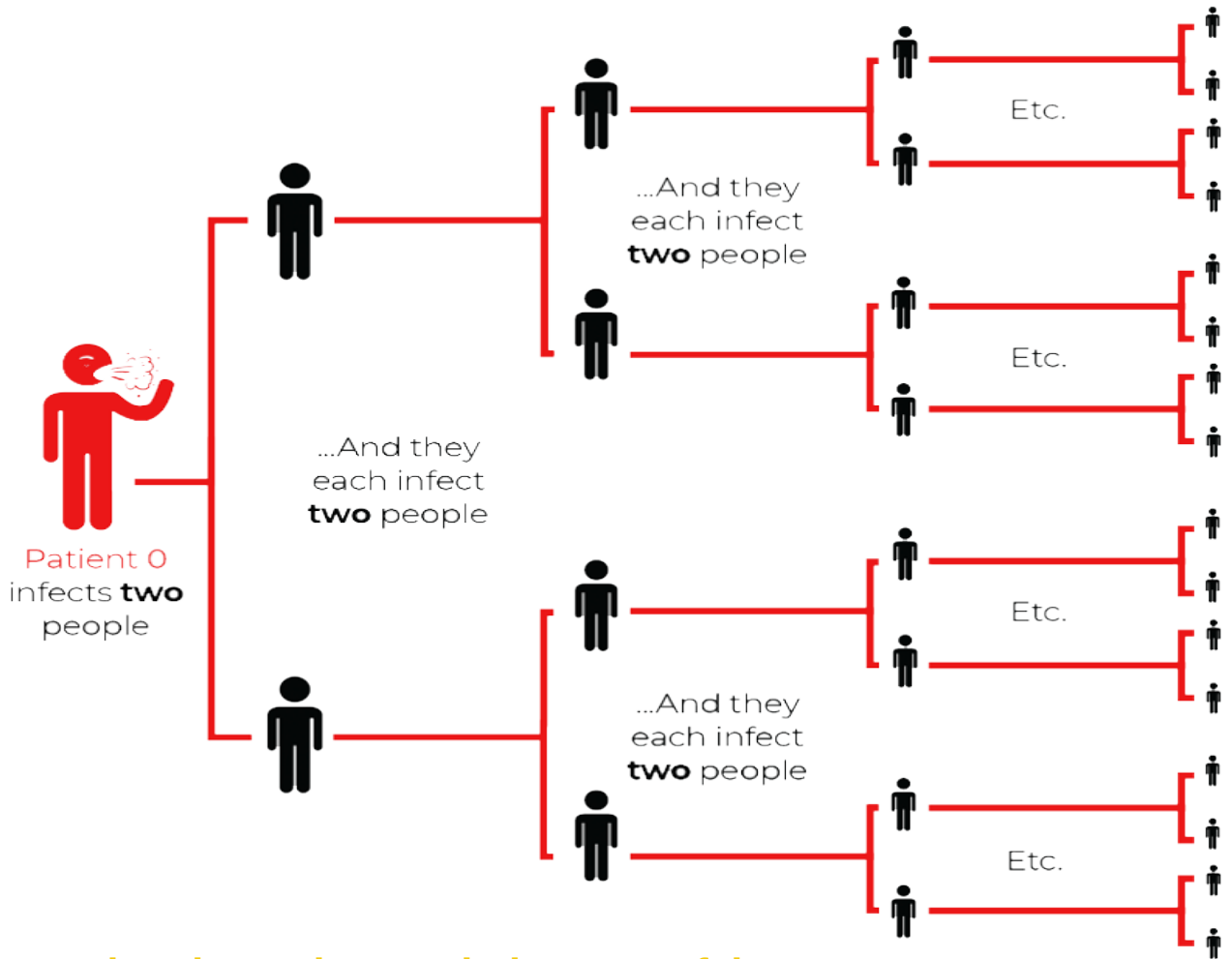
- World Health Organization estimates coronavirus has an R_o of 2.0 to 2.5 (based on data as of March 6th)
- other studies have estimated R_o in the following ranges:
  - 1.5 to 3.5
  - 2.06 to 2.52 with a median estimate of 2.28
  - 1.4 to 6.49 with a mean of 3.28 and a median of 2.79
- R_o for measles ranges from 12 to 18
- influenza virus has an R_o around 1.4

Determining the R_o

- based on hard science, forensic investigation, complex math models and guessing
- many unknown factors
- R_o can change over time
- asymptomatic or mild cases cause inaccuracies in R_o

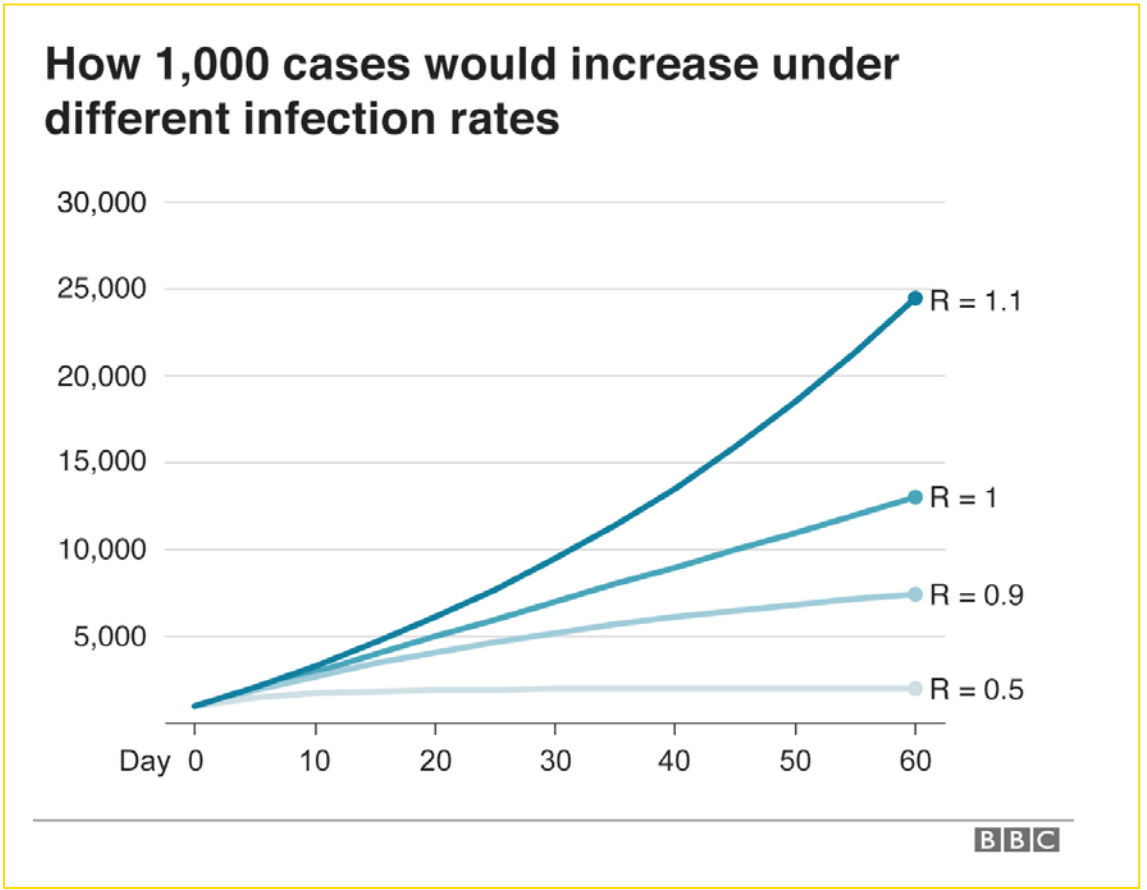


What does Ro2 look like?

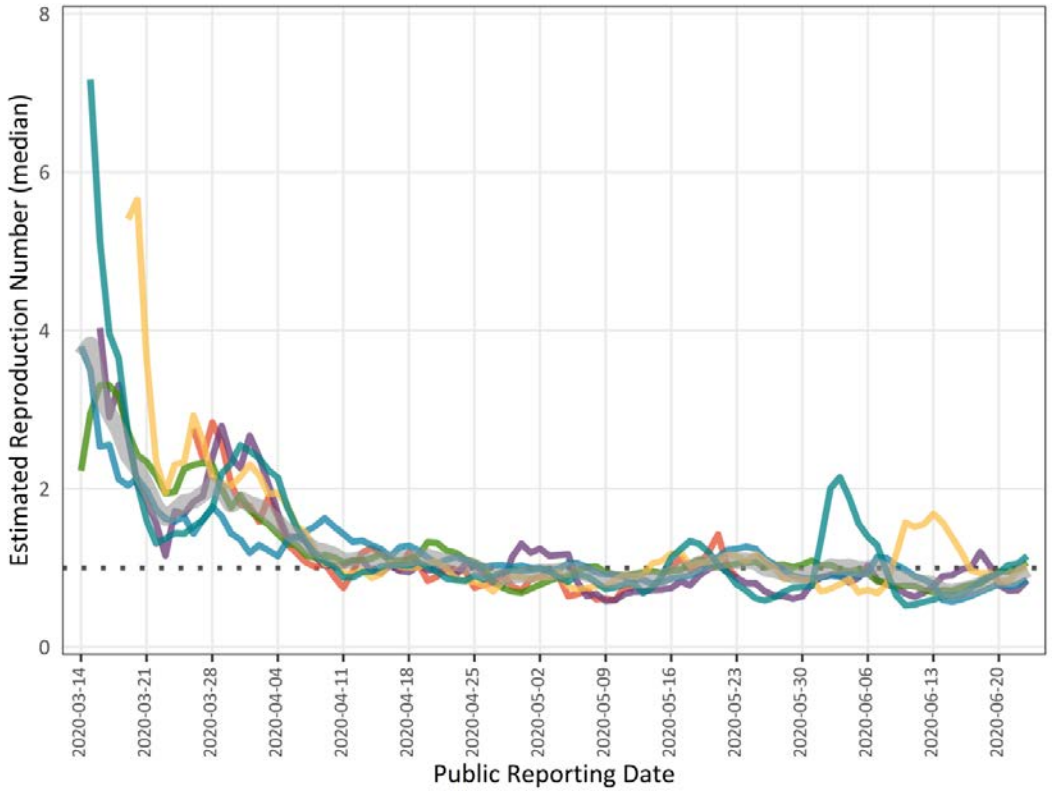


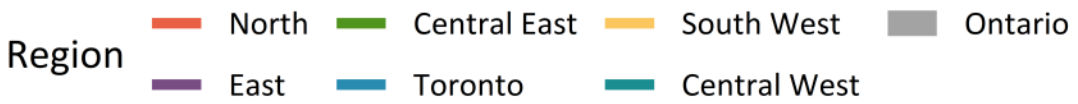
Target reproduction number

- if R_o is greater than 1, outbreak continues because average infected person is infecting at least one other person
- if R_o is less than 1, outbreak is coming under control because an infected person is less likely to spread infection



Reproduction number in Ontario, by week and region

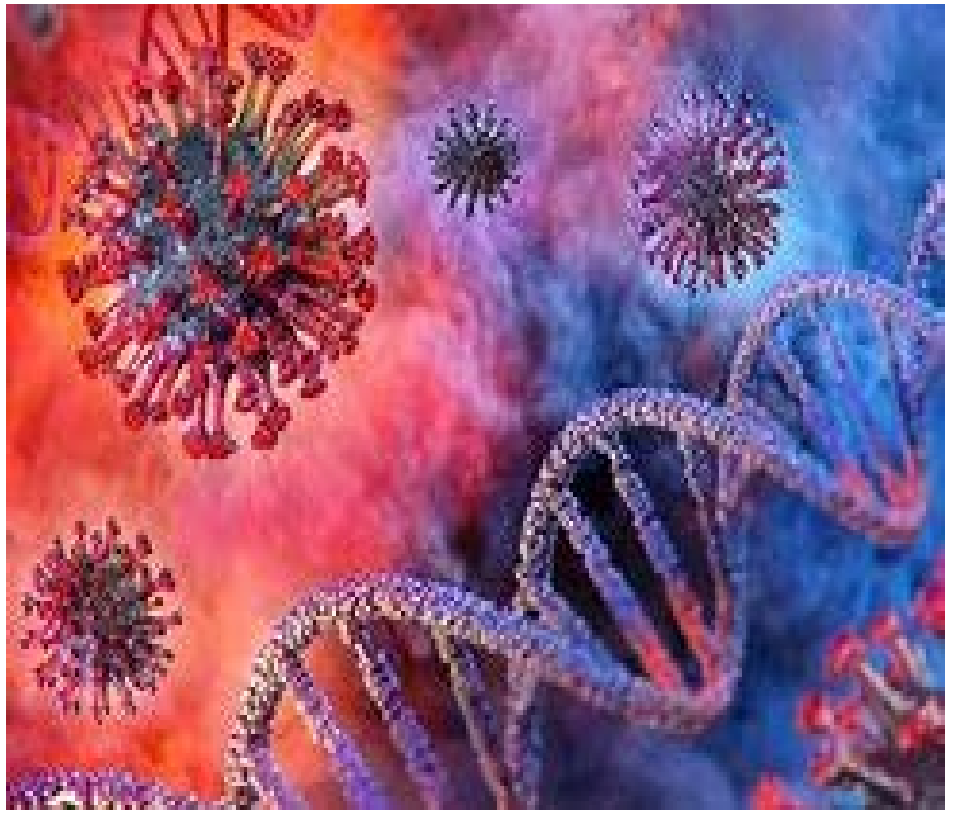




- **Data Source:** integrated Public Health Information System (iPHIS), Coronavirus Rapid Entry System (CORES) database, The COVID-19 Ottawa Database (The COD), COVID-19 Case and Contact Management tool (CCMtool).
- *Estimates for the reproduction number were not provided if there were <12 cases reported for a region within the 7 days prior to the public reporting date.

Ontario's current reproduction number

- reproduction number was 1.0 (June 17 – 23) up slightly from 0.9 the previous week (June 14 – 20)
- median reproduction number ranged from 0.8 in Toronto to 2.1 in Northern Ontario
- median reproduction number remained stable in Toronto and increased in Northern, Eastern, Central East, Central West, and South West regions (June 17 – June 23) compared to the prior week



How did the R_o decrease?

- R_o decreased as a result of public health restrictions, actions taken by employers and public cooperation
- restrictions and actions effective in flattening the curve and decreasing R_o include:
  - school and business closures
  - stay at home requirements
  - social distancing requirements
  - working remotely
  - increased cleaning and disinfecting
  - limiting social gatherings
  - wearing a face covering in public

Returning to normal

- the “normal” we once knew is not an option for now
- if society returned to the “normal”, R would soar above 1
- strict measures, procedures and precautions must be in place as we enter stage 3 to prevent a resurgence
- second wave could require Ontario to return to a previous stage or new stay at home orders

California first US state to order “shelter in place”

California timeline

Date	Action
March 7 - 15	closures of schools and non-essential
March 19	state wide stay at home order
May 8	stage 2 – some businesses can reopen
June 12	stage 3 – high risk businesses reopen
June 18	requirement to wear masks in public
July 13	many regions delay re-openings or close

California's case numbers

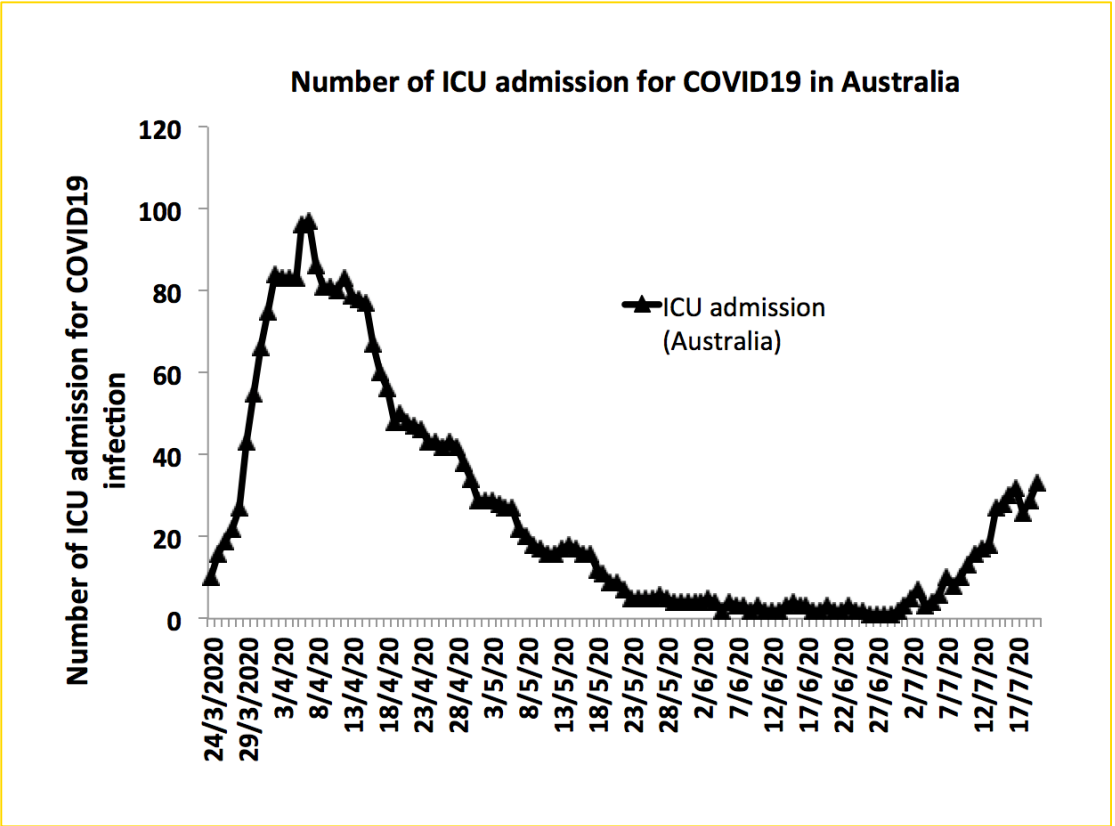
- March 19 – stay at home order - 161 new cases, 1,014 total cases
- May 8 – Stage 2 – 1,682 new cases, 63,800 cumulative cases
- June 12 – Stage 3 – 2,982 new cases, 146,659 cumulative cases
- June 18 – wear mask order – 3,385 new cases, 167,153 cumulative cases
- July 15 – delayed reopening and closing again – 8,903 new cases, 333,357 cumulative

Australia

- March 19 – Australia closes borders
- March 20 – Social distancing rule of 4 square metres per person
- March 22 – Australia closes down non-essential businesses
- March to April – individual states impose closures, lock-downs and restrictions

Victoria and NSW reinstate restrictions

- May 15 – slight re-opening with social distancing and restrictions
- mid-June – eased public gatherings, reduced distancing to 2 square metres
- July 4 – some states reinstate rules and stay at home orders



Here we go again…

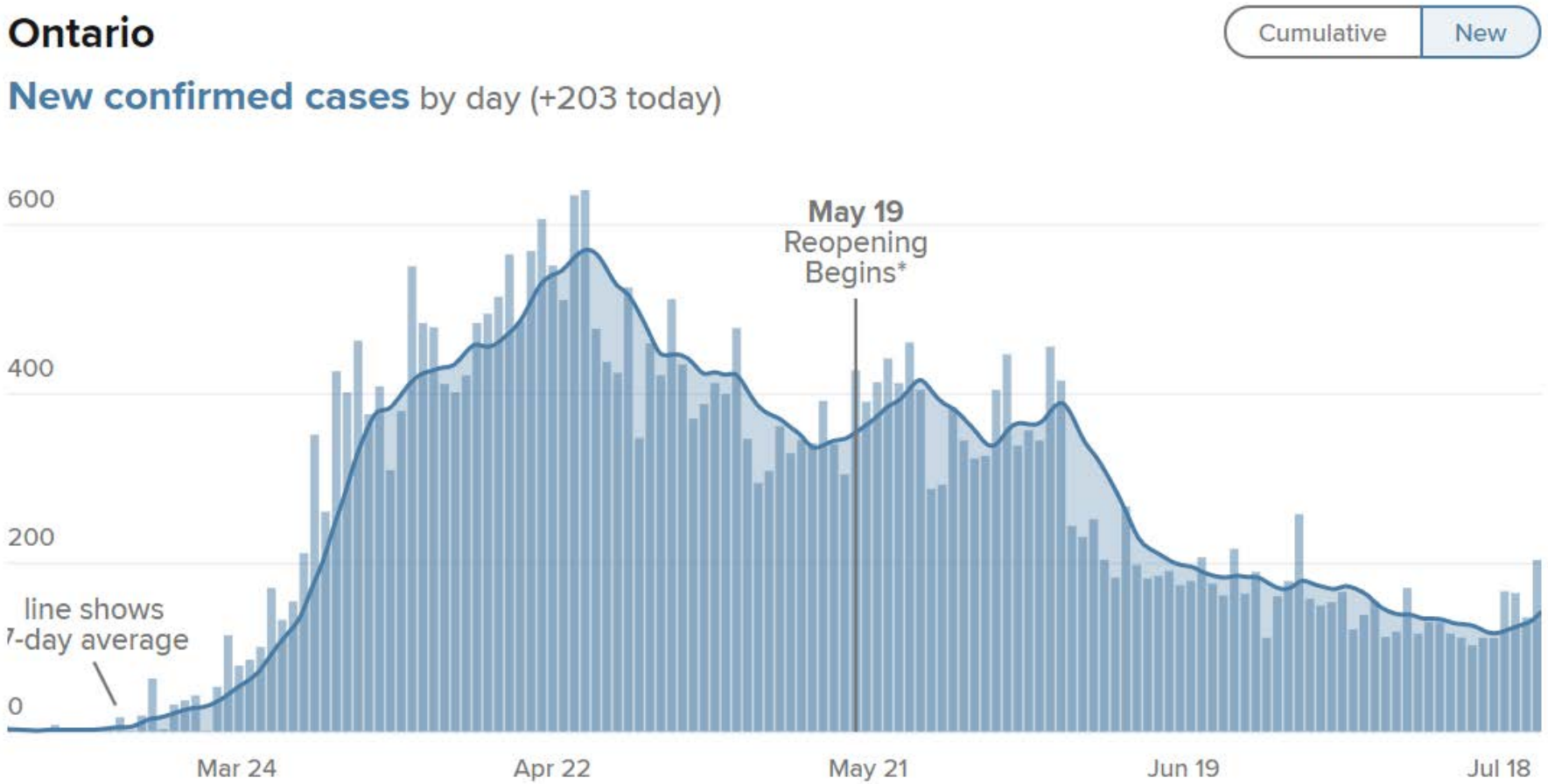
- TEXAS: non-essential businesses
- FLORIDA: bars and nightclubs
- INDIA: areas back in lockdown
- CHINA: schools and theatres
- GERMANY: two districts after meat processing plant outbreak
- IRAN: cities in 11 provinces shut down again

Hong Kong COVID-19 interventions

- 1,655 cases and 10 deaths total
- population of 7.5 million
- swift implementation of measures
- work from home = 67% transmission reduction
- physical distancing measures and closures of high risk places and facilities = 58% transmission reduction

Are we ready for the next stage?

Ontario cases



Importance of workplace precautions

- working remotely
- distancing
- installation of barriers
- proper cleaning and disinfecting
- increased ventilation
- limiting number of people allowed in establishment at any given time
- screening
- sick time policies
- PPE

Identifying hazards – joint committees

- evaluate workplace and it's systems to determine if workplace is ready for workers to return
- check for hazards associated with prolonged shutdown (e.g. mold, water systems, air, etc.)

- conduct an inspection of the workplace to identify hazards and potential hazards, including those that could increase COVID-19 transmission

Hazard assessment

- assessment includes looking at jobs and tasks workers are required to do
- with respect to COVID-19 it's important to consider:
  - **contact with others**: how much does this job require the worker to be in contact with others in order to perform it?
  - **physical proximity**: to what extent does this job require the worker to perform tasks in close physical proximity to others?
  - **exposure to disease and infection**: how often does this job require exposure to hazardous conditions?

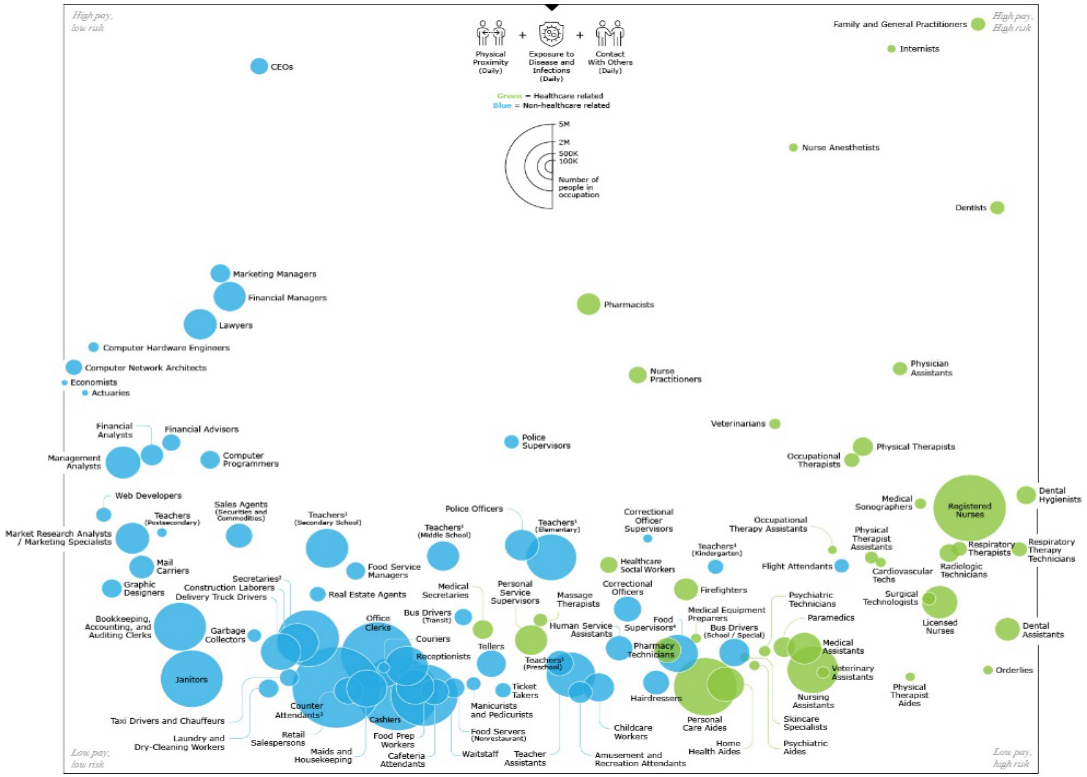
Hazard control

- ensure distancing by modifying or adjusting workstations, furniture, etc.
- use signs, markers or visual cues such as decals placed 2 m apart
- install barriers to separate workers and visitors
- space or remove chairs in communal areas to maintain distancing
- take steps to improve ventilation by increasing percentage of outdoor air, increase airflow supply, etc.

Hazard control

- increase air filtration, use high-efficiency air fan/filtration systems
- change work timing (e.g., stagger start, break and end times)
- increase workplace cleaning and disinfecting
- provide time for workers to wash their hands and access to soap, clean water and paper towel
- provide personal protective equipment
- establish policies and procedures (e.g., sick time, reporting illness, etc.)

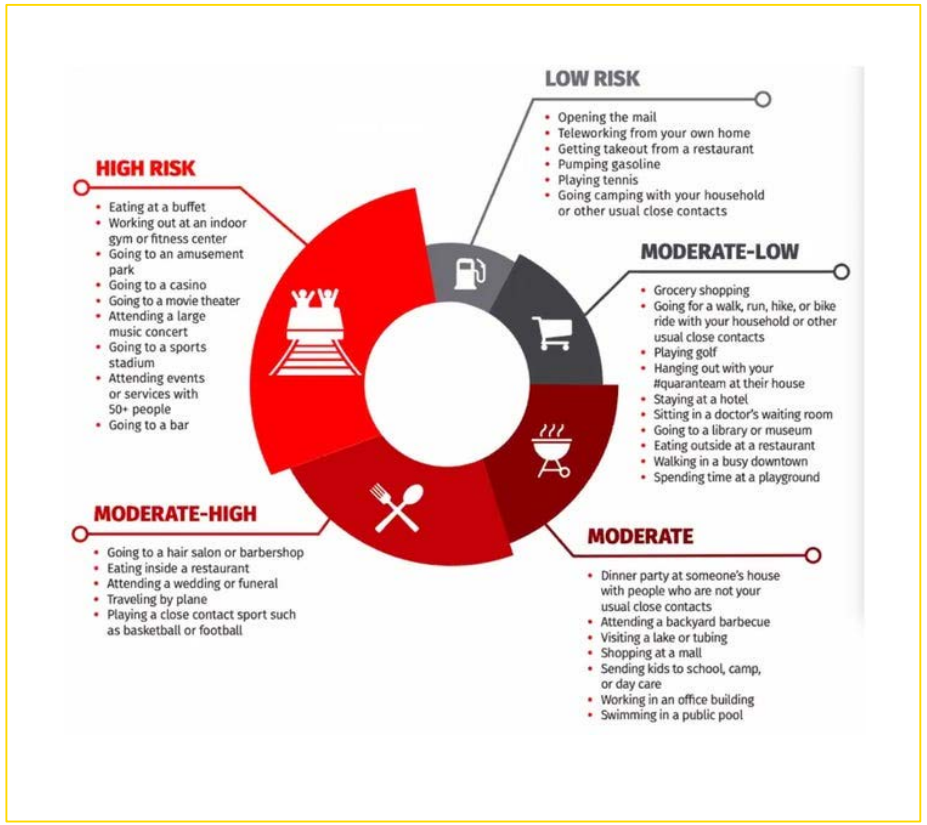
Occupations – high potential for transmission



- in addition to health care workers, the following are deemed high potential occupations for transmission:
  - cashiers, janitors, teachers, teaching assistants, housekeeping, retail workers, delivery drivers,

Activities - high potential for transmission

- in addition to occupations, various activities have been evaluated to determine potential for COVID-19 transmission
- nail salons, barbershops, restaurants/bars (inside), planes, gyms, movie theatres, amusement parks, sports stadiums are some of the places where it is deemed there is a moderate to high potential of COVID-19 transmission



WHSC training and resources

- now offering virtual classroom training
- includes the most popular programs, e.g., certification training for joint health and safety committee members
- new course on COVID-19
- register for our virtual classroom training on our website or by contacting one of our training services representatives.

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