



CAPS ACSP

**Canadian Association of Postdoctoral Scholars
Association Canadienne des Stagiaires Post-doctoraux**

EXECUTIVE SUMMARY

CAPS Official Report to the Advisory Panel for Canada's Fundamental Science Review

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L'Association Canadienne de Stagiaires Post-doctoraux (CAPS-ACSP)

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Background

As part of the consultation process for Canada’s Fundamental Science Review, In the late summer of 2016, the CAPS/ACSP Executive Council received a request from Dr. David Naylor, Chair of the Advisory Panel for the Review, to submit a response to the Science Secretariat’s call for evidence and input on behalf of Canadian postdocs. The Panel also asked CAPS/ACSP to provide data from our 2016 National Postdoc Survey, which was not yet ready for public release.

Rather than limit ourselves to responding to the questions posed to students, trainees, and postdocs in the official Call for Evidence and Input, we chose instead to write a report that included data from all of our national surveys as well as recommendations based on the evidence from our surveys and personal input from Canadian postdocs. The result was a 28-page report entitled: “Canadian Association of Postdoctoral Scholars – Official Report to the Advisory Panel for Canada’s Fundamental Science Review”. This Executive Summary reviews the key points from the full report ([available here](#)) and highlights the policy recommendations contained therein.

The report was largely based on data collected from postdocs working in Canada and Canadian postdocs working abroad on CAPS/ACSP’s three national surveys conducted in 2009, 2013, and 2016 (Stanford et al., Mitchell et al., and Jadavji et al., respectively).

Highlights from the report

Summary Data from CAPS/ACSP 2009, 2013 and 2016 Surveys

	2009	2013	2016
No. of respondents	1,192	1,830	2,109
Average age (yrs)	58% between 30-35	34	34
Gender	56% male 44% female	53% male 47% female	51% male 47% female
Nationality	44% Canadian 17% Permanent residents 39% Work permit	47% Canadian 15% Permanent residents 38% Work permit	57% Canadian 13% Permanent residents 29% Work permit
Canadians working abroad	1%	3%	12%
Partner	48%	69%	60%
Dependents	29%	35%	30%
Multiple dependents	13% (43% of parents)	16% (46% of parents)	15% (50% of parents)

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Survey data and Demographics:

- Thousands of postdocs responded to our surveys each year.
- The average age of respondents remained steady over that period at ~34 years.
- The proportion of male and female postdocs appeared to equal-out over time.
- The number of respondents who were Canadian citizens increased over time (44% in 2009 to 57% in 2016), whereas the number of permanent residents (17% in 2009 and 13% in 2016) and international postdocs on work permits (39% in 2009 and 29% in 2016) decreased.
- The number of Canadian postdocs working abroad increased by 11% from 2009 to 2016.
- The number of respondents with a partner increased to ≥60% in 2013 and 2016.
- Across all 3 surveys, ~1/3 of postdocs had dependent children and the proportion with 2 or more children increased over time to 50% in 2016.

Employment Status, Income, Benefits & Protections:

- Estimated that only ~30% of postdocs working in Canada were classified as 'employees' with access to Employment Insurance (EI) and the Canada Pension Plan (CPP) in 2016.
- Without access to EI most postdocs working in Canada lack coverage for:
 - o Job loss ('regular') benefits
 - o Maternity and parental benefits
 - o Sickness benefits
 - o Bereavement benefits
 - o Compassionate care benefits
 - o Special benefits for parents of critically ill children
- The majority of respondents on all three surveys indicated that they would prefer to be classified as employees and/or rated access to EI and CPP as a high priority for postdocs.
- The average estimated salary among postdocs currently working in Canada was \$46,600/year on the 2016 survey, which lagged \$7,400/year behind that of Canadian postdocs working in other countries, \$8,900/year behind that of postdocs working in Canada funded by foreign agencies, and \$43,200/year behind that of PhDs who did not pursue postdoctoral training.

Estimated cumulative foregone wages during postdoc training in Canada from 2016 survey

	Duration of Postdoctoral Training				
	1 year	2 years	3 years*	4 years	5 years^
Cumulative foregone wages	\$43,200	\$86,400	\$129,600	\$172,800	\$216,000

*= median years of training for past postdocs on the 2016 survey; ^maximum duration of postdoc training at most institutions in Canada

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- The Canadian research/training system does not use a commensurate approach to salary, and thus fails to acknowledge the value of the training and experience of its postdocs. This incentivises Canadian PhDs to pursue postdoctoral training abroad.
- Many postdocs working in Canada lack not only statutory benefits (EI and CPP), but also common employee benefits such as health/dental insurance, extended health coverage, a drug plan, family benefits, vision and eye care coverage, long-term disability, life insurance, and access to employee pension plans.

International Postdocs:

- The majority of international postdocs (~75% on the 2013 survey) either plan to stay in Canada or are unsure whether they will stay/leave – the latter due primarily to immigration issues and the lack of job prospects.
- Postdoctoral work is not officially recognized as 'skilled work experience' for the purposes of immigration to Canada and this is a barrier to postdocs seeking permanent residence.

Former Postdocs:

- 1/3 of past postdoc respondents on the 2016 survey left Canada to work abroad (n=141), and nearly half of them cited poor job prospects as the primary reason why they left. This speaks strongly to the need to create more jobs requiring postdoc-level expertise in Canada in order to increase the retention of the highly-qualified personnel trained in our system.
- The majority of former postdoc respondents on the 2016 survey were employed full-time (80%), but an alarming 9% were unemployed – more than double the previously reported 4% unemployment rate among PhDs in Canada (Edge & Munro, 2015).
- In the absence of evidence for increased employment or median salary relative to PhDs without postdoctoral training, the 2016 survey results for former postdocs trained in Canada indicate that the completion of postdoctoral training provided no labour market outcome advantage relative to the completion of a PhD alone for the average former postdoc respondent (n=479).

Mental Health:

- ~ ¾ of respondents on the 2016 survey had experienced an issue related to mental health during their postdoc training.
- Some of these issues were fairly serious, such as anxiety or panic attacks (30%), depression (27%), and thoughts of self-harm/self-loathing (7%). The former two figures are considerably higher than the national averages for depression (8%) and anxiety disorders (12%) reported by the Mood Disorders Society of Canada (2009), which highlights the need for improved mental health support for postdocs in Canada.

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Training and Professional/Career Development:

- The majority of postdocs were at least 'somewhat satisfied' with their training to date in all three surveys.
- The quality of training with respect to research skills was rated highest on the 2013 and 2016 surveys, followed by communication skills, management and networking skills, and then teaching skills. There was clear room for improvement on the latter three skill sets on both surveys.
- The professional development workshops currently available to postdocs are often stand-alone, one-time events that last only a couple of hours and lack cohesion, so they may not provide the kind of time and feedback required to truly build specific skill sets and optimize learning.
- The programs that do exist tend to focus on skills that are applicable to academic training and research, or general development, as opposed to non-academic career development per se, and postdocs are often expected to 'make up' time away from their research, which can be exceedingly difficult for people who already work >40 hours/week as postdocs typically do.
- Many respondents on the 2013 and 2016 surveys reported zero exposure to non-academic career opportunities (51% and 43%, respectively).
- The proportion of postdocs who expressed a desire to learn more about potential careers outside of academia remained unchanged from 2013 to 2016 (84%).
- Only 45% of postdocs reported that their supervisors' at least 'somewhat encouraged' professional development training on the 2016 survey.
- According to the 2016 survey, 51% of postdocs did not know whether they had access to a career counsellor at their institution, and of those who did know about half as many had access (16%) as did not (33%). Similar values on the 2013 survey suggest little or no change in the availability of career services support in the past 3 years – clearly this is an area that needs improvement, not just in terms of services offered, but also in terms of communication about those services and encouragement to pursue non-academic careers.

Summary of Challenges

Under the current research/training system in Canada postdocs face a considerable number of challenges that negatively impact their financial stability and security, physical and mental wellbeing, family aspirations, and future career prospects. We summarized the challenges to postdoctoral wellbeing and success identified in the report and provided a summary of the broader challenges to our system of research/training that underlie those issues in the following table in the official report. Taken together, these factors limit Canada's ability to attract, develop, and retain postdoctoral talent, which has negative implications on our future capacity for research and innovation as well as our production of world-class researchers and academic faculty.

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Major challenges to postdoc success and wellbeing and related challenges to the current research/training ecosystem in Canada

Challenges to postdoctoral success & wellbeing	Challenges to our system of research/training
Employment status ambiguity	Need for improved compensation, protection, and benefits for postdocs
Access to social support (EI and CPP)	Balancing research production and trainee needs
Access to other benefits (health, dental, vision, extended health, etc.)	Decline in recruitment or retention of young and/or international postdocs
Low compensation	Increasing length of postdoctoral training times
Support for mental health	Providing personal support services for postdocs
Support for female and international postdocs	Improving academic and non-academic career development & facilitating career transitions
Aging of postdoc population	Need for tracking of postdoctoral outcomes
Support for academic career transitions	Low availability of jobs requiring advanced research training and expertise in Canada
Support for non-academic career development and career transitions	Increasing the labour market value of postdoctoral training relative to PhD training

Recommendations in Brief

Towards the goal of addressing the challenges facing postdocs and broader research/training system today, the report included the following recommendations, provided here in brief.

- 1. Create and implement uniform postdoctoral policies at the federal and/or provincial levels**
There is a clear conflict of interest between what is best for institutions and research faculty (maximizing research output while minimizing cost) and what is best for postdocs (reasonable compensation, protection and benefits, as well as direct support for career development). Thus, research institutions cannot be expected to set policies that are in the best interest of their postdocs and top-down intervention at the federal and/or provincial level will likely be required to properly address the challenges facing postdocs training in Canada today.
- 2. Adopt minimum employment standards for all postdocs working in Canada regardless of employment status, citizenship/nationality, or source of funding. As justified in the full report, we recommend the following:**
 - a. Minimum annual salary of at least \$47,500*

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- b. Compensation explicitly tied to years of experience/training*
 - c. Access to the statutory benefits provided by EI and CPP*
 - d. Access to standard employee benefits including:*
 - i. Health insurance*
 - ii. Dental insurance*
 - iii. Extended health insurance*
 - iv. Prescription drug plan*
 - v. Vision/eye care coverage*
 - vi. Long-term disability coverage*
 - vii. Life insurance*
 - viii. Family coverage*
 - ix. Vacation time*
- 3. Track postdoc employment conditions and long-term labour market outcomes by either:**
- a. Creating a National Postdoc Registry that tracks postdocs throughout the entire course of their career trajectory; or at least*
 - b. Implementing new reporting requirements to allow the Tri-council or other government agencies to accurately monitor postdoc working conditions and policies at the institutional level.*
- 4. Create an independent professional body for postdocs tasked with:**
- a. Monitoring postdoctoral employment standards*
 - b. Producing guidelines to match the number of trainees with the number of jobs (academic and non-academic) available in Canada*
 - c. Administering benefits if a national group insurance policy is established for postdocs*
- 5. Increased support for international postdocs**
- a. Recommend that Immigration, Refugees and Citizenship Canada (IRCC) revise immigration policies to explicitly include postdoctoral research as 'skilled work experience'.*
 - b. Improve access to on-campus visa, work permit, and immigration services for international postdocs.*
 - c. Provide free or heavily discounted access to English language training programs as part of postdoctoral training.*
 - d. Improve disclosure regarding working conditions and immigration policies to ensure that international recruits have more accurate expectations of the Canadian system.*
- 6. Increased support for postdoc mental health**
- a. Increase monitoring and awareness of mental health issues among postdocs*
 - b. Improve access to on-campus mental health support at publicly-funded institutions*
 - c. Provide access to career counsellors for postdocs at the institutional level to assist with the stressful task of finding a career*

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- d. *Provide access to ombudsmen at the institutional level to provide personal support for postdocs in distress or experiencing workplace conflict.*

7. Revise grant and fellowship regulations to improve support for postdocs

- a. *Rebalance faculty incentives by decreasing reliance on publications and increasing the weight given to other signs of productivity including mentoring success – the outcomes of trainees who transitioned successfully to desirable non-academic careers should be given equal weight to those who remained in academic research.*
- b. *Allow postdocs and research assistants/associates (RAs) to be co-principal investigators (co-PIs) on research grants that will (in whole or in part) pay their salary. These positions do not equate to that of a full faculty member, so blocking postdocs and RAs from applying as co-PIs only creates a situation where they are expected to help write a grant without being able to take proper credit for their work.*
- c. *Remove any existing barriers to the use of grant money for paying EI and CPP premiums – these expenses should be considered part of the cost of doing research.*
- d. *Increase the availability of bridging funds to facilitate the transition from postdoc to faculty member for early career researchers.*
- e. *Increase funding allocations to support the higher costs of postdocs if our recommendations regarding compensation are implemented.*

8. Enhance support for non-academic career development and career transitions

- a. *Provide access to on-campus career services for postdocs*
- b. *Create non-academic career streams at the graduate and/or postdoc level*
- c. *Create flexible fellowship programs that emphasize individual career development over research production and specifically provide support for non-academic career transitions*
- d. *Expand existing professional/career development programs for postdocs*
- e. *Increase funding for internships and joint projects with non-academic organizations*

9. Enhance career opportunities for postdocs in Canada by

- a. *Creating jobs that require PhD-/postdoc- level training*
- b. *Facilitating postdoc access to existing non-academic jobs*
- c. *Promoting the value of postdoctoral training to potential employers*

Concluding statement

The challenges to postdoctoral wellbeing and success identified from our survey data translate into a variety of broader issues facing our current research/training system (summarized above). The recommendations contained in this report address all of those challenges to varying degrees. Adopted en masse, these recommendations would transform the Canadian system, boosting our capacity to attract, develop, and retain highly qualified personnel, and positioning our country as a world leader in postdoctoral support and training.

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We believe that continued monitoring, assessment, and public dialogue are all essential to the maintenance of a healthy Canadian research/training ecosystem and we thank you for the opportunity to contribute to the public consultations aimed at strengthening the future of Canadian research.

In closing, we acknowledge that many of the issues raised in this report may fall beyond the intended scope of the Fundamental Science Review. If the Panel is unable to consider the majority of these issues as part of this review, we would ask that you consider including a recommendation for a more thorough review of the Canadian postdoctoral training system in your final report to the Minister of Science.

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