

**Mapping Support in a Changing Health Research Landscape:**  
An Exploration of Supports Provided by the National Alliance of  
Provincial Health Research Organizations

**Key Informant Interview and Website Analysis**

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Annabritt Chisholm

Nova Scotia Health Research Foundation

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## EXECUTIVE SUMMARY

In the context of a rapidly changing health research landscape that is characterized by increased competition and decreased funding, it is imperative that the Nova Scotia Health Research Foundation (NSHRF) plans their programs and services strategically. As part of the planning process, key informant interviews and website searches were conducted to develop a comprehensive understanding of how other provincial counterpart organizations are reacting to changes and associated challenges in their respective jurisdictions.

Specifically, this report explores how members of the National Alliance of Provincial Health Research Organizations support students and researchers in their respective jurisdictions. Elements of organizational approaches to decision-making in the context of a changing landscape are also examined. Lastly, the report covers the various changes impacting member jurisdictions and reveals the strategies that organizations are employing as they react to change.

An examination of student funding opportunities showed that a variety of direct and indirect forms of support exist across jurisdictions. Among many jurisdictions, programs for undergraduates, graduate students, and postdoctoral fellows were similarly structured. The most common methods of support included scholarships, studentships, and postdoctoral fellowships. The Scotia Support Grant program offered by the NSHRF appears to be a unique approach to student funding in that it allows researchers the flexibility of deciding which level of trainee to support. In two jurisdictions student funding had been limited by recent budget cuts.

Funding programs for researchers varied by jurisdiction. However, the majority of programs appear to be well suited to one of the following three categories: capacity development, program grants, and support for teams, centres, and networks. Most organizations have partnered with the Canadian Institutes of Health Research (CIHR) to support the Partnerships for Health System Improvement program. Other forms of support included those for industry partnerships, knowledge activities, and research chairs. Plans to change or review current programs were mentioned by some informants.

Informants reported facing changes on provincial and national levels, most notably, changes stemming from CIHR programming shifts, as well as intra-jurisdictional budget pressures, and government changes. Although the full impact of changes to the health research landscape may not yet be fully realized, informants commonly reported increased pressures to provide matching funds and provide a replacement for the funding that had been lost due to decreased intra-jurisdictional success rates at CIHR competitions.

Informants mentioned strategies for adapting to change that were broadly categorized as maintaining communication, strengthening organizational processes, and re-assessing funding programs. At this point in time, conclusive decisions made from such evaluations have not been revealed.

## Introduction

In the context of a rapidly changing health research landscape that is characterized by increased competition and decreased funding, it is imperative that the Nova Scotia Health Research Foundation (NSHRF) plans their programs and services strategically. As part of the planning process, key informant interviews and website searches were conducted to develop a comprehensive understanding of the types of financial and non-financial supports that are provided to students and researchers by other provincial health research foundations. This report presents the findings of an analysis of these interviews and searches.

## Methods

To enhance the comprehensiveness of this report, two methods of data collection were used to assemble the evidence that would be analyzed: key informant interviews and website searches. Key informants were contacted to schedule interviews in order to gather rich contextual information on how other provincial health research foundations are providing support to students and researchers in their respective health research landscapes. When an organization was represented by a key informant, the organization's website was searched in order to verify and further inform the responses provided in the interview. Where information from website searches was included in the analysis it has been referenced accordingly.

Key informants were identified from within member organizations of the National Alliance of Provincial Health Research Foundations (NAPHRO). Created in 2003, NAPHRO functions to promote increased dialogue, linkages, and partnership activities between its member organizations. NAPHRO serves as the platform on which its member organizations can share information and work collaboratively on common challenges (NSHRF, 2013a).

The contact information for key informants was retrieved through website searches and a list provided to the interviewer by the NSHRF. Eleven individuals were contacted for an interview. Eight interviews were scheduled and completed over the telephone. Two additional informants provided written responses to the questions outlined in the interview guide. Table 1 provides a summary of organizations represented by key informants.

Key informants were contacted via email with a request to set up an interview. If a response was not received within a week of the initial email, a follow up email was sent and an attempt was made to contact the key informant by telephone. Interviews were semi-structured and lasted approximately 20-50 minutes, covering a range of topics including; demographics, types of supports for students and researchers, the organizational approach to supporting health research, the impact and reaction to the changing landscape, and program evaluation (see Appendix A for the complete interview guide). Interviews were audio-recorded and analyzed using Atlas.ti software. Data was then coded for analysis

based on responses to the questions in the interview guide. The broad themes that resulted from this were further analyzed in greater depth when sub-themes could be clearly identified within the data.

This report has been developed to inform programs and services within the NSHRF. As such, not all of the data collected through the interviews has been anonymized, as would be standard practice for a jurisdictional review. Instead, organizations have been identified in the sections of the report that pertain to the types of support for students and researchers. This has been done to permit contact with an organization should additional information about programs of interest be desired.

### Limitations & Scope

There are several limitations that should be noted.

Attempts to reach an informant from Prince Edward Island were unsuccessful, and therefore that jurisdiction is not represented within the analysis.

Realizing that all NAPPHRO member organizations represent unique jurisdictions, this report did not attempt to capture and subsequently compare any numerical data such as the number of awards handed out per year, or the success rates of the various competitions that are detailed below.

Although the interview guide was designed to broadly apply to any organization, key informants were not always able to respond to every question. As such, the discussion on certain topics may only be informed by a selection of all respondents interviewed who chose to respond to the pertaining questions in the interview guide.

**Table 1. Organizations Represented by Key Informant Interviews (n = 10)**

<b>Organizations Represented</b>
Alberta Innovates – Health Solutions (AIHS)
Fonds de recherche du Québec – Santé (FRQS)
Government of Ontario – Ministry of Health and Long Term Care (MOHLTC)
Government of Ontario – Ministry of Research and Innovation (MRI)
Manitoba Health Research Council (MHRC)
Michael Smith Health Research Foundation (MSHRF)
New Brunswick Health Research Foundation (NBHRF)
Newfoundland and Labrador Centre for Applied Health Research (NLCAHR)
Nova Scotia Health Research Foundation (NSHRF)
Saskatchewan Health Research Foundation (SHRF)

## Types of Support for Students

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NAPHRO member organizations offer a variety of direct and indirect opportunities for supporting students in their respective jurisdictions. Although not all organizations have specific funding programs for students, informants from these jurisdictions reported that students might be eligible to receive support indirectly through programs for career researchers. This section provides an overview of the available supports that exist for different categories of students.

### Primary and Secondary School Students

Examples of regular opportunities for engaging primary and secondary students were found in two NAPHRO jurisdictions: Alberta and Ontario.

- AIHS engages primary and secondary school students through an outreach program that supports activities such as science in the cinema, science fair prizes, a health science camp and a summer science research program (AIHS, 2013a).
- As a component of the Early Research Awards, Ontario's MRI allocates funding up to \$1,000 towards youth outreach activities (Ontario, 2013a).

### Undergraduate Students

Funding opportunities for undergraduate students are offered in five NAPHRO jurisdictions: Alberta, Manitoba, New Brunswick, Quebec, and Nova Scotia. In most cases the funding is directed towards summer studentship opportunities. Individual awards are valued at approximately \$5,000 across jurisdictions.

### Graduate Students

*Studentships.* Six organizations; AIHS, MHRC, FRQS, NBHRF, NSHRF, and the NLCAHR, currently provide funding in the form of graduate studentships. Master's students are awarded funding of \$10,000 - \$30,000 per year for 1-3 years, depending on the jurisdiction in which the award is offered and the recipients course of study. Awards for PhDs candidates are offered for 2-6 years and ranges from \$10,000 - \$31,000 per annum. In some jurisdictions the NAPHRO member organizations awards studentships in partnership with organizations that have a specific research focus.

*Scholarships.* The NSHRF provides scholarships to graduate students through the Scotia Scholars<sup>OM</sup> Awards program. At least one Scotia Scholar Award valued at \$10,000 per annum is awarded annually to each of Nova Scotia's universities that have graduate students completing thesis-based programs in studies pertaining to health. PhD students may be eligible to renew their awards for a second year.

*Other Support.* Informants from three jurisdictions provided examples of unique methods of supporting graduate students.

- AIHS provides funding to support students in gaining experience in areas that are not offered through their programs of academic study. For example, students are provided the option of receiving an additional year of experience through working in non-academic environments such as non-profit or government organizations. Another opportunity provides graduate and undergraduate students with a media fellowship at CBC radio for the purpose of improving their public communication skills, thereby preparing them to deliver information about science and medical research to the public (AIHS, 2013b).
- The NSHRF provides health researchers an opportunity to support graduate students through its Scotia Support Grants program. Grants are provided over two years with per annum allocations valued between \$6,000 - \$8,000 for Master's students, and \$12,000-\$16,000 for PhD students. These grants are available every second year.
- NLCAHR supports research skill development through grantsmanship seminars.

### Postdoctoral Fellows

Currently, postdoctoral fellowships are offered by six NAPHRO organizations: MSHRF, AIHS, SHRF, MHRC, FRQS, and NBHRF. The awards provided by the MSHRF are currently offered every other year. Fellowships appear to be similarly structured across jurisdictions. Stipends range from \$30,000 - \$50,000 and vary based on jurisdiction and the award recipient's previous degree(s). In addition to the stipend, award recipients are usually provided with a research allowance of \$750 - \$5,000, the amount of which varies by jurisdiction and the intended use of funds.

In some cases, NAPHRO organizations provide postdoctoral awards through a partnership funding structure. Partners include intra-jurisdictional organizations as well as national partners such as the Kidney Foundation of Canada, the Multiple Sclerosis Society of Canada and the Terry Fox Research Institute

*Other Support.* The NSHRF does not offer a postdoctoral fellowship but postdoctoral students can be supported through the Scotia Support Grant program which permits career researchers to apply for up to \$24,000 per year for two years to support a postdoctoral student. This program is offered every second year.

### Clinician Trainees

For individuals pursuing joint MD-PhD programs MD-PhD Studentships are offered by AIHS, the MHRC, and the FRQS. Award recipients receive an annual stipend valued at \$30,000 - \$35,000 and a research allowance of \$1,500 - \$2,000.

## Top Up Incentives

Organizations such as AIHS and SHRF offer students an incentive in addition to their award stipend. Incentives range from \$10,000 - \$15,000 and are awarded to recipients who are successful in seeking comparable peer-reviewed awards from other funding sources (AIHS, 2013b; SHRF 2013).

## Recent Changes

Two NAPPHRO jurisdictions related changes in the economy and budget cuts as being responsible for their decision to suspend student-funding programs. The MSHRF funded graduate and postdoctoral students until the economic downturn of 2009. Historically, the NLCAHR has offered an annual grants competition that included student-funding programs, but because of budget cuts, the program has been indefinitely suspended. A small number of fellowship opportunities for graduate students is currently being provided through a separate government fund.

## Types of Support for Health Researchers

The following section describes the similarities in the supports offered and notes any key differences between program structures that are currently supporting researchers in each NAPPHRO jurisdiction. Based on informants' responses it is clear that program structures differ across the jurisdictions. However, for the purpose of this analysis, the majority of programs appear to be well suited to one of the following three categories:

- program grants;
- awards for teams, centres and networks; and
- capacity development.

Impending changes to funding programs are included at the end of the section.

### Program Grants

Across jurisdictions research programs are supported through partnerships, topic-driven grants, industry partnership grants, research chairs and knowledge translation activities.

*Partnerships.* Most NAPPHRO organizations are engaged in a current partnership agreement with the Canadian Institutes of Health Research's Partnerships for Health System Improvement (PHSI) program<sup>1</sup>.

*Strategic Initiatives.* Currently the primary funding mechanism of the MSHRF is to provide operating funds for a topic specified by the government.

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<sup>1</sup> "The Canadian Institutes of Health Research (CIHR) is Canada's federal funding agency for health research. Composed of 13 Institutes, CIHR provides leadership and support to more than 14,100 health researchers and trainees across Canada." CIHR. (2013). CIHR at a Glance. Retrieved from <http://www.cihr-irsc.gc.ca/e/193.html>

*Industry Partner Grants.* Grants provided in partnership with private industry are currently offered by AIHS and the NBHRF. These awards are offered for translational and strategic research initiatives. The maximum contribution from the NAPPHRO partners ranges from \$150,000 to \$200,000 (AIHS, 2013d; NBHRF, 2013).

*Research Chairs.* Research chair programs are currently supported by AIHS, SHRF, and the MHRC.

*Knowledge Activities.* Although knowledge translation is broadly supported within many funding programs, only three NAPPHRO member organizations, AIHS, SHRF, and the NSHRF, offer awards for knowledge sharing activities and events.

### **Awards for Teams, Networks and Centres**

Established funding programs for research teams, networks and centres are currently supported by AIHS, SHRF, Ontario's MOHLTC, the FRQS, and the NSHRF. Although many of these awards are directed at established researchers, most informants mentioned that a proportion of the funds go towards supporting trainees. Informants stated that these awards were often intended to enhance intra-jurisdictional collaboration, build capacity and support research infrastructure. A description of these award structures is provided below.

*Alberta.* AIHS has recently implemented a program of Collaborative, Research and Innovation Opportunity Grants for small, medium and large teams of researchers. This program intends to "catalyze and support collaborative, interdisciplinary, multi-sectoral, and/or multi-institutional research with a focus on achieving solutions that address complex health problems or issues" in strategic areas (AIHS 2013e).

*Saskatchewan.* SHRF provides a health group grant program that has three stages of competitive support, each over a three-year period, to interdisciplinary groups of researchers. The first stage involves group formation, building collaborations, and planning for other grant applications. Recipients at this stage are awarded \$30,000. In the second stage recipients are provided \$300,000 over 3 years to use as operating funds. Groups who reach the third stage receive \$250,000 per year for three years in operating funds and must be able to show productivity, obtain other grants, and demonstrate knowledge translation and capacity building. This stage is renewable.

*Ontario.* The MOHLTC provides competitive funding for teams, networks and centres, through their Health System Research Fund Program Awards. These three-year awards are directed at health services/system research, population health research, and/or knowledge translation and exchange. Applicants must be established senior researchers as the awards values range from \$0.5 – 2.5 million per year.

Ontario's MRI provides commercialization support to researchers through an institute model. Support is currently being provided to institutes for cancer and brain research.

*Quebec.* The FRQS supports research infrastructure by providing funds to research groups, networks and centres within its jurisdiction. Each year 9 groups, 18 networks and 17 centres receive a combined total of approximately \$4, \$12, and \$34 million respectively. These funds are used to create a solid base of research infrastructure so that researchers in Quebec are able to compete at national/international levels.

*Nova Scotia.* Through Research Enterprise Development Initiatives, the NSHRF has encouraged the development and strengthening of research teams in Nova Scotia. Team development awards of up to \$10,000 for one year support development and/or strengthening of teams. Other team development activities are supported through the competitive Development/Innovative grants, Establishment grants, and the Scotia Support Grants programs. The Scotia Support Grants have specific provisions for a team-training environment.

## Capacity Development

NAPHRO members support capacity development in their jurisdiction through both financial and non-financial commitments, including support for new investigators, proposal development, support for infrastructure, bridge funding, and a variety of educational and networking activities.

*New Investigators.* Establishment Grants, Capacity Awards, or Early Research Awards are the most commonly reported mechanisms by which NAPHRO organizations support new investigators. Although the terms of awards offered vary slightly, comparable structures are found in all but two jurisdictions.

*Infrastructure Support.* Ontario's MRI is one example of how jurisdictions may support capacity development through research infrastructure. This program supports projects that provide strategic value to Ontario by funding matched funding for capital costs.

*Research Proposal Development.* The NSHRF offers a Development/Innovative grant program that support researchers in conducting pilot studies and developing proposals for applications to provincial, national or international funding agencies. These awards are capped at \$15,000. Historically, the NLCAHR had offered a similar program however because of recent budget cuts the program has now been suspended.

*Bridge Funding.* Based on the coding of informants' interview responses, a form of bridge funding is, or will be, provided by two NAPHRO organizations. AIHS's Catalyst Grant program provides competitive support to academic researchers who are in the process of applying to national funding agencies. And, although the exact program structure is still in its design phase, the MHRC intends to provide bridge funding with financial resources that had previously been dedicated to CIHR's Regional Partnership Program.

*Non-Competitive Supports.* Only two informants mentioned a source of non-competitive funding. At AIHS non-competitive funds may be used for seed funding or special activities of high interest. Additionally, a number of jurisdictions provide competitive supports for workshops and events for knowledge translation purposes.

The NSHRF provides non-competitive opportunities through the REDI awards program. The Research Skills, Team Development, and Catalyst grants are all objective driven, as is the support for knowledge workshops and other knowledge advancing activities.

## Upcoming Changes

Informants from the following jurisdictions reported planning or considering changes to their awards programs: British Columbia, Manitoba, Quebec, and Nova Scotia. A more detailed explanation for each jurisdiction is provided below.

*British Columbia.* The MSHRF will be unveiling an early career award in the fall but the foundation is also considering moving away from the traditional approach to health research funding, in terms of competitions dedicated to trainee or career awards. Instead, they are considering a shift to competitions for systems of influence. Such systems would create opportunities for research, practice and policy to be done together, at first on a small scale and eventually expanding. Another component of this award may involve leaving the applicants to decide how they use the award to fund personnel. A parallel can be drawn between this type of award structure and the structure of the NSHRF's Scotia Support Grants, which allow researchers the flexibility to decide which level of trainees they would be best able to support.

*Manitoba.* The MHRC is undergoing a program review that may have some significant changes. They are looking at bridge funds and at developing programs in cluster areas.

*Quebec.* The FRQS is also undergoing a program review, and is looking to redeploy resources in a way that they will facilitate a way for research centres and networks to work together more effectively. This transition is being examined based on the reasoning that a collaborative in-house model will increase the competitiveness at the national and international level.

*Nova Scotia.* In the fall of 2013, the NSHRF will be launching a program review for their Establishment grants to determine if the program continues to meet the needs of its stakeholders. The NSHRF recently conducted similar reviews as it sought to redesign and re-launch its Knowledge, REDI, and Research Trainee programs.

## Organizational Approaches

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### Determining the Best Way to Support Health Research: Strategic Plans & Priorities

NAPHRO member organizations recognize that they each approach the support of health research in a unique way. However, when informants were asked how their organizations determined the best way to support health research, similarities appeared across jurisdictions.

Many informants reported looking for external feedback, usually from a mixture of stakeholders, decision-makers, and industry partners. In one case, strategic clinical networks modeled after CIHR's were used to capture information on priorities and population needs. Most informants discussed using a strategic plan. In some cases, an organization's strategic plan was connected to their provincial government's health strategy. Other methods reported by informants included looking to other NAPHRO jurisdictions to get a sense of what they were doing in terms of providing support.

All but one informant noted that key priority areas had been specified by their organization. For some organizations, priorities acted as a mechanism for targeting funding and were given weight in decisions regarding partnership and matched funding proposals. One informant suggested that priorities served as a way for their organization to be accountable with their money.

The organization without specified organizational priorities followed the broad provincial health priorities that existed within their jurisdiction. This organization has chosen not to adopt organizational priorities based on the reasoning that without priorities they are able to support the best in the research community, regardless of research focus.

### Philosophical Approaches

In addition to that presented above, some factors central to the informants' decision-making processes became evident through discussion about their organization's philosophical approach to supporting health research. Two philosophical approaches emerged from informants' responses.

Three informants felt that supporting innovation was a primary role for their respective NAPHRO organization. For example, in response to a concern that research funding is increasingly geared towards applied health research, one informant stated that support of innovation is required for them to maintain support for basic biomedical research.

Some informants believed that their organization's role went beyond that of a jurisdictional funding agency in that they also existed to support informed decision-making within government. For example, one organization is uniquely positioned in the sense that they act not only as a funder of research but also as a major consumer of research evidence. In

this case it was important for the organization to influence health research to be more relevant and impactful for the priorities of the health system and needs of decision-makers.

## Funding Decisions

With few exceptions grants awarded by NAPRHO organizations are subjected to a competitive review process.

Informants revealed that 80% of NAPRHO organizations provide funding across all health research disciplines. In two cases, the organizations do not provide funding for biomedical or clinical research but are solely focused on research pertaining to health services and population health.

When informants were asked whether or not their organizations placed restrictions on funding with respect to career stage or research focus, five common criteria resulted. Firstly, some organizations focus on funding new researchers. Secondly, organizations may have some funding protected for research in identified priority areas. Thirdly, one informant mentioned protected funding for new and emerging areas of interest to their jurisdiction. Fourthly, a couple of organizations protect funds for specific health disciplines. And finally, organizations guided by an investment philosophy consider the investment potential that applicant's research could have on the health system. It should be noted that in some informants reported that their organization's funding was guided by more than one of the above criteria.

*Upcoming Changes.* One informant suggested that they may consider an intra-jurisdictional regional partnership program to address some of the imbalance that currently exists in the manner in which funding is geographically allocated throughout their jurisdiction. This program would allow for a portion of annual funding to be directed towards developing research climates.

Another informant noted that his/her organization may see a change in protected funding envelopes that coincides with the national push for more clinical and translational research.

## Partnerships

When asked if they partnered or collaborated with other funding agencies or organizations, most informants reported having existing or previous partnerships with a mix of academic institutions, federal funding agencies, health charities, hospital foundations, industry, and provincial governments.

*Challenges and Barriers.* When informants were asked about the challenges they have experienced through involvement in partnerships and collaborative activities, four key sub-themes emerged from the discussion. Firstly, informants reported that it could be a challenge to find alignment between partners, with it being time consuming to establish trust, define the roles of individual partners, and create a partnership that aligns with

organizational priorities. Secondly, some organizations saw administrative challenges as the biggest barrier to partnering. One example of such a challenge is that CIHR's timelines are not always aligned with other funding decisions that need to be made by organizations. Thirdly, the well-established competitive culture of the research environment may act as a barrier if collaborative activities are not valued or promoted. And finally, multiple informants noted the obvious challenge presented by having limited resources.

In one case, an informant suggested that partnering among organizations may be limited because of provincial political barriers.

## Evaluation

During the interview informants were asked how their organizations evaluated the success and/or impact of their funding programs. Based on the responses collected, half of the organizations appear to have an evaluation branch and conduct their evaluation using the Canadian Academy of Health Sciences' (CAHS) framework. Of the remaining informants, one did not comment on their organization's evaluation processes, while two others noted that evaluation was something that they were working on and developing a strategy for. Another evaluation strategy employed by organizations included an examination of leveraged funds to understand the economic impact of funding programs.

Informants reported that evaluation data is generally used internally for accountability, education, demonstrating effectiveness, and planning purposes; and externally for communicating with stakeholders and key funders.

One informant expressed that it may be difficult for capacity building organizations to demonstrate impact through evaluation because of the type of research that they are supporting.

## **Looking at the Landscape: Change, Impact, and Strategies**

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Informants were asked to describe how changes to the national and provincial health research landscapes were affecting the sustainability, continuity, and consistency of their organization's funding programs for students and researchers. Based on the responses of key informants, the following section highlights some of the major national and provincial changes facing NAPPHRO jurisdictions, the perceived impact of those changes, and the reactionary strategies used to adapt.

### Provincial Changes

Although each NAPPHRO jurisdiction is recognized to be unique, many similarities were found with respect to the changes and environmental sensitivities reportedly felt by informants at a provincial level. The changes most commonly reported involved those to annual budgets, government, and key leadership positions. Annual budgets were a

sensitive issue for the majority of informants and across jurisdictions budgets were reported to have been recently cut, remained status quo, or consistently inconsistent. Budget inconsistencies were attributed to the structure of funding agreements, government priorities, and requests for special initiatives.

An additional change included a heightened sense of, and need for, collaboration between stakeholders in the health research landscape. A concern that governments were too often devoting resources to specific research initiatives that were not peer-reviewed was also reported. This concern was based on the reasoning that if government resources were dedicated to funding non-peer reviewed research, the input and weight of the peer review process would decrease.

## National Changes

Based on informant responses, changes to programming at CIHR appear to be having an impact on almost all NAPPHRO jurisdictions. Noted changes that have or are expected to occur include:

- the end of the Regional Partnership Program;
- a shift from pure research towards pillar-crossing, applied health research;
- longer term funding for a smaller number of awards;
- increased demands for matching funds;
- decreased success rates at national competitions; and
- the nationalization of health charities.

## The Impacts of Change

In many cases, the informants stated not to know the full impact the above stated changes had or would have on their respective organizations. However, coding revealed a number of commonalities among jurisdictional responses. Informants reported experiencing a pressure to provide matching funds that are increasingly hard to come by, which could result in decreased partnering abilities. Also mentioned was a demand to replace lost CIHR funding, and an intra-jurisdictional shift towards funding more pillar crossing and applied health research.

## Adapting to Change

When asked how their organizations were adapting to the above-mentioned provincial and national changes, participants presented strategies that could be categorized into three broad themes:

- maintaining communication;
- strengthening organizational approaches; and
- undergoing reviews of funding programs.

Informants suggested that using communication as a strategy for adapting to change would allow them to be part of a community and keep up to date with happenings at multiple levels of the health research landscape. Examples provided by informants included communication with local researchers, provincial governments, NAPHRO members, and the Funder's Forum.

At the organizational level, informants revealed strategies that included: improvements to marketing of their organization and its health research to both public and government stakeholders. Responses showed informants felt it may be important to enhance their organization's entrepreneurial efforts to supplement budget cuts. The need to strengthen and consolidate a stake in the health research enterprise was presented by multiple informants who reflected that this strategy should be applied at not only the provincial, but also at the national level.

Within organizations, the most frequently presented strategy for managing change involved a reassessment of funding programs. Some informants mentioned undertaking an evaluation to examine whether or not current programs still had the desired impact. One informant suggested making moral rather than financial commitments for multi-year awards. A moral commitment would imply providing a multi-year award with a financial commitment of one year of funding, with the subsequent years of the award being provided pending funding. Proposed changes to the content of funding programs included the addition of bridge funding, as well as a shift from funding individual awards towards developing programs that centered on research clusters or networks.

## **Conclusion**

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Interviews with key informants from NAPHRO member organizations provided insight into how jurisdictions across Canada were supporting students and researchers while facing their respective challenges in a changing health research landscape.

An examination of student funding opportunities showed that in many jurisdictions programs for undergraduates, graduate students, and postdoctoral fellows were similarly structured. Less common programs included ones that engaged primary and secondary school students, as well as those that provide opportunities to undergraduate and graduate students to gain experience outside of a regular academic environment. The Scotia Support Grant program offered by the NSHRF appears to be a unique approach to student funding in that it allows researchers the flexibility of deciding which level of trainee to support. In two jurisdictions student funding had been limited by recent budget cuts.

Funding programs for researchers varied by jurisdiction. There was some continuity across jurisdictions with respect to the supports provided for capacity building and CIHR's PHSI program. The majority of organizations provided some awards programs intended to develop or maintain research capacity within their respective jurisdictions. While some organizations primarily supported programs of individual investigators, others provided funding in the form of team grants.

Informants reported facing changes on provincial and national levels, most notably, changes stemming from CIHR programming shifts, as well as intra-jurisdictional budget pressures, and government changes. Although the full impact of changes to the health research landscape may not yet be fully realized, informants commonly reported increased pressures to provide matching funds and replace the funding that had been lost due to decreased intra-jurisdictional success rates at CIHR competitions.

Informants mentioned strategies for adapting to change that were broadly categorized as maintaining communication, strengthening organizational processes, and re-assessing funding programs. A further analysis of these strategies revealed informants' desires to be current in their knowledge, to better market their organizations, and to successfully partner in joint funding opportunities with charitable foundations, the health system, and industry. In some cases, participants suggested that they might re-evaluate their funding programs. At this point in time, conclusive decisions made from such evaluations have not been revealed.

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## **APPENDIX A: INTERVIEW GUIDE**

### **Mapping Reactions to the Changing Health Research Landscape - Interview Guide**

Thank you for agreeing to participate in this interview about the health research landscape in your jurisdiction. The following pages act as a guide of topics that we will discuss. You have been identified as someone who would have valuable insight regarding this topic as it applies to your organization and province. You may feel that you are in a position to speak to only some or all of these questions. Anything you have to offer is of value to us.

The health research landscape is changing rapidly both provincially and nationally. In order for the Nova Scotia Health Research Foundation (NSHRF) to plan strategically, it is important to get a sense of what other provincial health research foundations are doing, considering, or in the process of establishing with regards to support for students and researchers. The purpose of this interview is collect evidence that can be used to inform NSHRF programs and services. Data will be analyzed with the intention of providing insight into how other jurisdictions are facing their respective challenges.

#### **Privacy and Confidentiality**

The discussion will be audio recorded for the purpose of accuracy during analysis and write up of findings. The audio recording will not be shared with anyone outside the review team, which consists of employees and representatives of the NSHRF only. The resulting audio file will be stored securely at the NSHRF and maintained by the review team. The interview will be compiled into a report that will be used to inform decision-making around the NSHRF's programs and services. While the report may be shared with some of the NSHRF's key stakeholders, original raw data (i.e., the audio recording and interviewer's notes) will not be shared with anyone outside the review team. Responses will be presented on a group basis whenever possible.

Should you have questions about this guide or the interview process please do not hesitate to contact us.

Sincerely,

Annabritt Chisholm, Master of Health Administration Resident  
Nova Scotia Health Research Foundation  
Email: [Annabritt.Chisholm@gov.ns.ca](mailto:Annabritt.Chisholm@gov.ns.ca)  
Telephone: 902-424-3054

Dr. Nancy Carter, Director of Evaluation Services  
Nova Scotia Health Research Foundation  
Email: [Nancy.Carter@gov.ns.ca](mailto:Nancy.Carter@gov.ns.ca)

## Demographics

The questions in this section are meant to gather some basic information about your perspective, experience and personal context within your jurisdictional health research enterprise.

1. Name of organization
2. Type of organization (ex: university, government, non-government, private, other )
3. What is your current role within the organization?
4. For what length of time have you been in this position?
5. Please provide, to the best of your knowledge, an overall picture of how your organization supports health research in your jurisdiction with respect to:
  - i. Students (type)
  - ii. Researchers (career stage)
  - iii. Discipline funded (medical research, health-outcome research, health services-research, and health public-policy research)<sup>2</sup>
  - iv. Type of support available (competitive, non-competitive, operating grants, trainee grants, collaborative grants)
  - v. Total amount of funding awarded by the organization per year \_\_\_\_\_
  - vi. Range of award dollar amounts across funding programs \_\_\_\_\_

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<sup>2</sup> **Medical research** means basic scientific and biomedical research as well as clinical and epidemiological investigations. **Health-outcome research** means research into changes in the health status of populations due to the implementation of health programs and services. **Health-services research** means research into the efficiency and effectiveness of the management, organization, and delivery of health services. **Health public-policy research** means research into the impact of social factors, allocation of resources, legal and ethical issues, and the administration, organization, and financing of health care

## Your Organization's Approach

The questions in this section are intended to gather information on your organization's approach to the support of health research in your jurisdiction.

1. How do the awards granted by your organization compare to those of other organizations in your jurisdiction? In other words, are you aware of any similarities and/or differences between the supports provided by your organization and those provided by others?
  
2. Are there restrictions placed upon who is provided support (e.g., with respect to researcher career stage, research focus, or matched funding)?
  
3. If any exist, how are competitive grants/awards applications reviewed?
  
4. To what extent are changes in the National and Provincial health research landscapes affecting the sustainability, continuity or consistency of your research funding programs?
  - i. In the past has your organization and/or its programs been sensitive to environmental changes? If so, how so? If not, why not?
  - ii. Are there any processes or strategies that your organization has established so that you are better able to adapt to environmental changes? If so, please tell us about them.
  
5. How does your organization determine the best way to provide support to health research in your jurisdiction (ex: consultations, surveys, etc.)?
  - i. Has your organization set strategic plans? If yes, can you explain the process that was undertaken to do so?
  
6. Legislation requires the NSHRF to identify health research priorities through consultation and communication with government, health boards, organizations,

institutions, and individuals. Is your organization mandated by similar legislation within your jurisdiction? If so,

- i. How does your organization identify these priorities?
- ii. How often is the relevance of these priorities re-assessed and confirmed?
- iii. In what ways do these priorities influence the type of research supports provided by your organization?

7. Do you collaborate or partner with any other granting agencies/organizations with regard to the funding competitions/opportunities that you offer?

- i. If so, tell us about those collaborations.
- ii. Have you experienced any challenges or barriers to collaboration/partnering? Please explain.

8. Are you aware of any changes that will be occurring within your organization in the next few years with respect to:

- i. Availability of funding opportunities?
- ii. Type of funding opportunities?
- iii. Structure of funding competitions?

## **Evaluation**

The questions in this section are intended to gather information on your organization's approach to evaluating the support of health research in your jurisdiction.

1. How does your organization evaluate the success and/or impacts of your research funding programs?
  - ii. Is any data collected? If yes, how?
  - iii. And if so, how is that data used within your organization?
  
2. Does your organization undertake any evaluations to consider the outcomes of the research that it has supported?

## **Additional Comments**

1. Is there anything else you would like to share with us about your organization's support of health research in your jurisdiction?

Thank you for participating!