Ku-gaa-gii pimitizi-win:

The COVID-19 cohort study of people experiencing homelessness in Toronto, Canada

Lucie Richard, Dr. Jesse Jenkinson, Olivia Spandier, Dr. Sharmistha Mishra, Frank Crichlow, and Allison Dyer

CAEH Conference, November 2nd 2022

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Land acknowledgement

This conference is taking place on land that has been home to First Nations for thousands of years. Toronto exists on the ancestral territory of the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples, and is home today to a vast diversity of First Nations, Inuit and Métis individuals from across Turtle Island.

Ku-gaa-gii pimitizi-win:
life is always/forever moving

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Acknowledging Terminology:

People experiencing homelessness

Session Outline

1   Introduce the study and share initial findings

2   Discuss and share lessons learned collecting data during COVID-19 pandemic

3   Present a mathematical model to support future strategies and policies that minimize risk of outbreaks and support advocacy

4   Highlight necessary improvements for researchers with lived expertise

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Part 1 :

Introducing the

Ku-gaa-gii pimitizi-win study

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Motivation for the study

- People experiencing homelessness often reside in settings with traits ideal for the spread of COVID-19 (eg. crowded, shared sleeping spaces)

- As a group, people who experience homelessness also have higher rates of health conditions associated with poor COVID-19 outcomes
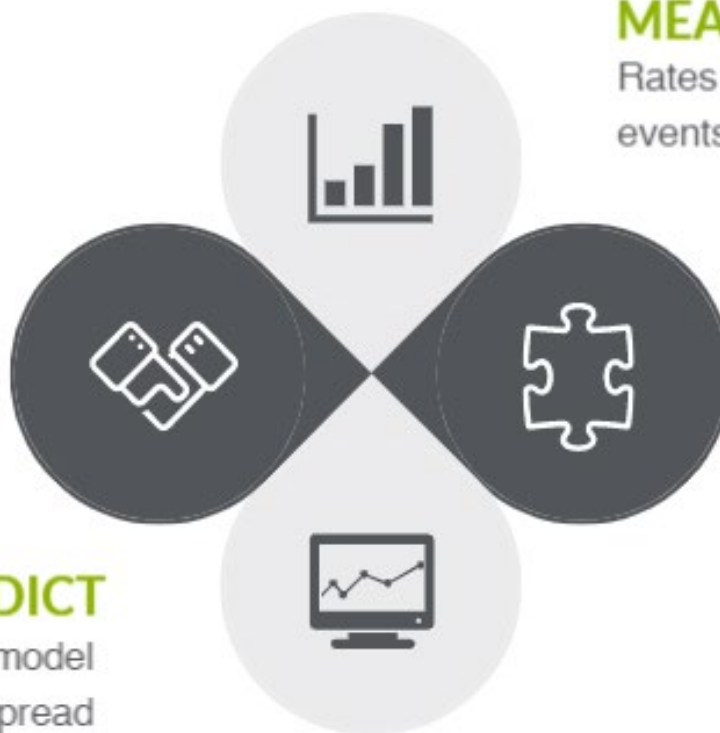
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Together, these realities mean that COVID-19 poses a threat to the health of people who experience homelessness.

We also know that **vaccination** is one of the best protections against serious illness from COVID-19 infection, yet early reports suggested that **rates of vaccination among people experiencing homelessness might be low.**

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Quant and Qual Study goals

MEASURE
Rates of COVID-19 related events in this population

UNDERSTAND
Pandemic experiences and views on vaccination of people experiencing homelessness during the pandemic

ASSESS
Factors (e.g. housing) thought to be linked with COVID-19 infection and related outcomes

PREDICT
Develop a mathematical model of how COVID-19 might spread among people experiencing homelessness in urban settings

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Quantitative Methods

1. **Recruitment: June - September 2021** from 61 shelters and physical distancing hotels across Toronto, and 1 urban encampment

2. **736 individuals**: survey and biological samples (blood, saliva) to test for current/past COVID-19 antibodies

3. **Follow up every 3 months** over the next year to do additional surveys and sample collection

Qualitative Methods

Recruitment:

November 2021 - January 2022

42

Indigenous = **10**
White = **20**
Racialized = **12**

Male = **22**
Female = **14**
Non-binary, Two-Spirit, other identity = **1**
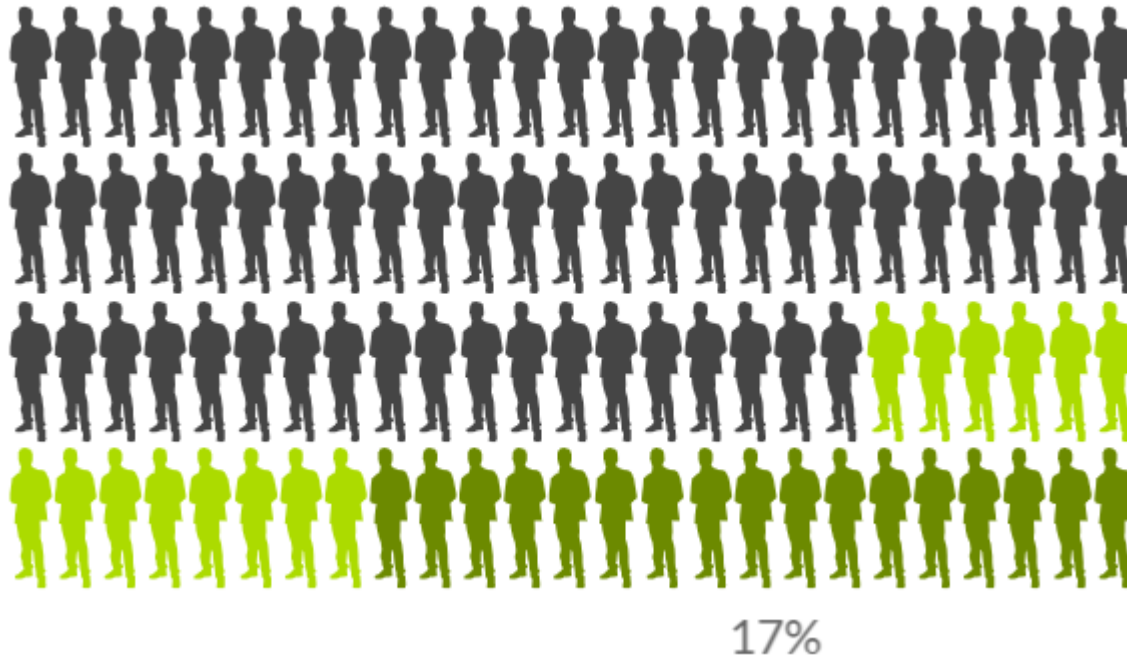
Vaccinated (at least 1 dose) = **25**
Not vaccinated = **17**

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We asked participants about…

- Experiences during the COVID-19 pandemic

- Opinions toward the COVID-19 vaccine

- Enablers and barriers to vaccine uptake

- Strategies to improve vaccine uptake

- Sources of support, feeling safe and cared for

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Quantitative Findings

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1. COVID-19 infection history at baseline

17%

2. COVID-19 infection within 6 months

30% of participants without history of COVID-19 had an infection within 6 months
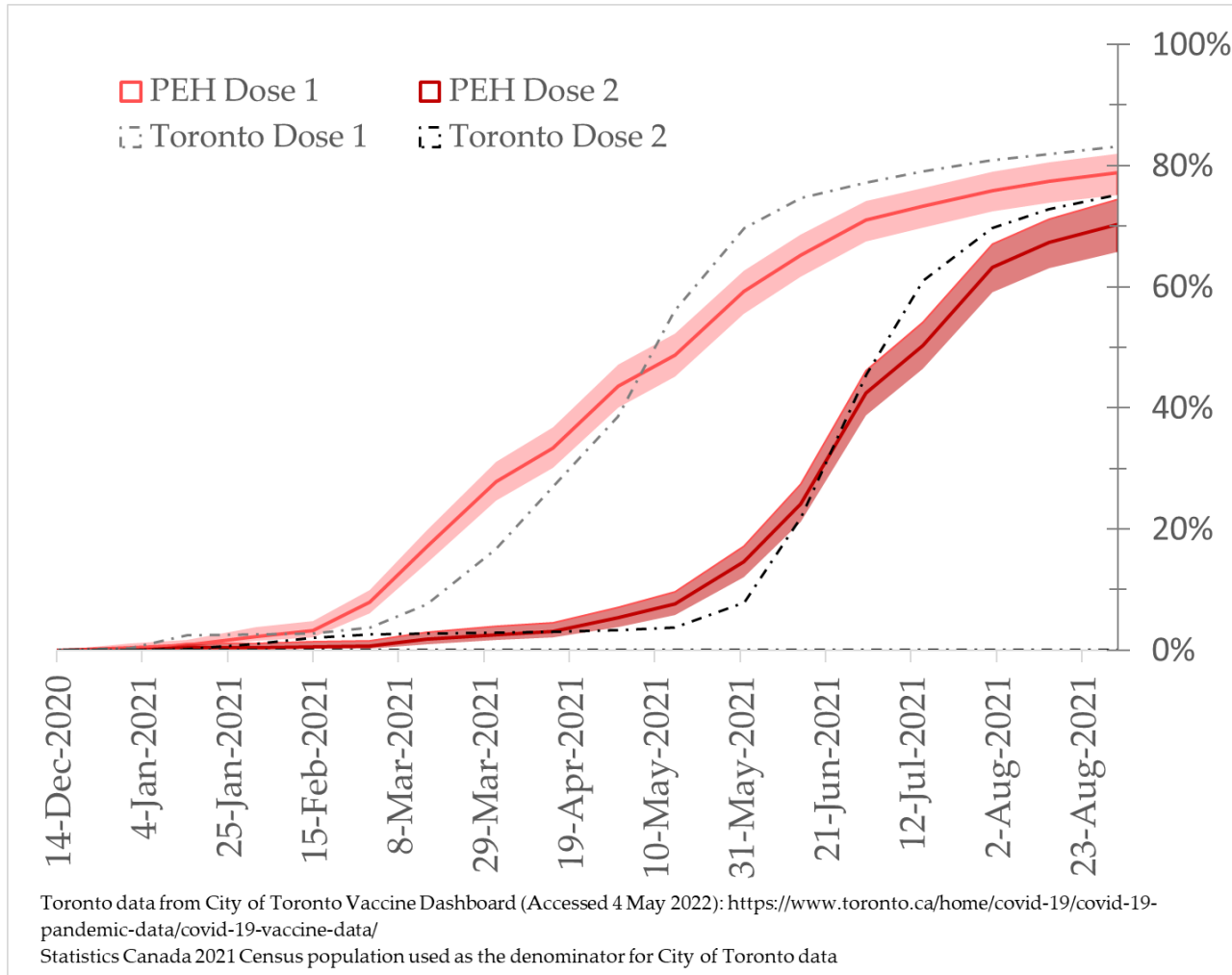
Groups who had higher rates of infection included:

- People responding during Omicron
- Recent Immigrants to Canada
- Those reporting alcohol consumption

Groups who did NOT have higher rates of infection included:

- Individuals staying in more crowded/shared housing

3. COVID-19 vaccination uptake

Legend:
- PEH Dose 1
- PEH Dose 2
- Toronto Dose 1
- Toronto Dose 2

Toronto data from City of Toronto Vaccine Dashboard (Accessed 4 May 2022): https://www.toronto.ca/home/covid-19/covid-19-pandemic-data/covid-19-vaccine-data/
Statistics Canada 2021 Census population used as the denominator for City of Toronto data

By September 2021:

- **80%** of participants had 1+ vaccine dose;

- **64%** had 2+ doses

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Qualitative Findings

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4. Experiences during the pandemic

- Accessing services
- Isolation and loneliness
- Stigma and discrimination
- Lack of social support

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"My alcoholism started to spiral out of control and [Pause] I think a lot of that has to do with the fact that I wasn't seeing anybody you know everybody was sort of keep, like keeping their distance from everybody and [Pause] so I was very isolated so..."

(ID_3425, Vaccinated, Female, White)

5. Thoughts about COVID-19/government responses

- Abiding by PH rules/mandates (both V and NV)
- Trust in science, understandable skepticism of the government
- Vaccine passport as divisive

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"I try to keep myself safe as much as I can. I do not interact with nobody like I'm in my room most of the time. I try to keep myself safe. I have my mask on anytime to move around the building I have my mask on, I sanitize so, yeah, I try."

(ID_1535, Not Vaccinated, Female, Racialized)

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"I trust the science. I trust the doctors; I trust the scientists. I don't normally trust the government [laugh] but I trust, I trusted the doctors and I really believed that it was going to be okay."

(ID_3425, Vaccinated, Female, White)

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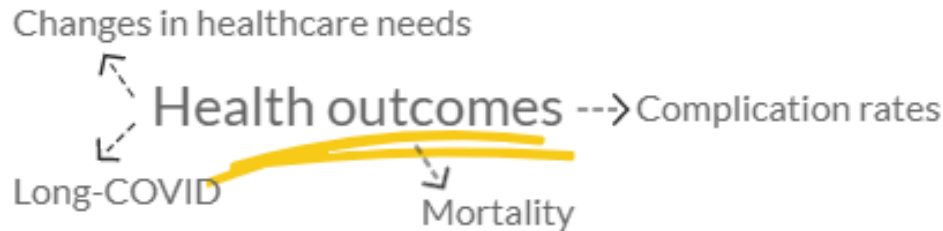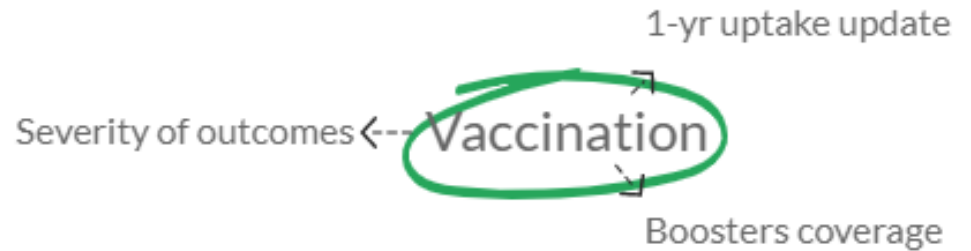
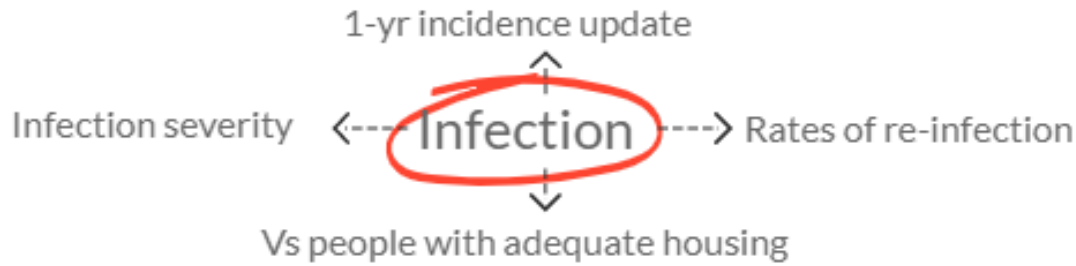# 6. Forces shaping vaccine decision making

- Access
- Vaccine trust
  - Hasn't been around long enough, safety, effectiveness
  - Vaccination as normative behavior, protecting the gen pop
- Experience getting vaccinated
  - Supported, questions answered
  - Rushed
- Agency

"I feel like it should be a personal choice."

(ID_0095, Not Vaccinated, Female, White)

7. Strategies to improve government responses, vaccination rates

- Education and information sharing
- Peer ambassadors
- Personalized approach
- Sticks, Carrots and Breaking Barriers
  - Mandates, incentives, improving access
- Holistic approach to dealing with PH crises – HOUSING, SERVICES

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Don't see it here? Tell us what other questions you'd like us to answer!

For more information, please see:

Protocols (these detail data collection and analysis methods):

- Richard L, Nisenbaum R, Liu M, et al**. *Ku-gaa-gii pimitizi-win*, the COVID-19 cohort study of people experiencing homelessness in Toronto, Canada: a study protocol**. BMJ Open 2 2022; 12: e063234. doi:10.1136/bmjopen-2022-063234

- Jenkinson JIR, Sniderman R, Gogosis E, et al. **Exploring COVID-19 vaccine uptake, confidence and hesitancy among people experiencing homelessness in Toronto, Canada: protocol for the *Ku-gaa-gii pimitizi-win* qualitative study**. BMJ Open 2022; 12:e064225. doi:10.1136/bmjopen-2022-064225

Website:

- https://maphealth.ca/ku-gaa-gii-pimitizi-win/

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Discussion / Q&A

Ku-gaa-gii pimitizi-win:

Lessons learned from conducting a cohort study measuring incidence and prevalence of COVID-19 among people experiencing homelessness in Toronto

Olivia Spandier, Dr. Sharmistha Mishra, Allison Dyer & Frank Crichlow
November 2nd 2022

Part 2:

Data collection: Lessons learned

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Recruitment

- 736 participants recruited over 3 months from 61 shelters and physical distancing hotels; follow-ups each 3 months for a year

- Participants were approached based on a predetermined random order

- In-person surveys conducted on IPADS and saliva and blood samples were collected to test for present and past COVID-19 infection

- Interviewers were screened at each site and wore full PPE, while participants were given a mask and offered hand sanitizer

Navigating Data Collection

- **Change in unit numbering system –** the system within which we were working was adapting to COVID-19
  - New numbering systems to ensure physical distancing
  - Staff called to confirm numbering system the day before site visits

- **Developing trust**
  - Provided notification of study, posters at sites
  - Had shelter staff assist with first contact so that it was a familiar face
  - Relationship building and providing resources
- **Outbreaks prevented site visits**
  - Ensured research staff had access to vaccines and N95s
  - Cleared to visit sites

- **Participants moved and or were discharged and not able to go back to their original interview site**

  - Interviewers obtained detailed contact information on participants and contacts

  - Developed relationship with Bond Place, Heyworth House and Good Shepherd to interview participants not currently residing there

  - If consented, used SSHA reports to find out where they were staying

  - Letters for participants left at sites if they were not present

- **Access**

  - Used a call-in translation service

  - We travelled to participants and performed home visits and outreaches to increase accessibility for all participants

  - Met people in their location of choice (ie. park, mall, coffee shop)

  - Option of accessible sites for interviews

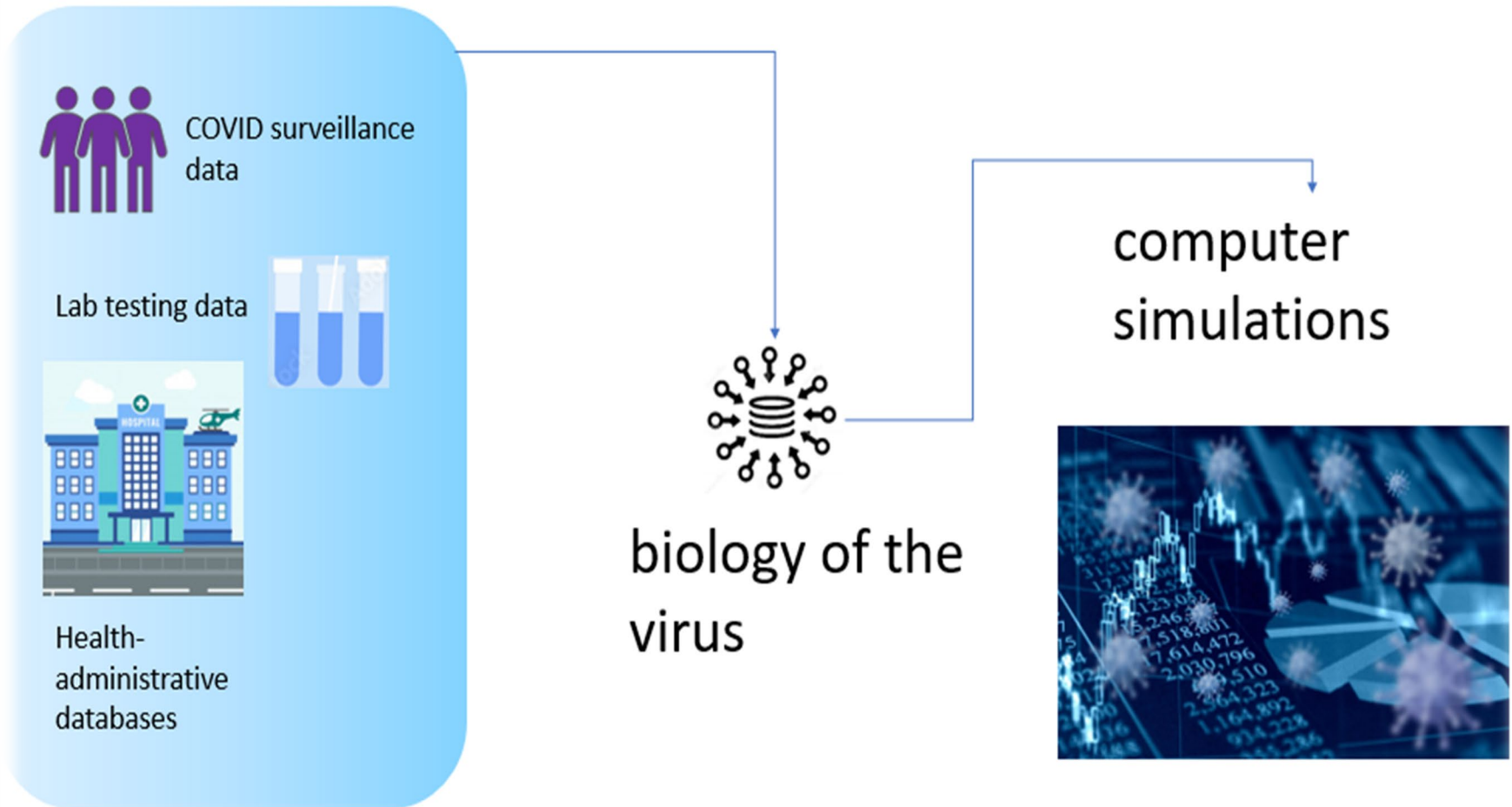 - Coordinated with detention centers to arrange transportation to and from interviews
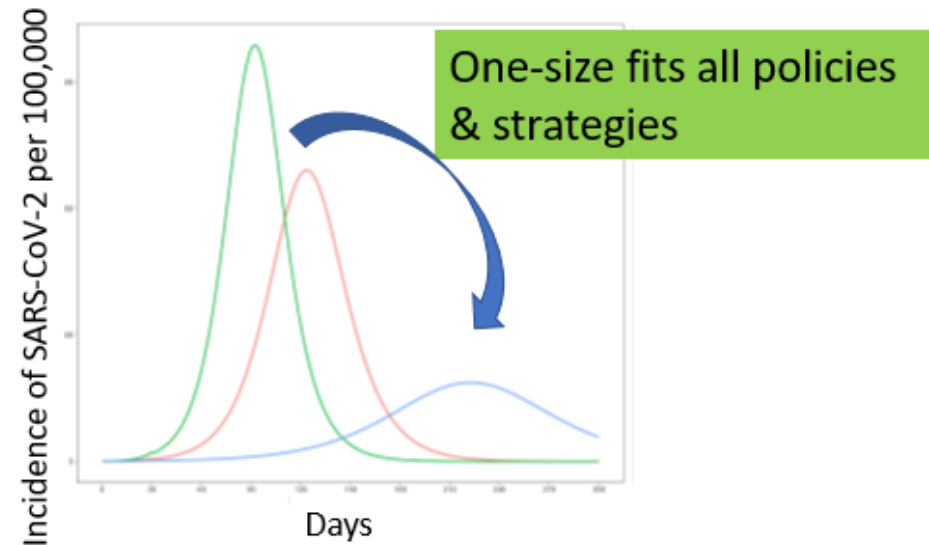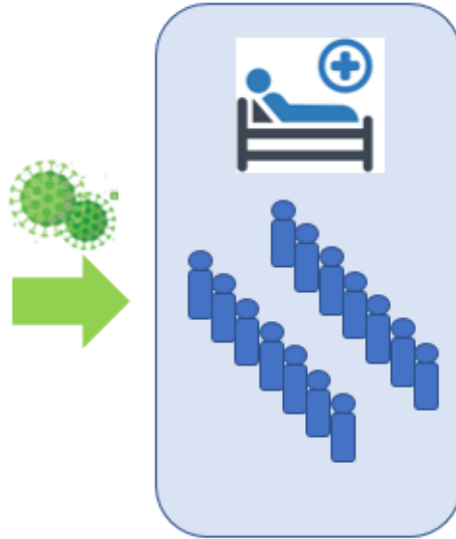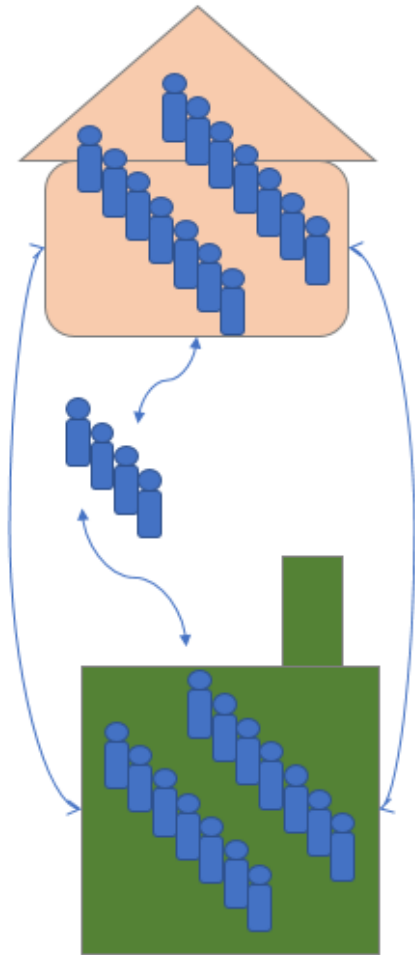
Part 3:

Mathematical Modelling

Mathematical models can be used to:

1) Project what might happen next

2) Explain why something happened

3) Compare the potential benefits of different strategies and policy decisions

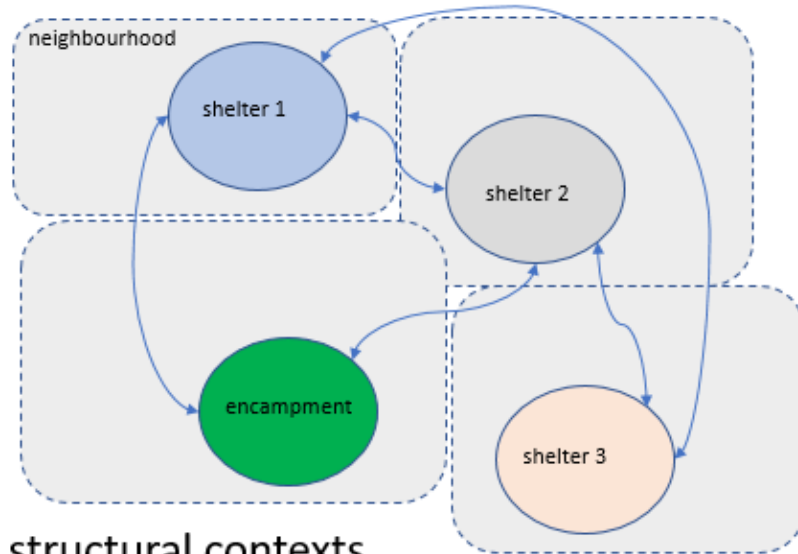4) Identify what data are needed to generate more accurate answers

Data on Cases

COVID surveillance data

Lab testing data

Health-administrative databases

biology of the virus

computer simulations

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assumed everyone, every context "equal" risk...

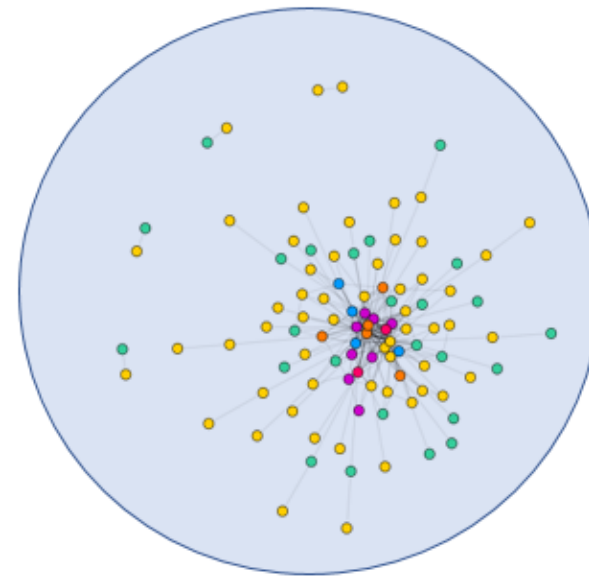One-size fits all policies & strategies

A new mathematical model

structural contexts
(persons/beds per room, ventilation,
types of contacts and exposures,
vaccination levels)

variability between persons
experiencing homelessness and in
the physical networks

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Person-level

COVID surveillance data

Lab testing data

Health-administrative databases

Survey data

Facility-level

Shelters and program data (physical distancing & isolation hotels, vaccination, testing)

Neighbourhood-level

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Put numbers to…

- Past
  - How many cases were prevented to date with the strategies put into place?

- Future
  - Risk of future outbreaks if status quo remains?
  - Size of future outbreaks if status quo remains?
  - What strategies could minimize risk of future outbreaks?
  - What pre-pandemic or inter-pandemic policies could minimize risk of future outbreaks?

- Support advocacy

- Inform policies

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Part 4:

Researchers with Lived Expertise: Guidance and Next Steps

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Proverb

What we do for ourselves dies with us, but what we do for others and the world remains and is immortal.

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What do researchers with lived expertise bring to the research team? Why are we important?

What needs to improve in research?

- Pay equity and job security

- Professional development – investing in people's careers

- Language and identity

- Access to opportunities

  - Accessibility vs advocacy

  - (being involved in the research) vs (being authentically heard)

Pay Equity
and
Job Security

Professional Development

Language and Identity

Access to Opportunities and Advocacy

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Call to Action

- *Ku-gaa-gii pimitizi-win* study's research participants

- Survey Research Unit (SRU) staff, including Alexandra Carasco, Annika Khan, and the entire SRU interview team

- Shelter and COVID-19 physical distancing shelter hotel staff for facilitating visits

- Dr. Suzanne Stewart's team from the Waakebiness Institute for Indigenous Health

- Joe Hester and Harvey Manning from Anishnawbe Health Toronto

- Members of MAP's Community Expert Group (CEG)

- Heath Priston and Ryan Nagelmakers from the City of Toronto Shelter Support and Housing Administration (SSHA)

- Members of the Gingras Lab including Melanie Delgado-Brand, Tulunay Tursun, Geneviève Mailhot and Roya M Dayam

- Jessica Bourke and the Microbiology Lab at Mt. Sinai Hospital

- Gary Chao and the Gommerman Lab at the University of Toronto for processing biological samples

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Discussion / Q&A

Thank you!

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