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<b>SUBJECT</b>	COVID-19 Research Response
<b>SUBMITTED TO</b>	Board of Governors
<b>MEETING DATE</b>	December 3, 2020
<b>SESSION CLASSIFICATION</b>	Recommended session criteria from Board Meetings Policy: OPEN
<b>REQUEST</b>	For information only - No action requested

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<b>LEAD EXECUTIVE</b>	Dean Dermot Kelleher
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### EXECUTIVE SUMMARY

The Board has received many updates about the public health and University's response since the COVID-19 pandemic affected operations in March 2020. A report on the global impact and UBC's participation in the research response has been requested for the December meeting from Dr. David Patrick, Executive Medical Director and Deputy Provincial Health Officer, and a Professor in UBC's School of Population and Public Health.

Dr. David Patrick is an infectious diseases specialist and epidemiologist with a career interest in responding to emerging infectious diseases. He has published on a range of topics including HIV epidemiology, impacts of immunization on population health and vector-borne and zoonotic disease, and has become quite involved in responding to the epidemic of COVID-19. Slides for the presentation are attached.

Please be aware that some slides with epidemiology statistics will be updated as the meeting date approaches, to ensure the Board is looking at the most current figures relating to the pandemic.

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### PRESENTATIONS

1. COVID-19 Research Response Presentation



**BC COVID-19**  
STRATEGIC RESEARCH  
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# COVID-19 Research Response Roles and Opportunities for UBC

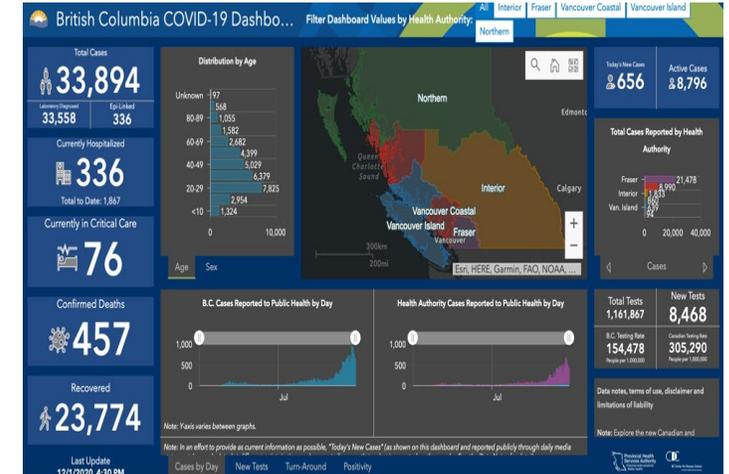
November 18, 2020  
David M Patrick, MD, FRCPC, MHSc  
Professor, UBC School of Population and Public Health  
Director of Research, BCCDC (UBCCDC)  
Co-Chair, BC COVID-19 Strategic Research Advisory Committee

# Key Messages

- Forward thinking and early investment have accelerated COVID-19 research and helped to link funders, researchers, health care agencies and policy makers
- BC Researchers have been productive and work is bearing fruit.
- Eleven months into the research response it's important to consider what challenges remain
- There are key long term lessons for Canadian Science and time limited opportunities for UBC

# As of December 1, 2020

- Globally: 64 M cases and 1.4 M deaths
- Big upswing during the fall in much of the Northern Hemisphere
- USA, India and Brazil are hardest hit
- 34,000 cases and about 450 deaths in BC (2/3 in long term care)
- Fraser South is hardest hit but upswing elsewhere in the province
- Overall curve MAY be moderating in response to public health measures in play for last 3.5 weeks
- A failure to bend the curve would test our hospitals dearly
- "The Ghost of Christmas Yet to Come"



# Evolution of the BC Research Response

- Request from Provincial Health Officer to form advisory group
- Ad Hoc Coordination led to Funding Success
- Strategic Research Advisory Committee supported by MSFHR and tied to Incident Command Structure
- Ongoing Briefings for PHO, Ministry of Health

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# Coordinated response structures in BC

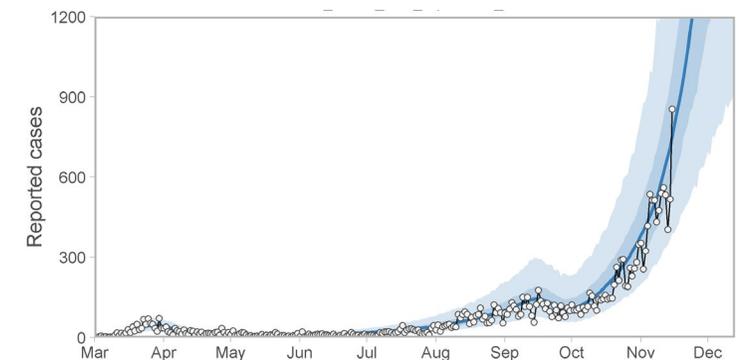
- Collaborative life science research community
- Clinical Research Coordination Initiative (UBC)
- BC Academic Health Science Network:
  - [BC Inventory of COVID-19 Research](#)
  - [BC COVID-19 Clinical Trials Network](#)
- Ministry of Health Internal Work

# Scale of the BC Research Response

- Early Rapid Response Funding (MSFHR, Genome BC, BCCDC) -> Millions - Rapid
- National Tri-Council Contributions – Tens of Millions -> Quick
- International and Private Capital -> Hundred(s) of Millions
- Over \$200M in total funding
- 500 projects
- More Recently Announced Provincial Funding
  - BCCDC Foundation for Population and Public Health
  - Pandemic Studies Institute SFU/UBC
- **Opportunities to change the face of pandemic response may be much greater**

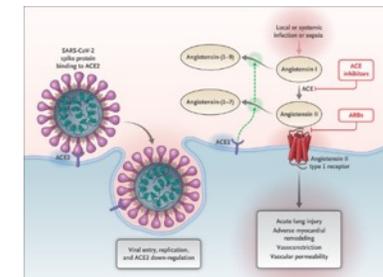
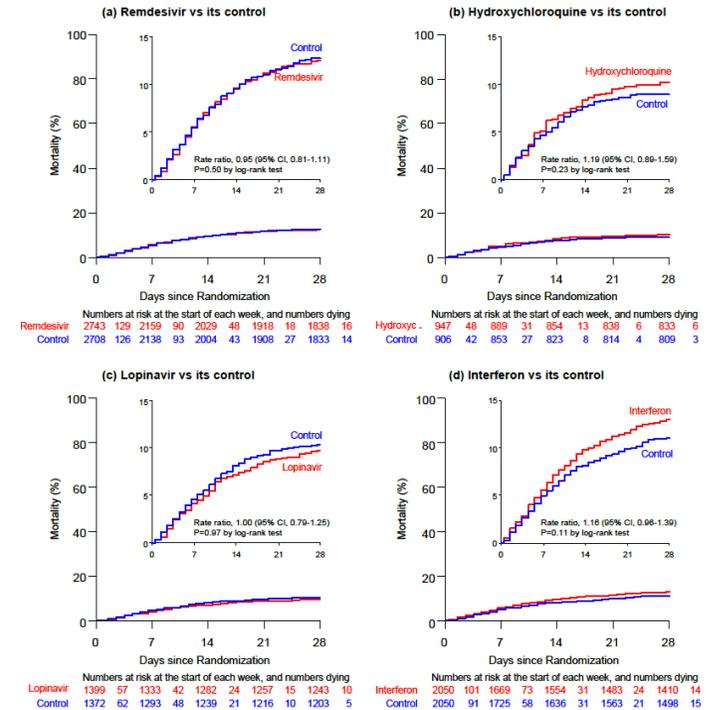
# Themes Within the BC Response

- Diagnostics
- Viral and Host Genomics
- Epidemiology and Modeling
- Immunity and Vaccine Preparedness
- Population Health and Unintended Consequences
- Drug and Antibody Discovery
- Clinical Trials



# Clinical Research

- Global Solidarity Clinical Trial (Murthy et al)
- ARBS –Corona II
- rsACE2
- Research into the longer term trajectory of COVID-19



# BC is Contributing to and Learning from Global Research

- Indigenous Governed and Led Research
- Central role of BC-based biotech firms in liposome and monoclonal antibody production
- Stunning Success of UK Recovery Trial
- Vaccine Trials (7 Phase 3 trials underway and promising interim analysis from three vaccine candidates)



**RECOVERY TRIAL**  
Dexamethasone in COVID

First10EM



# Unintended Consequences

- School closures
- Overdose deaths
- Delay of Procedures
- Economics, Unemployment, Stress
- These problems are not equitably distributed
- Issues for Priority Populations
- **Not an either/or or “zero sum” game -> Controlling the virus helps the economy**

COVID-19 deaths v. Overdose deaths in B.C. (2020)

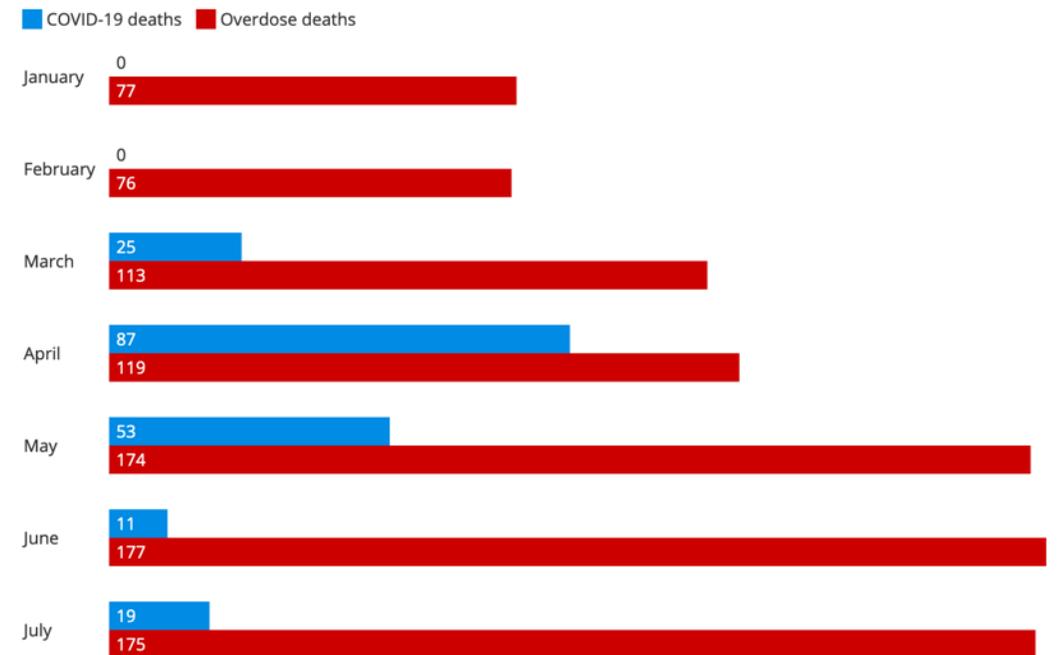


Chart: Justin McElroy • Source: B.C. Ministry of Health/BC Coroners Service

“The single most important economic policy of our government and the best thing we can do for our economy is to keep coronavirus under control. If we continue to do the right things on the health front that is the strongest foundation and support we can give to our economy.” - Freeland



# Research Gaps and Some Short Term Priorities

- Improving processes to recruit patients to research
- Therapeutics including outpatient options
- Public Health and Health Care Management
  - Mitigation of risk in Long Term Care
  - More efficient operation of public health interventions
  - Better protection and optimal deployment of health workforce
- **Evaluation and preparedness for an end-game through vaccine -> UBC's role in this important work?**

# Two Long Term Priority Areas

- Organize BC / Canadian Clinical Trials to Replicate the Success of the UK Recovery Model
  - Network of Networks bid
- Consider our role in moving BC's Biotech Industry into a full development and manufacturing capability that will better mitigate the harm of this and future pandemics
  - Strongly recommend that UBC / Life Sciences BC engages with BC Government to dialogue with Innovation, Science and Economic Development Canada



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# Discussion

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DECEMBER 3, 2020

DAVID PATRICK