Urban Disaster Risk & the Covid-19 Pandemic

Addressing Vulnerability, Strengthening Resilience

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Biography

McMaster University (2013-2017)
Geography & Political Science

University of Toronto (2018-2020)
Munk School of Global Affairs and Public Policy

Reach Project (2019)
Fab Lab, Guadalajara, Mexico

Urban Policy Lab (2019-2020)
Munk School of Global Affairs and Public Policy
Research Plan

**Problem**
High concentration of population, economic activities and interconnectivity make cities Covid-19 hotspots.

**Challenge/Opportunity**
Underlying vulnerabilities and disproportionate experiences.
Unprecedented opportunity to study how cities react to pandemics and how they adapt.

**Objective**
Examine urban experiences with Covid-19 to better understand how we can build more resilient cities.
Understanding Disasters

Types: Atmospheric (hurricane), geological (earthquake), biological (pandemic), etc.

Vulnerability & Resilience: Embedded risks often exacerbated by disasters
Capacity of a system to adapt, preserve and 'bounce back'

Disaster Risk Drivers: Climate Change, uneven economic development, poverty, poorly planned urban development, weak governance, shifting demographics, etc.
Urban Experiences with Covid-19

Cumulative Covid-19 Cases by Neighbourhood

January 21, 2020 – October 15, 2020

Low → High

Toronto Public Health Study

Lowest income groups = highest rate of confirmed Covid-19 cases (504 cases per 100,000 people) compared to the rate in the highest income group (162 cases per 100,000 people).

Determinants of Health in Cities

1. Discrimination
2. Health Care Access
3. Occupation
4. Housing
5. Transportation Network
6. Income
7. Access to green spaces
Response Challenges

Compounded Risk

- Possibility of multi-hazard events (mitigating risks while upholding pandemic response)
- Second wave
- Economic crisis, rising unemployment
- Strained local budgets
- Quarantine fatigue

Compounded Vulnerability

- Address vulnerabilities borne out of structural inequalities
- Linked to factors including, but not limited to: geography, housing, gender, age, ethnicity, job sector, income, health, mobility, and education
Policy Guidance

- Strong and strategic integration of health-related emergency risks into DRR policy at all levels of government.
- Develop better understandings of Covid-19 economic implications to develop and enhance resilience.
- Augment strategic plans for inclusion of multi-hazard event preparedness during pandemic planning.
- Address underlying community-level vulnerabilities before they are exacerbated by hazardous events.
- Early implementation, widespread information sharing, and enforcement of social-distancing practices.
- Regulate and repurpose the use and operation of public facilities and land.
- Investigate urban characteristics, plans, and policies that have worked against Covid-19 control measures.
WHAT HAPPENS NEXT?

- Must better understand the underlying patterns and dynamics of pandemics, their effects on cities, and the necessary emergency preparedness measures to enhance resilience.

- The policy guidance brought forward in this report can be utilised as a starting point for such changes.

- With critical changes to how we think of and prepare for pandemics, future outbreaks may cause minimal shocks and stresses to cities—and then we would never have to repeat 2020 ever again.

Thank you!