

Gauging the impacts of the COVID-19 pandemic on the postdoctoral community in Canada

Sept 1- Dec 31, 2020 "Back-to-work" Survey



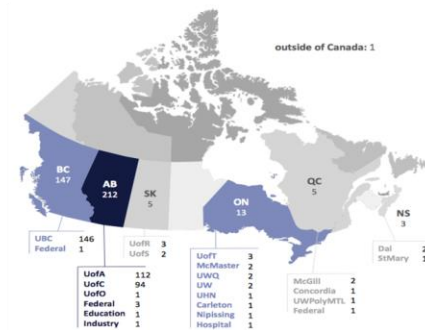
Returning to the workplace

n=209 respondents



Jan 15 - Apr 21, 2020
CAPS national survey
n=1016

March 11, 2020
WHO declares
COVID-19 a pandemic



Apr 01 – May 31, 2020 "Quick-Response" Survey



COVID-19 impacts on postdoctoral life

At CAPS-ACSP, we are working behind the scenes to have the postdoctoral experiences be heard. We want to hear your thoughts on how COVID-19 has impacted your research trajectory. Please fill this quick survey and let us know your thoughts (your answers will be anonymous to organizers).

n=384 respondents

At the beginning of the COVID-19 pandemic, the Canadian Association of Postdoctoral Scholars (CAPS-ACSP) conducted an online survey, termed "Quick-Response" survey to gauge the early pandemic impacts on the Canadian postdoctoral community.

Key Findings from the COVID-19 "Quick-Response" Postdoc Survey (Apr – May, 2020)

- 85% reported that their research activities were impacted, >50% being highly/severely affected
- 85% reported impacts on their work logistics (30% highly to severely impacted), with 16% unable to adapt their work to a home office environment
- 84% reported cancellations of work-related travel (immediate and planned)
- 25% reported that their teaching activities were negatively affected
- 59% of postdocs indicated that their insurance needs were met
- 14% reported that their contract and/or fellowship was negatively impacted
- 60% confirmed or expected job application interruptions (38% yes, 22% unsure)
- 22% were affected by interruptions to work permit and immigration processes

Based on these findings, our immediate recommendation to institutions and funding agency partners is to develop a recovery plan, focusing specifically on:

- Implementation of a "Stop-the-clock" for postdoc fellowship applications + more virtual professional development opportunities for postdocs (most valued by Canadian postdocs based on national survey 2016/2020 findings are PD options focused on grant-writing and project management).
- Ensure access to adequate mental health support.
- Provide extensions in fellowship durations for postdocs by default (to buffer financial impacts, administrative interruptions to work permits and benefits plans).
- Provide clear criteria for grant reviewers to account for COVID-19 interruptions.
- Create new funding opportunities for senior postdocs to support those who are close to being competitive for (or in the process of transitioning to) faculty positions.
- Ensure the continuity of funding and research opportunities for diverse research areas. Funding and job applications are already impacted by a national shift to COVID-19 research prioritization.
- Ensure external postdocs are eligible for institutional benefits, including basic protections like EI/CPP/QPP (without a stipend reduction).

Find the full report and more at:
<https://caps-acpp.ca/resources/>

The report from CAPS' **Returning to the Workplace Survey (Sept-Dec 2020)** starts on the next page

CAPS-ACPP Survey Series to gauge the impact of the COVID-19 pandemic on the postdoctoral community in Canada – Part II) Returning to the Workplace Survey (Sept-Dec 2020)

This survey was designed by:

Dr. Noushin Nabavi (2019/20 Vice-Chair Surveys and Data), Dr. Christine Gibb (2019/20 Chair), Dr. Emma Griffiths (Past Chair), Dr. Sarah Grasedieck (2019/20 UBC Member at Large)

Data analysis and report by Dr. Sarah Grasedieck (2020-22 Vice-Chair Surveys and Data), revised by Dr. Christine Gibb and Dr. Edris Madadian (2021/22 Chair)

Postdoctoral scholars are individuals holding a doctoral degree (e.g., PhD) or a professional equivalent (e.g., MD) who hold a temporary mentored position in an academic or affiliated institution to strengthen their research focus. As the time spent as a postdoc increases (Powell, Nature, 2015) and there are at any given time many more postdocs than available faculty positions (Larson et al, Syst Res Behav Sci, 2014), most postdoctoral scholars explore career paths alternative to academia in industry, government, education/public service, and health care sectors – either voluntarily or not. The postdoctoral community in Canada therefore represents a transient but valuable pool of talented and highly skilled workers.

In general, a postdoctoral appointment is short (on average 2-3 years), and about 60% of postdocs in Canada are estimated to be visiting international scholars. This has the effect that the postdoctoral landscape in Canada is volatile, hard to track and to connect, and that individual work experiences, salaries, access to support structures, benefits, and collective agreements as well as many other factors vary widely – each postdoctoral experience is unique and therefore poorly regulated.

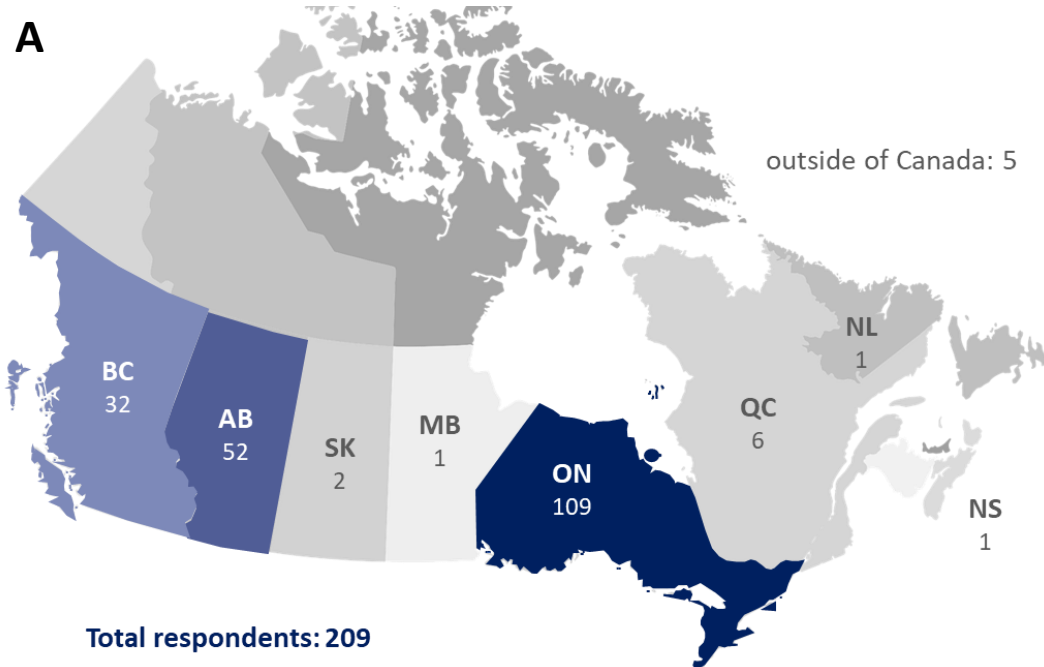
The Canadian Association of Postdoctoral Scholars / Association canadienne des postdoctorantes et postdoctorants (CAPS-ACPP, previously l'Association canadienne des stagiaires postdoctoraux (ACSP)) is an advocacy group comprised of postdoctoral fellows in Canada that was founded in 2009. Our mission is to connect and to advocate for postdocs in Canada as well as for Canadian postdocs abroad in order to assess and to improve their living and working conditions.

In the pursuit of this mission, CAPS-ACPP frequently collects data on postdocs in Canada for use in evidence-based reform and in advocacy for postdocs at the national, provincial, and institutional level. In our independent nation-wide surveys, we could identify three key issues that negatively affect the wellbeing and career prospects of the Canadian postdoc community: (i) low compensation and benefits, an issue that is directly linked to (ii) administrative ambiguity in placing postdocs into employment categories, as well as (iii) insufficient career development and mental health support.

Reports on the impact of the COVID-19 pandemic on academic performance and mental health, especially brought upon by workplace shutdowns and school closures, are still emerging. To document the impacts of the already vulnerable postdoc population in Canada and to formulate fast-response action plans and recommendations to policy makers, funders, universities, and other employers, CAPS-ACPP has conducted two independent surveys both in English and French language during the pandemic. Both surveys were distributed among the CAPS-ACPP general membership listservs, through advertisements on the CAPS-ACPP website, CAPS-ACPP social media outlets (Twitter, Facebook, and LinkedIn) and through personal contacts including individual university postdoctoral associations, the Tri-council, and the Canadian Association of Postdoctoral Administrators (CAPA).

The first survey, conducted in April-May 2020, documents the immediate impact of interruptive workplace and school closures as well as additional, global pandemic effects on the financial, research, immigration, mental health and career situations of postdocs in Canada and Canadian postdocs abroad. Please find this and other CAPS survey reports at <https://caps-acpp.ca/resources/>.

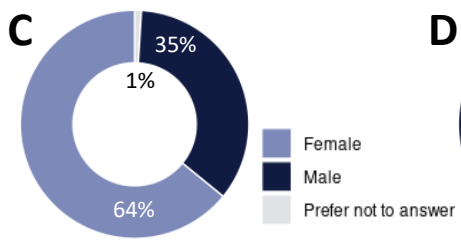
The following short report summarizes the responses CAPS-ACPP collected in a follow-up survey, conducted between September – December 2020, which focused on assessing the concerns of postdocs as well as the support they received from employers and funders regarding their safe return to work, their mental health, and access to career development opportunities.



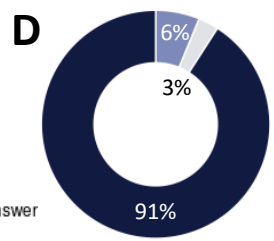
B

Type of Organization	number	proportion
Academic organization/ University	190	91%
University affiliated work site	13	6%
Industry	4	2%
Provincial / Territorial organization	1	0.5%
Federal organization	1	0.5%

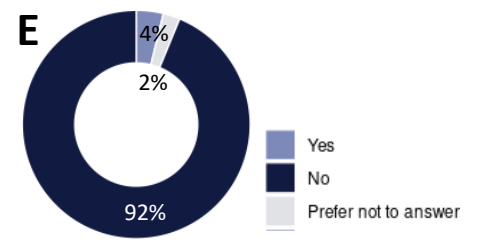
How do you identify your gender?



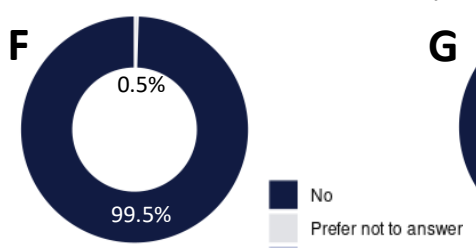
Do you self-identify as a non-heterosexual person?



Based on this definition¹: Are you a Person with a Disability?



Based on this definition²: Are you an Aboriginal Person?



Based on this definition³: Are you a Racialized Person?

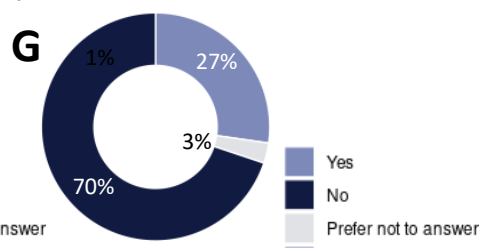


Figure 1. Demographics

Throughout the pandemic, postdocs have been working and returning to their office spaces, labs, classrooms, field sites, and other workplaces to varying degrees - some might not have been experiencing workplace shutdowns at all, posing its own challenges. For the purpose of this survey, the term 'return to work' referred to work taking place outside the home. The original questionnaire used to obtain the data that was analyzed for this report can be found [here](#).

Survey Participant Demographics

A total of 209 postdoctoral scholars participated in this survey. The majority of respondents were based in Canada, with just more than half of the participants located in Ontario and 5 Canadian citizen postdocs conducting research in another country (**Figure 1A**). 203/209 postdocs were affiliated with Universities or related organizations (**Figure 1B**) and the majority of survey respondents identified as being female (64%, **Figure 1C**). This survey reached 12/209 (6%) respondents who identify as non-heterosexual (**Figure 1D**), and includes data collected from 8 postdocs (4%) reporting a disability (**Figure 1E**). No aboriginal people were among the survey respondents (**Figure 1F**). Almost one third (27%) of postdocs in our survey self-identify as non-Caucasian in racial origin (**Figure 1G**). For the purpose of this survey, generally no data stratification was performed to elucidate differences between any of the above-mentioned groups. However, if this is of interest, we are happy to provide this information. Please contact survey@caps-acpp.com

Anticipated return to the workplace and desire to work from home

This survey was conducted from 6 to 9 months after the COVID-19 outbreak had officially been declared a pandemic by the WHO. At this time, almost half of the surveyed postdocs reported they were already back to working on site (45%). Another 35% of respondents were expecting to be back at their workplaces within the coming 6 months, 14% anticipated to start working outside their home office within the coming year. Six respondents (3%) did not expect to return to their workplace (**Figure 2A**). When asked whether they would prefer to work from home, 28% of respondents replied with a clear *no* and 48% answered with a clear *yes* (**Figure 2B**). Interestingly, this proportion shifted when only focusing on postdocs who were already working on site at the time of answering the survey (n=95): 29% of on-site workers indicated they would prefer to work from home, 21% were unsure, and 43% of on-site workers indicated they indeed prefer to work on-site. A comparable insecurity and individuality was apparent when postdocs were asked whether they felt prepared for a second wave of COVID-19 infections, where the distribution of replies indicated no clear majority for any of the rating categories (**Figure 2C**). However, the overall confidence in the current employer to ensure a safe return to the workplace was high with only few exceptions (**Figure 2D**).

Access to childcare

When asked about sufficient access to childcare services, 80% of survey respondents indicated that were not in need of childcare/after school care. In this respect, this survey cohort deviates from data collected in our national surveys, where 33-39% of postdocs indicated they have children. Among the current surveys' postdoc respondents who require childcare, 71% (30/42) were female and 83% reported that their childcare facility was operational at the time taking this survey (**Figure 2E**). However, about one quarter (23.5%) of these respondents preferred to keep their children at home despite having access to childcare. Among the 17% (n=7) participants who did not have access to childcare at the time of the survey, 3 reported the reason to be pandemic-related. Alarming, the remaining 4 respondents, accounting for 10% of postdocs with children represented in this survey, were in need of childcare independent from the pandemic. Three of these four were women and all reported to be already working on site but indicated they would actually prefer to work from home. The respective location of postdocs who were not able to secure suitable childcare for pandemic unrelated reasons were Ontario (2), Quebec (1), and British Columbia (1).

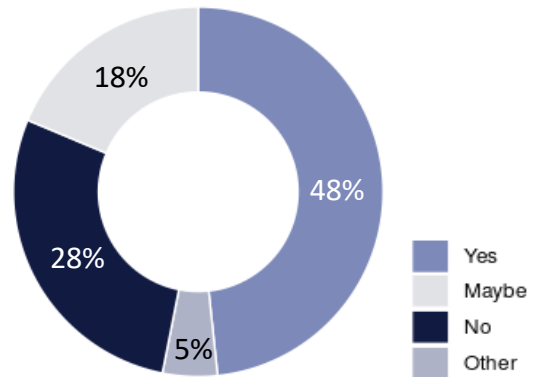
Route of commute and subjective feeling of safety during commute

How the COVID-19 has impacted on postdocs' commute routine is difficult to interpret (**Figure 3A**). In line with the observed high variability in rating subjective preparedness for a second COVID-19 wave,

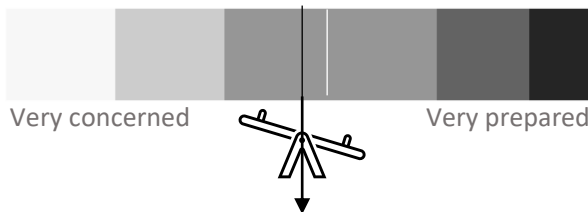
A When do you foresee yourself returning to the workplace?



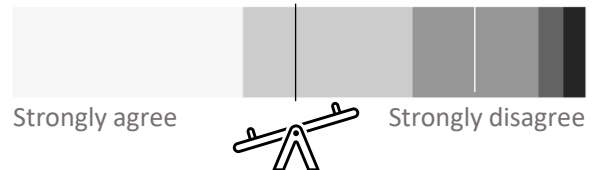
B Would you like to continue working from home at this time?



C How prepared are you for a second wave of COVID-19 infections?



D Please rate the following statement: I feel confident my organization will ensure a safe return to work for me.



Black line corresponds to a neutral rating if the proportion of answers was equal for each category, white lines correspond to actual neutral ratings per question. A shift to the right favours the left hand category and *vice versa*.

E Do you currently use/have access to childcare services (e.g. childcare facility, camps, pre-school, school, private childcare or other programs)?	number	proportion
This does not concern me / I am not in need of childcare	168	80%
Yes, my childcare service is operational	26	12%
Although my childcare service is operational, I prefer to keep my kids at home	8	4%
No, I did not find suitable childcare yet independent of COVID-19*	4	2%
No, my childcare services are still closed/unavailable due to the pandemic	3	1%

*2 Ontario, 1 Quebec, 1 British Columbia

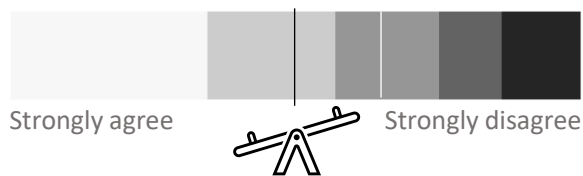
Figure 2. Concerns surrounding the return to the workplace

the subjective rating of whether postdocs who currently commute to work feel safe during their commute is highly variable and depends on individual circumstances. No clear connection between any route of commute and a feeling of safety or lack thereof could be made (Figure 3B).

A

Usual route of commute (multiple answers possible):	number	proportion
Drive my own car	91	44%
Walking	73	35%
Public Transit	69	33%
Biking	44	21%
The pandemic has changed my commute routine	27	13%
The pandemic has not changed my commute routine	20	10%

B Please rate the following statement: I feel safe traveling to and from work



Black line corresponds to a neutral rating if the proportion of answers was equal for each category, white line corresponds to the actual rating by responders. A shift to the right favours the left hand category.

Figure 3. Impact of COVID-19 pandemic on commute routine

Health & safety measures implemented at the workplace

According to postdocs’ reports, more than half of Canadian Universities and affiliated institutions had implemented the full-time wearing of masks (95%), offered hand sanitizer in entry/exit areas (80%), restricted room capacities (68%), and provided daily disinfection of the workplace area (60%)(Figure 4A). Measures that were implemented in less than half of academic Canadian workplaces included contact tracing (35%), mental health support (36%), and discounted parking/transit fees for workers who needed to work on site at the time of this survey (9%)(Figure 4A).

Policies and support offered by employer

About half of the Canadian academic employers that were covered by this survey offered virtual professional development opportunities to their postdoctoral scholars in a way that reached the survey participants. Significantly more survey respondents based in British Columbia indicated access to professional development opportunities (69%) as compared to postdocs who were based in Ontario (48%), Alberta (44%), Quebec (50%), or outside of Canada (40%)(Figure 4B). Likewise, almost half of Canadian academic employers offered mental health guidance and resources: in the provincial comparison, 53% of respondents who were based in British Columbia reported that they were provided with mental health support, followed by 48% in Alberta, 44% in Ontario, 40% outside of Canada, and only 17% of respondents who were located in Quebec (Figure 4B).

Regarding individual support, about 17% of employers from survey participants reportedly offered help with work permit extensions and immigration applications, 16% supported their postdocs with funding extensions, 12% offered appointment extensions, and 7% offer mitigation strategies for postdoctoral status or access to benefits (Figure 4B). Of note, with 209 participants, this survey cohort is small and not every postdoc requires all types of support mentioned here - therefore the presented numbers might not reflect the actual extent of support received by individuals.

A Which health & safety measures or interventions will be/are implemented at your workplace?

Safety measures at workplace	number	proportion
Masks mandatory	199	95%
Hand sanitizer available at entries / exits	167	80%
Room capacity restrictions / room booking	143	68%
Daily disinfection	125	60%
Elevator capacity restrictions	119	57%
Spaced desks / one-way walking systems	94	45%
Mental health support	76	36%
Contact tracing measures	74	35%
Daily health screening, online questionnaire	67	32%
Face shields / barriers	54	26%
Disposable gloves available	51	24%
Optional employee testing for active virus infection (PCR)	22	11%
Discounted parking/transit fees	19	9%
Area closures to reduce shared space	19	9%
Daily health screening, on site, incl temperature check	19	9%
Disposable gloves mandatory	15	7%
Mandatory employee testing for active virus infection (PCR)	11	5%
Prohibition of carpooling	6	3%
Masks optional	4	2%

B Does your organization have policies regarding the following, to support your return to work?

Policies offered by employer	number	proportion	Where
Professional development opportunities (e.g. virtual meeting support, etc.)	107	51%	48% Ontario, 44% Alberta, 69% BC, 50% Quebec, 40% outside of Canada (% of respondents per province)
Mental health support and guidance	100	48%	44% Ontario, 48% Alberta, 53% BC, 17% Quebec, 40% outside of Canada (% of respondents per province)
Work permit / Immigration visa extensions	36	17%	25 Ontario, 7 Alberta, 4 BC (n per province)
Funding extensions	34	16%	16 Ontario, 11 Alberta, 7 BC (n per province)
Appointment extensions	26	12%	19 Ontario, 5 Alberta, 2 BC (n per province)
Mitigation strategies for postdoc status	11	5%	5 Ontario, 3 Alberta, 1 BC, 1 outside of Canada (n per province)
Mitigation strategies for benefits	5	2%	3 Ontario, 2 BC, 1 outside of Canada (n per province)
Others	49	23%	

Figure 4. Institutional Support and Health/Safety measures during the COVID-19 pandemic.

Compared to the proportion of postdocs who reported that their employer already had professional development policies in place (51%, **Figure 4B**), thankfully, we found that the proportion of respondents who expect to receive skills development support upon their return to work was higher. We asked postdocs whether they think that their mentors/organizations will continue to provide skills development opportunities to enhance their competitiveness - independent of their day-to-day research experience - as they return to work and after. Overall, almost two thirds (65%) of survey respondents answered with a clear yes, 16% expected at least a limited form of support, and one in five postdocs (19%) did not expect to receive any opportunities for skills development (**Figure 5**).

Interestingly, postdocs taking our survey who were located in Alberta were much more confident than the average (only 10% selected “no”), whereas alarmingly, one out of two postdocs from Quebec (50%) did not expect to receive career development support from their mentors and/or institution beyond their research work.

Considering individual postdoc groups, a generally higher confidence in skills development support was voiced by postdocs identifying as male (70%) as well as by postdocs self-identifying as racialized (=non-Caucasian in racial origin regardless of the place of birthplace or citizenship, non-Aboriginal Persons; 67%, **Figure 5**). Overall lower confidence was reported by postdocs who identify as female (61%) as well as by postdocs with a disability (50%, **Figure 5**).

Do you feel your mentor/organization will continue to provide opportunities for skills development?

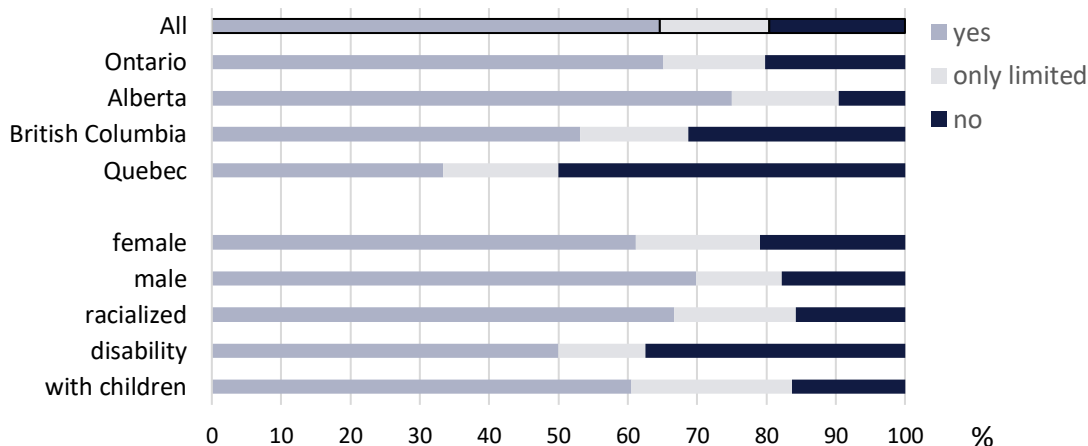
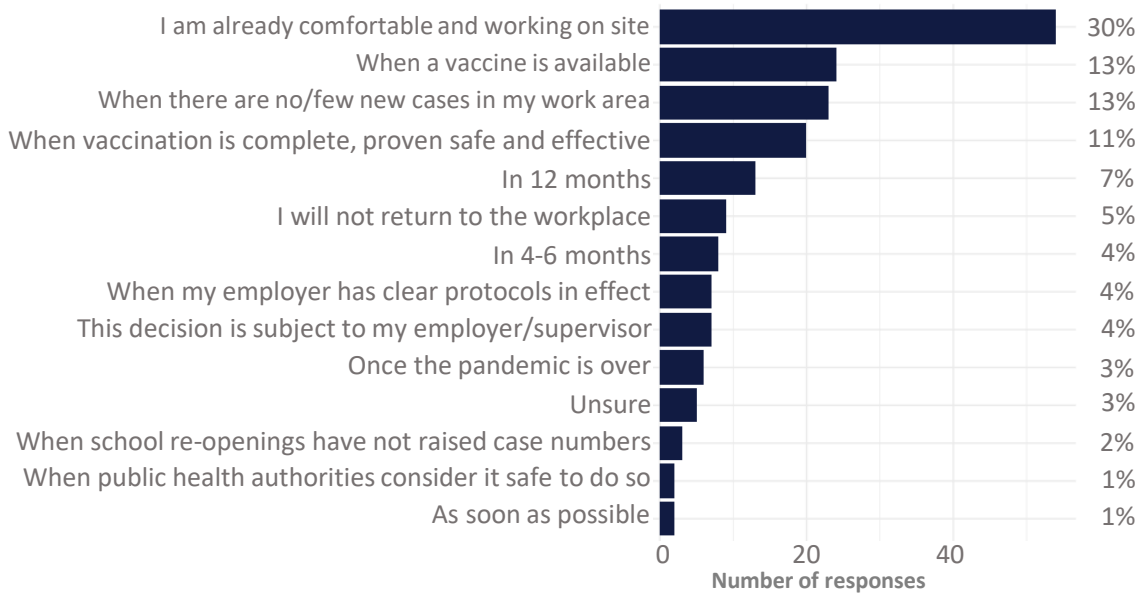


Figure 5. Confidence in employer to provide ongoing support for skills development

When asked about the time survey participants would feel confident and comfortable to return to the workplace, the majority of respondents (30%) indicated they were already confident and comfortable and back to the workplace. 13% of respondents replied they would return confidently and comfortably when a vaccine was available, another 13% replied “when there are no or only few new cases in my work area”, followed by “when vaccination is complete and has proven safe and effective” (11%) (**Figure 6A**). In line with these sentiments, survey participants mentioned “availability of a vaccine”, and “low case numbers” among the most highly ranked reasons that would make them confident and comfortable to return to work (**Figure 6B**). Of note, while answering these questions about the time and conditions for a subjectively safe return to work, 8 individuals mentioned they wished for “greater institutional support” and 2 individuals indicated that it was not their choice that they were working on-site but their “only option” (**Figure 6B**). In an open field question, we asked postdocs to share their individual comments and concerns. A collection of direct quotes that reflect the participants' worries and experiences during the COVID-19 pandemic are presented on pages 9 and 10 and is followed by a summary, conclusion, and recommendations.

A When will you feel confident and comfortable going back to work?



B What would make you comfortable with returning to work?

	number	proportion
Availability of a vaccine	32	15%
Low case numbers	27	13%
I am confident with the current policies	16	8%
Better enforcement of insitutional safety measures	16	8%
Low work place capacity	12	6%
Mask mandates	10	5%
Routine COVID-19 testing at workplace	8	4%
More institutional support	8	4%
Better public transport safety measures	8	4%
Vaccine mandates	7	3%
Nothing until this pandemic is over	7	3%
Provision of PPE by employer	4	2%
Having my own office / more office space	4	2%
Continous monitoring of cases	4	2%
Parking subsidies	3	1%
No outbreak after University reopenings	3	1%
If courses for students were kept virtual	3	1%
Working on site is not my choice, it is my only option	2	1%
Treatment that is effective against COVID-19	2	1%
Shift work	2	1%
Extension of contract/fellowship	2	1%
Clear communication and safety plan by employer	2	1%
Cancellation of Undergraduate non-essential activities.	2	1%
When children are allowed back to school	1	0.5%
The all-clear from public health authorities	1	0.5%
Knowing my children are safe at childcare	1	0.5%
If I had a say in my employers' decisions	1	0.5%
NA	57	27%

Figure 6. Institutional Support and Health/Safety measures during the COVID-19 pandemic.

"Postdoc Voices" - Open Field Comments and Concerns regarding the pandemic, selected

*"I do not feel particularly reassured that **lower productivity** during shutdown periods will not be **punished in the subsequent job applications.**"*

*"My contract ends at the end of 2020. I am having **difficulty finding a job!**"*

*"**Job prospects are feeling very bleak** right now, but even if I am able to extend my current postdoc for several more years, it feels unfair to be **stuck in a form of academic "serfdom"** without the ability or opportunity to progress."*

*"Yes, my institution offers career development opportunities, but I am attending far fewer opportunities at the moment due to **care giving constraints and overwhelming exhaustion**"*

*"**Postdocs are very vulnerable to job market disruptions. Universities are not doing enough to support them** -- i.e. there is no talk of extending current postdoc contracts even though there is very good reason to believe that this upcoming job market year will be very difficult; my dean, at least, has stated to me that he does not believe that the pandemic has created a difficult environment for the careers of current postdocs at my institution and that the university has no reason to change their business-as-usual treatment of postdocs."*

*"I am concerned about my **work permit and Visa extension**. iRCC is working very slow and I **cannot make any future commitments.**"*

*"My **immigration status** is the most important thing for me right now."*

*"I am concerned about my **delay in research productivity**, since I was not allowed in the lab between March and August. This especially concerns me given the 5 year max for Postdocs."*

*"Working from home is **not efficient** for everyone."*

*"I am currently in Canada on a **2-year work permit** and because of the pandemic, I have **'lost' approximately 6 months of research time**. Having **work permit/visa/funding extensions** for people in my position or similar would be extremely helpful for allowing us to catch up on work, but also to reduce the **anxieties associated with the idea of not completing projects/publications before work permits/visa's expire.**"*

*"My desk **ergonomic situation** is shitty at best. My back, neck and arms keep getting more and more strained. I worry about how long I will be able to maintain my current work condition. I am already seeking help from massage/physiotherapy. **There is no end in sight and I feel powerless.** I don't have enough space to set up a proper desk, nor sufficient pay to afford a bigger apartment. **I wish I could have my office back even for one day per week. It would make a huge difference.**"*

*There have been issues with **reduction of remuneration, inspite of a post-doc having to work full time**. This is kind of misuse and hurts especially for an immigrant like me who has to support a family with the meagre amount. The **pandemic limits the option to move around to explore new options**. Had no choice but to take up this position, as there was already a delay to join due to first wave of pandemic."*

*“As a postdoc I **don't feel supported**. Also this pandemic is **impacting productivity** and the institution should recognize that instead of try to push to work as much as possible. Since I am working from home, I end up working every day (also weekend), more than 8h, because my productivity has decreased. Plus I am not taking vacation. At the end, I **feel so exhausted**.”*

*“I am really **worried about my contract renewal** because of COVID-19. Since we are not working in the lab full-time and our **PDF contracts are on a 6 months basis**, every time I am worried that my supervisor may refuse to renew my contract with any excuse like being unproductive.”*

*“The university told us that there were **so few postdocs it was not worth their time helping us** compared to the much larger population of bachelors and graduate students. Postdocs are in an extremely **precarious career stage especially since many universities implemented hiring freezes**. We also do a lot to lead research and mentor students, and yet **it does not feel like anyone is looking out for us**.”*

Summary and Conclusion

This survey of Canadian postdocs is the third in a series of consecutive surveys conducted by CAPS/ACPP – the first capturing the *status quo* of postdocs in Canada and Canadian postdocs abroad just before the COVID-19 pandemic started; the second portrayed the problems postdocs experienced during the initial “lockdown phase” around 4 months after the WHO official declared the COVID-19 outbreak a pandemic. This third survey captured postdoc experiences at an insecure transition time, about 6-9 months into the pandemic, when COVID-19 case numbers were closely monitored and often surging unpredictably, most schools and many childcare facilities were closed, hiring freezes and layoffs were common, and most importantly, vaccines were not yet available to the general public. Despite experiencing varying degrees of fear and uncertainty during this time, many academic institutions prepared for a common “return to the workplace”. Throughout the pandemic, postdocs have largely continued their research, either working from home or on site, as the time to produce data, publish, and meet grant-associated deadlines at this competitive career stage is short and for many postdocs, further restricted by work permits and visas.

Data from our national surveys (2009-2020) show that postdocs in Canada – before, and therefore independent of the effects of the COVID-19 pandemic - face three general issues: low pay and lack of job security/access to benefits, institutional ambiguity, and insufficient institutional support, especially lack of career development and mental health support. Key findings from our first COVID-19 survey show that many postdocs have struggled with expiring work permits and visas, faced severe mental health challenges, had difficulties to adapt their work to remote conditions, show that parents were overwhelmed with the full-time care and/or homeschooling of their children on top of working a full-time job, and that postdocs with immunocompromized or elderly dependents faced the moral dilemma of weighing their safety against the potential career consequences of staying home and that for many postdocs, continued funding or contract extensions as well as job prospects were uncertain.

This survey provides an additional snapshot of the worries and experiences of postdocs in Canada and of 6 Canadian postdocs abroad at a time when a nation-wide return-to-work was imminent – but proved to be complicated by a second wave that many had predicted but few felt truly prepared for. This “second wave” started just after this survey was closed, in

December 2020, and was especially pronounced in the East of Canada. The results of this survey show that about half of the polled postdocs shortly before the second wave of the COVID-19 pandemic were back to working on site but that many continued to suffer from decreased productivity and expressed their difficulties in and worries about the prospect of finding a job.

Only every second postdoc reported to receive mental health as well as career development support at the time of this survey. Whereas 70% of male postdocs were confident that they would receive opportunities for skills development after returning to the workplace, this was true for only 61% of female postdocs and for only 50% of postdocs reporting a disability. Among survey participants, 7 out of 10 postdocs with children at childcare age were female and although most of them reported to have access to childcare and career development opportunities at the time, some stated that childcare was barely affordable and that they did not receive any childcare support from their employers. One female postdoc parent who did have operational childcare and their employer provided career development opportunities pointed out that she was “attending far fewer opportunities at the moment due to care giving constraints and overwhelming exhaustion”, highlighting that the pandemic put additional strain on already vulnerable and poorly supported postdoc groups, including female postdocs, postdocs with children, as well as postdocs with a disability. Noticeably, postdocs located in Quebec reported by far the poorest access to career development beyond their research work as well as to mental health support from their mentors and/or institutions.

In addition, we found that 10% of postdocs with children that were represented in this survey - with 3 out of 4 being female - reported they had not yet been able to secure childcare independent from the COVID-19 pandemic, highlighting the poor support structures for full-time working parents at Canadian universities and in Canadian university cities.

As a result of the COVID-19 pandemic, contracts were discontinued, funds were cut, work permits have expired, critical opportunities have been missed, and insecurity has increased for most Canadian workers, including postdocs. Pre-existing hurdles for postdocs have become even higher, for some they might have become too high to overcome. The pandemic has highlighted issues that postdocs face around the globe, and we provide a series of snapshots into the issues that postdocs face in Canada.

General Problem 1: At most Canadian institutions, there are no pay increases for postdocs and although the Canadian Tricouncil fellowships for postdocs have seen a single raise from 40 to 45K annually in 2015 - the first since 2003 - this does neither account for inflation nor agree with the cost of living in many of Canada's university cities where rents and food prices skyrocket.

Solutions: Institutions and funders need to adapt fellowships to inflation and regional cost of living. In addition to direct financial support, institutions need to increase their efforts to get to know their postdocs – to learn how many there are, what types of support and benefits they receive and what types they are lacking in order to make services available to them that provide indirect financial support and that are taken for granted for other academic groups like students, employees, or faculty (e.g. student immigration or legal services, career counseling or resources, paid sick leave, career development support, union representation, assistance with child care and with health care challenges...).

General Problem 2: Only a fraction of postdocs will move on to faculty position and even less to a full professorate and despite this, the number of postdocs is steadily increasing (Trager R. Chemistry World, 2021).

Solution: Employers need to acknowledge, communicate and adapt the provided career development resources for postdocs to become competitive for careers in non-academic sectors, such as industry, government, and nonprofit organizations. Currently, our schools, universities and governments invest a lot of resources to attract the younger generations to STEM careers, but we lack the infrastructure to place them into attractive non-academic positions after obtaining a Bachelor, Master, or PhD degree. As Universities do not have the capacity to take on more faculty without devaluing professorships or underpaying teaching personnel, it does not make sense to groom ever more postdocs for an academic career trajectory.

Postdoctoral scholars are drivers of innovation and discovery. They are highly skilled and talented thinkers, educators, project managers, researchers, analysts, artists, inventors, and communicators. The majority of the Canadian postdoctoral community are international guests in this country and although we as CAPS like to sometimes call them a community in our reports and communication, our data, individual discussion with CAPS members, and our fundamental difficulties to reach out to postdocs in Canada, show us a different picture: only very few are in contact with other postdocs be it on a national level or even within their own departments. The postdoc time is a financially insecure and mentally challenging experience with poorly controlled and generally not streamlined access to benefits and professional development opportunities. The COVID-19 pandemic has further exacerbated these issues. It is not too late and indeed it has become critical to act to improve conditions for future generations of postdocs in Canada. The COVID-19 pandemic is often compared to a storm on an open sea and it is said how each of us has to navigate it in a different vessel. Staying with this analogy, each wave is its own ending as much as its beginning – let’s begin focusing more on postdoctoral scholars in Canada. We must not leave these young innovators adrift any longer.

¹For the purpose of this survey, a Person with a Disability means a person who has a long-term or recurring physical, mental, sensory, psychiatric or learning disability and who (a) considers herself/himself to be disadvantaged in employment by reason of that disability or (b) believes that an employer or potential employer is likely to consider him/her to be disadvantaged in employment by reason of that disability, and includes a person whose functional limitations owing to his/her disability has been or previously has been accommodated in his/her current job or workplace. Based on the description: Are you a Person with a Disability?

²For the purpose of this survey, the Canadian Constitution recognizes three groups of Aboriginal People: First Nations (also referred to as Indian), Métis or Inuit. A First Nations Person refers to Status and Non-Status Indian Person in Canada. Based on the description: Are you an Aboriginal Person?

³For the purpose of this survey, a Racialized Person means a person other than an Aboriginal Person as defined above, who self-identifies as non-Caucasian in racial origin regardless of the place of birthplace or citizenship. Based on the description: Are you a Racialized Person?