



BC's health research funding agency

The impact of COVID-19 on health research in BC

Results from MSFHR's information gathering process*

November 2020

*Data were collected June – September 2020. As such, the information in this deck represents the point of view of researchers over that time period. See Appendix for more information on methodology.

Key Findings

- All BC health researchers are impacted by the pandemic, but certain groups are more impacted than others: caregivers, women, post-docs and early-career researchers
- The increased workloads and reduced time available for health research experienced by early- and mid-career researchers will impact career progression and the generation of health research knowledge that benefits the health of British Columbians
- Research curtailment and phased reopening has had large-scale impacts on BC's research capacity and workforce, particularly for clinical and lab-based research and knowledge translation activities
 - Graduate students and post-docs are integral to the health research workforce, but experiencing job insecurity and reduced workload
 - Researchers report challenges attracting and retaining new staff and students

Key Findings

- There has been significant uptake in COVID-19 funding and research opportunities in BC but there is a need for funders to continue to support non-COVID-19 research
- Existing federal and institutional supports for the pandemic are appreciated but may not adequately account for funding shortfalls, research delays and researcher inequities
- MSFHR has been advised to expand and adapt funding programs, supports and processes (e.g. peer review) and focus investments on trainees and early-career researchers

Approach to information gathering

Purpose

To inform strategic thinking and decision-making about MSFHR's funding programs and implementation of our 2020-25 strategic plan in light of COVID-19

Data Sources*

- Stakeholder interviews of BC health research leaders
- Survey of BC health researchers
- Review of national and international literature

*Data were collected June – September 2020. As such, the information in this deck represents the point of view of researchers over that time period. See Appendix for more information on methodology.

Guiding Questions

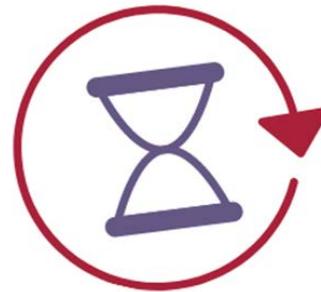
- How are BC researchers differentially impacted by the pandemic?
- How is COVID-19 impacting health research talent in BC?
- How is COVID-19 impacting health research capacity in BC?
- What supports exist to help BC researchers?
- What advice would you give MSFHR?

Overview: Survey of BC health researchers



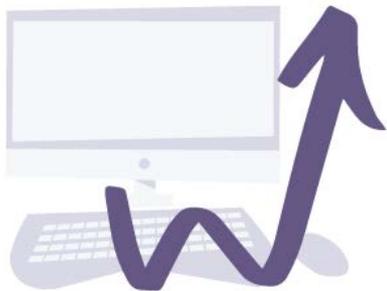
80%

reported a **negative impact**
on their ability to do research



>45%

had research
halted or postponed



60%

reported a **significant**
increase in workload



>50%

have **caregiving responsibilities**

**How are BC researchers
differentially impacted by the
pandemic?**

Caregivers, women, and early-career researchers most disproportionately impacted

The pandemic is exacerbating existing inequities in research and academia ([Maas et al., 2020](#))

1. **Caregivers** are struggling to be as productive as their colleagues. Respondents are worried that this loss of productivity will affect their ability to progress their career
2. **Women** are primarily affected by the loss of childcare resources and are struggling to balance home responsibilities with research responsibilities
3. **Early-career researchers** that are pre-tenure or new faculty are negatively affected by halting of research activities, delays to grant competitions, and inability to build/maintain a team. **Post-docs** were often mentioned alongside ECRs

Impact on early-career researchers

- There was broad consensus that early-career researchers were among the most vulnerable groups on campus

"COVID-19 and the curtailment of research is causing massive disruption to more junior faculty, pre-tenure crowd and grant-tenure folks who are reliant on maintaining their salary and productivity."

– Senior university research leader

Impact on women and caregivers

“Women. Parents. Both are taxed with extraordinarily high caregiving responsibilities right now that make it IMPOSSIBLE to maintain the usual 40+ hour work week. We're drowning. We're exhausted. We're burnt out. And we are fully aware that there is a childless colleague who just submitted 3 papers in a month who is going up for the same award we are and feeling like he worked hard and deserves the accolades. If I think too long about it, I feel incredibly depressed.”

- Early-career researcher

Different impacts by research area

- **Biomedical research:** biomedical researchers reported the greatest impact of the pandemic on their ability to do research (90% reported negative impact vs. survey average of 80%)
 - Impacted by research curtailment due to lab closures
 - Negative impact of the pandemic on ability to develop research tools/methods (60%), medical products/treatments (68%), and develop IP (56%)
- **Clinical research:** clinician-researchers experienced increased clinical workloads and reduced time for research, and challenges progressing clinical research projects
 - 83% faced challenges recruiting research participants

Different impacts by research area

- **Community-based and participatory research:** barriers to collaborating with community-based partners and adapting to remote/virtual approaches
 - Negative impacts primarily affected population health researchers (73%) and researchers outside of the Lower Mainland (69%)
 - Specific impacts noted for research involving Indigenous communities and rural/remote communities – e.g., reduced access to Indigenous communities during COVID, limited phone and internet connectivity in rural/remote areas

Different impacts by research area

"I've seen students struggle with forming the kinds of relationships that need to occur over time, primarily face-to-face in order for this good kind of community-based research to happen. How do you Zoom Elders? Some rural and remote communities in the North don't have tablets or computers that can make that happen."

- Senior university research leader

How is COVID-19 impacting health research talent in BC?

Focus of analysis: Impact of COVID-19 by career stage

Findings are reported by the following self-reported categories:

- **Graduate students** involved in health research (includes masters and doctoral)
- **Post-doctoral** researcher
- **Research associate:** masters or PhD trained, not an independent researcher, includes clinical fellows
- **Early-career:** within 5 years of first independent research position
- **Mid-career:** 5-15 years of independent research position
- **Senior-career:** >15 since independent research position

Source of career stage definitions: <https://cihr-irsc.gc.ca/e/34190.html#r14>

Impacts of COVID-19 on BC health researchers

- Impacted research across all career stages, but greatest impacts were reported by early- and mid-career researchers
- Research halted or postponed reported most often by early- (54%) and mid-career (55%) researchers
- A small proportion of researchers (14%) reported that “most” of their research shifted to focus on COVID-19
 - Early-career researchers and research associates more likely to pivot (20% reported that most of their research has shifted)
 - Research not amenable to shifting to a focus on COVID-19 cited as a challenge by health services and population health researchers
 - Fewer new health research opportunities for biomedical researchers (35% vs. survey average of 57%) compared with other pillars
 - Important call to action for funders to ensure that there are non-COVID-19 research funding opportunities available

Impacts of COVID-19 on BC health researchers

"The situation of junior northern researchers in health services is particularly precarious. The halting of this research will not only negatively affect individual careers but will also slow the production of the rich knowledge that can come out of research approaches such as in-person interviews, shadowing or participant observation. Qualitative research that seeks to "get at the meanings of things" may be replaced by more surface level research."

- Senior researcher

Workload and precarity of employment linked to career stage

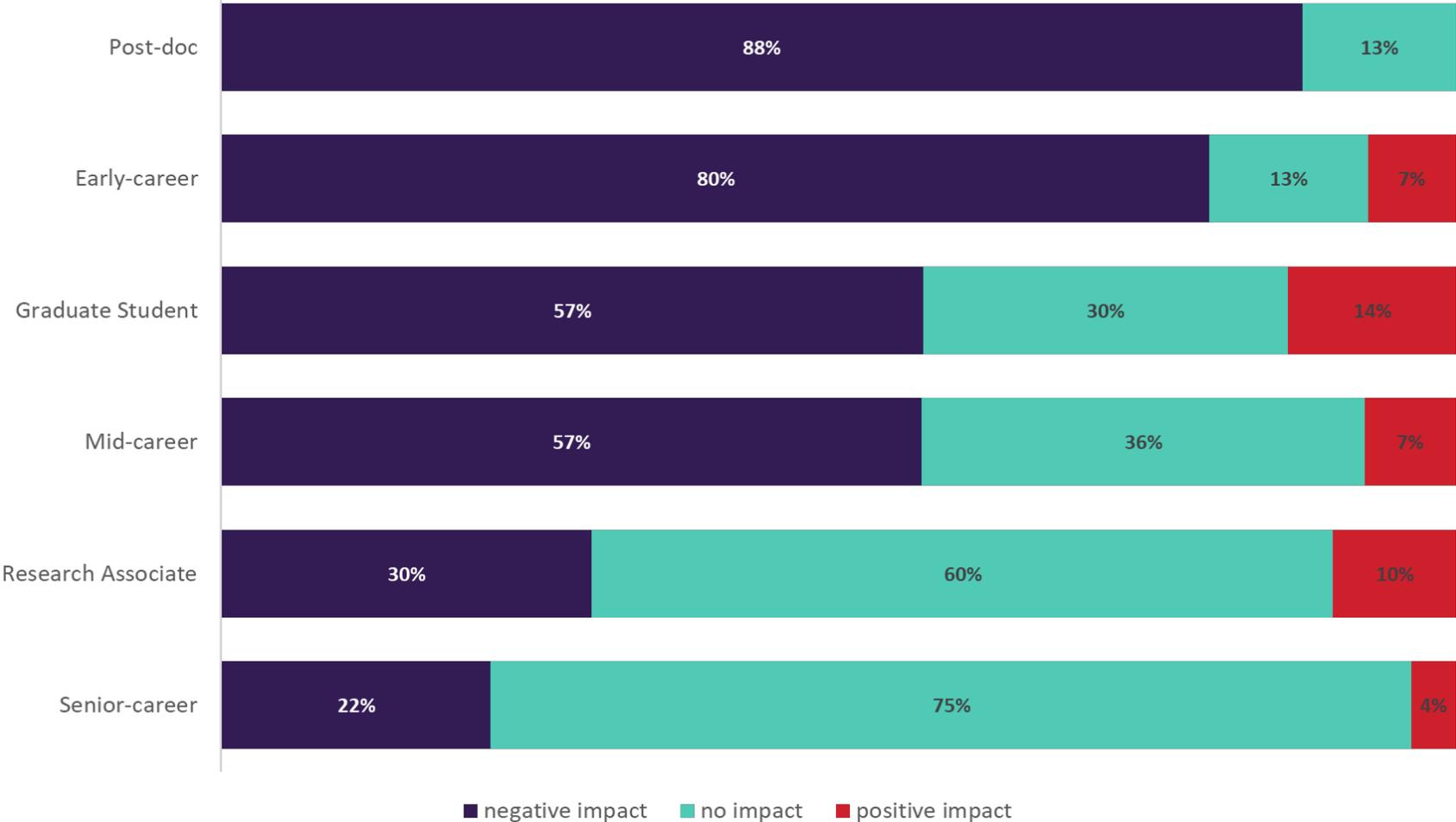
Career stage	Observations
Graduate students, post-docs and research associates	15% students, 20% postdocs and 44% research associates in full-time permanent positions
	58% of students, 41% of post-docs, 31% research associates reported reduced workload
	28% of students, 24% of post-docs, and 24% of research associates reported reduced hours and loss of jobs
Early- and mid-career researchers	65-80% in full-time permanent positions
	Increased workload for 2 in 3 early-career and 60% of mid-career researchers
	Reported pandemic has had a negative impact on their ability to carry out scholarly activities like writing and submitting publications
Senior researchers	91% in full-time permanent positions
	Less impact on workload and scholarly productivity relative to other career stages

Multiple factors contribute to changes in research productivity

Factors	Affected
<p>Adapting to working remotely</p>	<ul style="list-style-type: none"> • Impacted early- (70%), mid- (79%) and senior- (73%) career researchers more than students (38%), postdocs (24%) and research associates (43%) • Teaching workload (e.g., time required to move classes online) particularly impacted early- (47%) and mid-career researchers (31%)
<p>Personal responsibilities such as caring for a child or sick loved one was reported by 1/3 of sample overall</p>	<ul style="list-style-type: none"> • Impacted early- (51%) and mid-career researchers (43%) • ~40% researchers reported that this will likely continue to impact their ability to do research over the next 12 months; particularly early- (56%) and mid-career (48%)
<p>Stress and/or changes in mental health reported by 1/5 of respondents</p>	<ul style="list-style-type: none"> • Impacted students (34%), post-docs (27%), early-career researchers (30%) more than other groups

Negative impacts on career progression experienced by post-docs and early-career researchers

The impact of COVID-19 on career progression, by career stage



How is COVID-19 impacting health research capacity in BC?

Impact on health research capacity in BC

- Research curtailment and phased restart of in-person research activities in BC
- Major disruptions to clinical and lab-based research; in-person resumption at reduced capacity. Stretched clinical research capacity in most of BC's regional health authorities
- New opportunities for pandemic-related research and funding: over \$250M and 450 active COVID-19 research projects in the province ([BC AHSN, 2020](#))
 - A greater proportion of mid-career researchers (70%) reported new opportunities compared with other career stages

Impact on the BC health research workforce

Impacts	Affected
Talent recruitment & retention	<p>Majority of early-, mid-, senior-career researchers (particularly biomedical researchers) reported that their staff and students have been greatly impacted</p> <ul style="list-style-type: none"> • 41% reported the pandemic has impacted their ability to hire staff • 52% concerned about attracting/hiring new students • 80% concerned that students and staff are experiencing barriers to participating in research • 70% reported students experiencing interruptions in research training and/or ability to complete their degree
Training	<p>Nearly 60% of students and postdocs reported the pandemic has impacted their training 'a great deal'</p> <ul style="list-style-type: none"> • 66% reported reduced ability to network and collaborate with other researchers, research users and prospective employers
Leave BC	<p>Majority (>90%) plan to stay in BC in for the next 12 months</p> <ul style="list-style-type: none"> • 98% of mid-career researchers plan to remain in BC • Small proportion of research associates, students, early career researchers and postdocs plan to leave BC (ranging from 6% to 25%)
Changes to research careers	<p>~90% expect careers or plans to change</p> <ul style="list-style-type: none"> • 95% of early-career researchers and research associates expect careers or plans to change

Impact on the BC health research workforce

- There was concern about the effect the pandemic will have on health research more broadly. With early-career researchers constrained from doing the innovative and ground-breaking research needed in the health system, there could be a cost to the health of British Columbians

“My real worry is losing people from academia who can’t get back on track and losing knowledge. There is so much to learn and so many health challenges that we have dropped the ball on.”

- Senior university research leader

Impact on the BC health research workforce

“The universities are taking significant (and important) measures to ensure the slowing of COVID-19 but that also means it is significantly harder to accomplish the same amount of productivity (especially as a junior postdoc with experimental plans that rely heavily on being on campus and collaborating with others).”

- Post-doctoral fellow

Knowledge translation activities are disrupted

- Early- (60%) and mid-career (72%) researchers reported that KT activities were disrupted, followed by senior-career researchers (46%)
- Health services and population health researchers most likely to report disruptions to KT activities compared with other research pillars
- Most reported impacts:
 - Dissemination activities delayed, changed, or cancelled
 - Difficulty collaborating with research user partners

Impact on knowledge translation activities

"A lot of KT activity can be done on virtual platforms but there's nothing like that physical being there, being able to just see the visual feedback. Over a short period of time, using virtual technologies can maintain momentum and keep the glue together on teams. Long term, if it gets past 6 months, it's going to be a lot more challenging".

– Senior university research leader

What supports exist to help BC researchers?

COVID-19 supports launched to help BC health researchers

- **Federal:** Canada Research Continuity Fund (\$450M), investment in postsecondary students (\$9B), extensions to Tri-Council fellowship and salary supplements
- **Provincial:** BC government emergency student financial assistance (\$3.5M) and Indigenous student emergency assistance fund (\$1.5M)
- **Institutional:** Emergency funding – e.g., UBC student emergency fund, BC Cancer COVID-19 response fund

Variable benefits and gaps in COVID-19 supports

Benefits	Gaps
Early- (57%), mid- (76%) and senior-career (63%) accessed supports for health research	Less than half of students, post docs, and research associates accessed supports
Majority accessed some form of federal support – e.g. CRCF, extensions to tri-council awards and fellowships	Concerns that federal funding inadequate to make up lost research time and operating costs
Support accessed for trainees and research staff	Available supports seen as less helpful for those facing challenges due to personal circumstances (caregiving, finances)
Institutional supports for remote working and teaching, and one-year tenure clock extensions	

Variable benefits and gaps in COVID-19 supports

[Extending the tenure clock by one year] *"would not ameliorate inequities between more vulnerable subgroups of ECRs. Those who can work remotely, for example, are better off than those who need to work on campus to access specialized facilities or who are doing human participant research. ECRs with childcare responsibilities, who are primarily women, are less able make use of the extra time to publish and apply for grants."*

- Senior university research leader

Common reasons researchers didn't access supports

Reason for not accessing supports	Career stage most affected
Supports unavailable, or researchers were unaware of supports	Doctoral, post-docs and early-career researchers
Not eligible for supports	All career stages
Supports difficult to find/researchers had no time to find them	Early-career researchers
Supports were not needed	Senior-career researchers

Supports could include: financial support, grant extensions, equipment, or others from a research institution or provincial/federal government.

Perspectives on institutional support

Description	Affected
Institutional support	<p>1 in 4 health researchers report feeling unsupported by their health research institutions</p> <ul style="list-style-type: none">• 55% researchers reported feeling supported• remainder reported feeling unsupported (25%) or neutral (21%)* <p><i>*Small differences by career stage; more early-career researchers reported being unsupported</i></p>
Department or supervisor support – clear expectations	<ul style="list-style-type: none">• 1 in 3 health researchers reported having clear expectations from their department or supervisor• 1 in 5 early-career researchers reported having clear expectations from their department or supervisor

**What advice would you give to
MSFHR?**

Advice to MSFHR

Advice from survey respondents and interviews focused on:

- **MSFHR funding:** costed extensions for current award holders, additional support for graduate students, trainees and ECRs, access to bridge and/or pilot funding, extending eligibility windows, adjusting review criteria to reflect impact of COVID-19. Mixed advice on balancing COVID-19 and non-COVID-19 research funding
- **Greater flexibility for award holders:** research outputs, timelines, reporting requirements and use of funds; no-cost extensions
- **Clear and regular communication:** with the research community on MSFHR funding opportunities, changes and expectations for applicants and award holders

Advice to MSFHR

“Very important long-term action, beginning now: Revise criteria for grant and award selection going forward to take into account the varied ways in which people have had their careers negatively affected by the pandemic (especially women, members of vulnerable groups, parents of young children).”

- Early-career researcher

"The single most important investment MSFHR can make is expanding its trainee funding program... It would be relatively small compared to other stimulus programs, would support B.C. researchers, improve mental health of recipients and their stressed-out supervisors, and be a heck of a lot better than CERB."

- Mid-career researcher

Advice to MSFHR

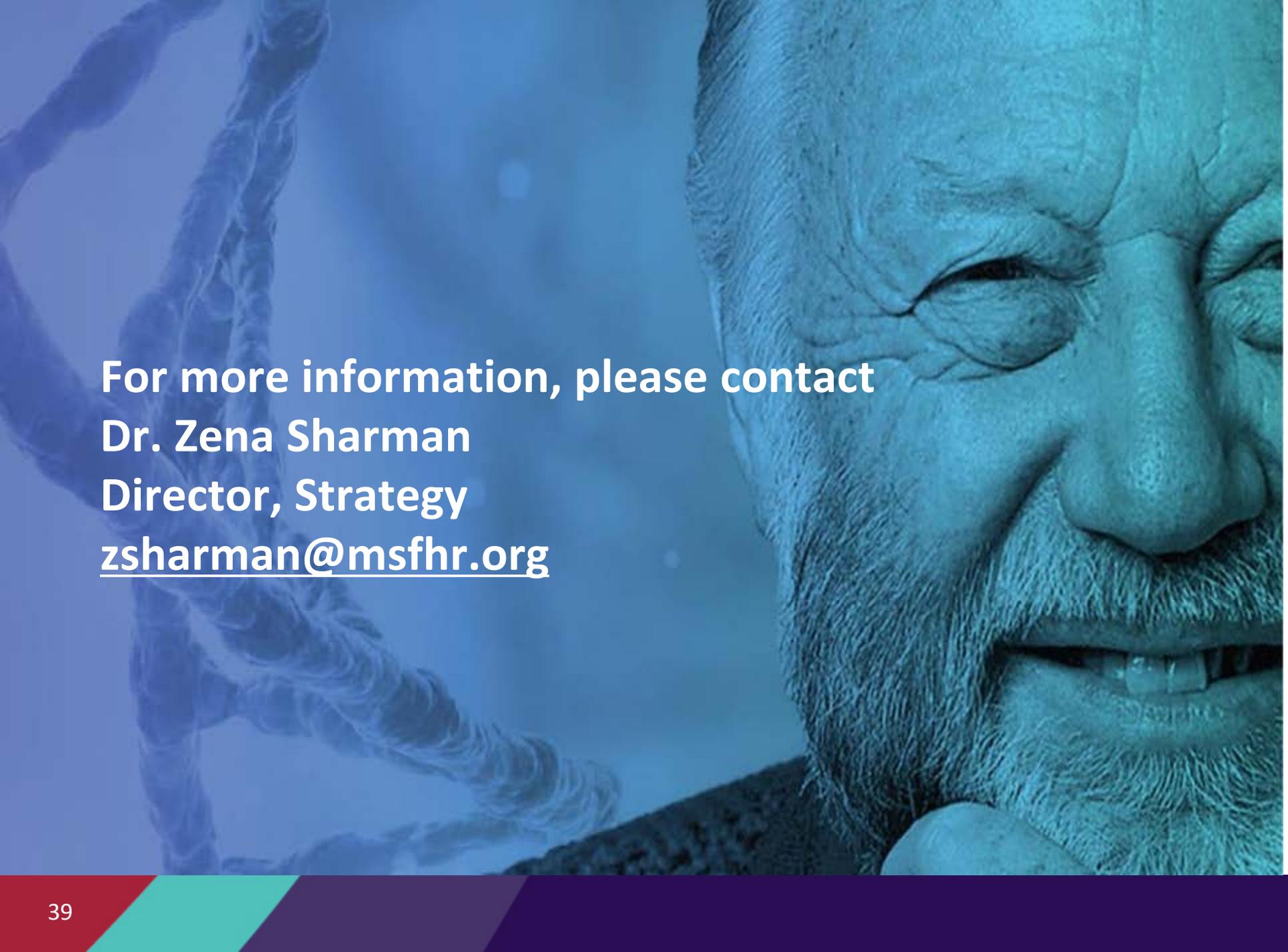
- **Peer review:** Do not review grant applications as we would in a typical grant cycle. For instance, a reviewer currently could not approve a grant that involves in-person research. Understanding that this will disadvantage those doing qualitative and health services work, MSFHR could provide applicants with support or a COVID-19 contingency plan for collecting data to show how to repurpose a proposed study

"I would like reviewers to recognize that my productivity will have been less than some of my peers' with no children at home, because I have had to split my time between work and childcare responsibilities these last months."

- Early-career researcher

MSFHR's response to date (November 2020)

- Flexible policies for award holders
 - No-costed extensions
 - Flexibility to use unspent funds (e.g., travel, conference fees)
- [MSFHR Research Continuity Fund](#) for eligible award holders
- Changes to 2021 Scholar and Research Trainee competitions to account for the impacts of COVID-19
 - Extended program eligibility window for postdocs and early career researchers
 - Adaptations to application and review process
- Supporting the [BC COVID-19 Research Response](#)
 - BC COVID-19 Strategic Research Advisory Committee
 - MSFHR COVID-19 Rapid Response Fund
 - Funding to BC health authorities to strengthen and sustain clinical health research capacity



**For more information, please contact
Dr. Zena Sharman
Director, Strategy
zsharman@msfhr.org**

Appendix

Appendix: Additional survey information

- **Survey data** collected July 21 to August 14, 2020 (n=~300). Survey targeted to BC-based health researchers from graduate students through to senior career researchers
 - **Career stage:** masters and doctoral students (n=47), post-doctoral fellows (n=34), research associates (n=21), early- (n=70), mid- (n=67), senior-career (n=59) researchers
 - **Region:** 73% respondents from the Lower Mainland
 - **Research pillar:** biomedical (n=89), clinical (n=58), health services and policy (n=69), population health (n=70) and other (n=12)
 - **Involvement with MSFHR:** ~38% respondents current MSFHR award holders, ~31% no prior involvement with MSFHR, remainder previous award holders/other involvement with MSFHR (e.g., peer reviewers)
 - **Gender:** ~63% respondents identified as women

Appendix: Additional information about stakeholder interviews and literature review

- **Stakeholder interviews** conducted June to September 2020
 - 28 senior research leaders, representing four research-intensive universities (UBC, UBC-Okanagan, UNBC and UVic) and five health research institutes (BC Cancer, BC Childrens Health Research Institute, Providence Health Research Institute, Vancouver Coastal Health Research Institute and the Womens Health Research Institute)
- **Literature review** scan of emergent literature on the impact of the COVID-19 pandemic on science, research funding and higher education in Canada, the United States and the UK
 - Review focused on ~70 reports, editorials, surveys and journal articles published between March and October 2020