CIHR IRSC

Canadian Institutes of Health Research Instituts de recherche en santé du Canada

Training for Impact:

The Health System Impact Fellowship

Canadian Centre for Health Economics seminar

January 31, 2020

Dr. Meg McMahon, Associate Director, CIHR Institute of Health Services and Policy Research
Dr. Jonathan Lai, Director, Strategy & Operations, Canadian Autism Spectrum Disorder Alliance, HSI Fellow alumnus
Sophie Roher, PhD candidate, Dalla Lana School o Public Health, Health System Impact Fellowship alumnus
Dr. Daniala Weir, Trillium Health Partners-IHPME Health System Impact Fellow

Canadian Institutes of Health Research Instituts de recherche en santé du Canada

Canada

Agenda

- The case for training modernization

- The Health System Impact (HSI) Fellowship 101

- Application details: eligibility, how to find a host partner organization, peer review criteria & how to apply

- A learning program: emerging insights about embedded fellowships

- The real deal: a panel with current & alumni Health System Impact Fellows

Background Context:
Pan-Canadian Training Modernization

What are we working towards?
PhDs can make an impact in many different roles.

Better health, health care & health systems

Decision maker

Applied Researcher

Manager/ Analyst

Embedded/ LHS Scientist

Health System Impact Fellowship

Why Modernize our Training Approach?

Challenges in the Health Research Enterprise Reflect broader challenges in PhD Training

Training Challenges:

Health Research is Evolving

Health research is increasingly complex, interdisciplinary and global

Career Paths are Changing

51,000 PhDs and 6,000 Fellows in Canada. Most (≈85%) do not secure a tenure-track position, yet not enough PhDs according to the OECD

Expertise in Critical Areas is Lacking

Data-intensive research ● Indigenous health research ● Health-professional scientists ● Patient-oriented research ● Entrepreneurship and Innovation ● Embedded Research

Future trainees must be:

Research Leaders of Tomorrow

who can lead high-impact, multi-disciplinary research in a rapidly evolving environment and in learning organizations and learning health systems.

Leaders Across Knowledge Sectors

who can apply their scholarship and talent to lead innovation across different sectors of Canada's knowledge-based economy

Experts in Critical Priority Areas

who can establish and fill Canadian priority areas of specialized expertise and advance the frontiers of science

The Canadian Context:
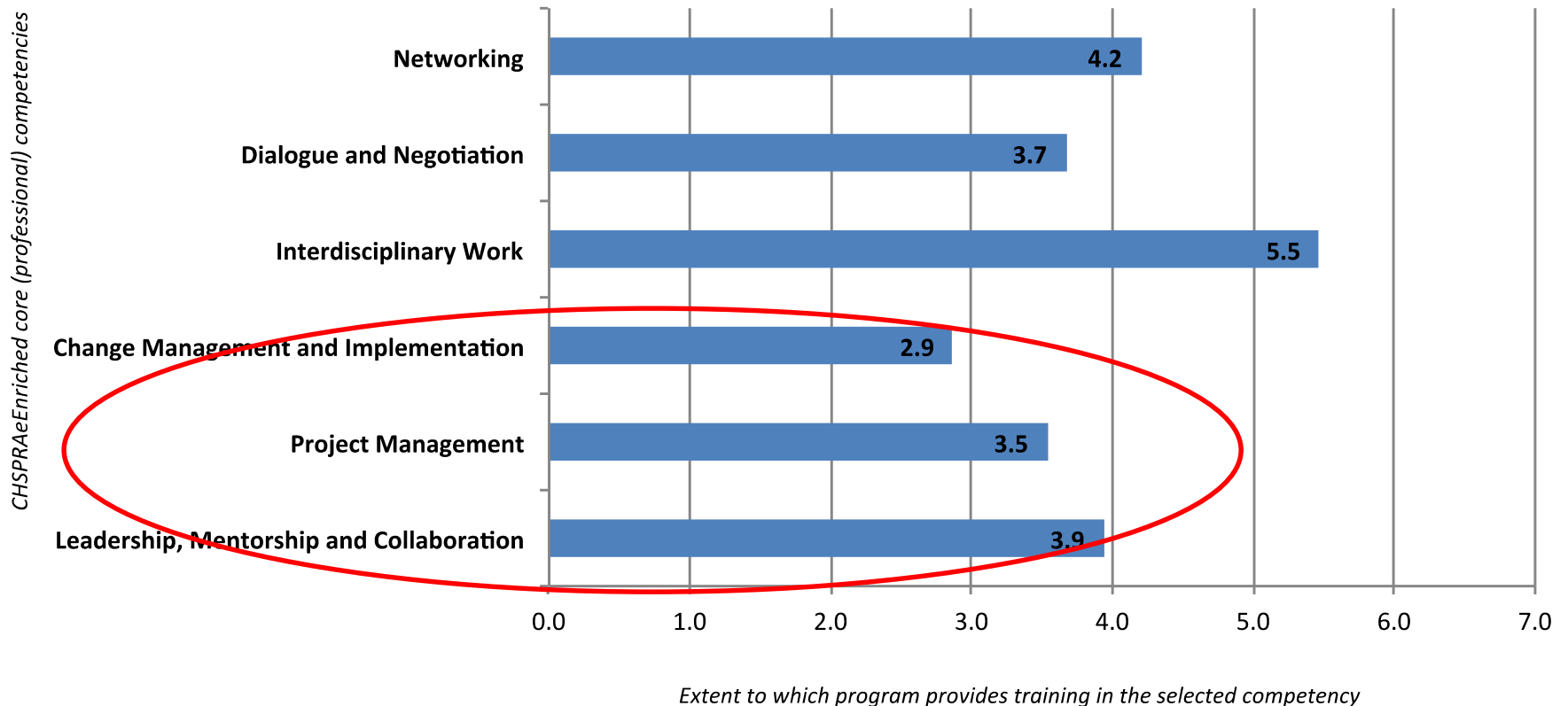# HSPR PhD Graduate Employment Trends
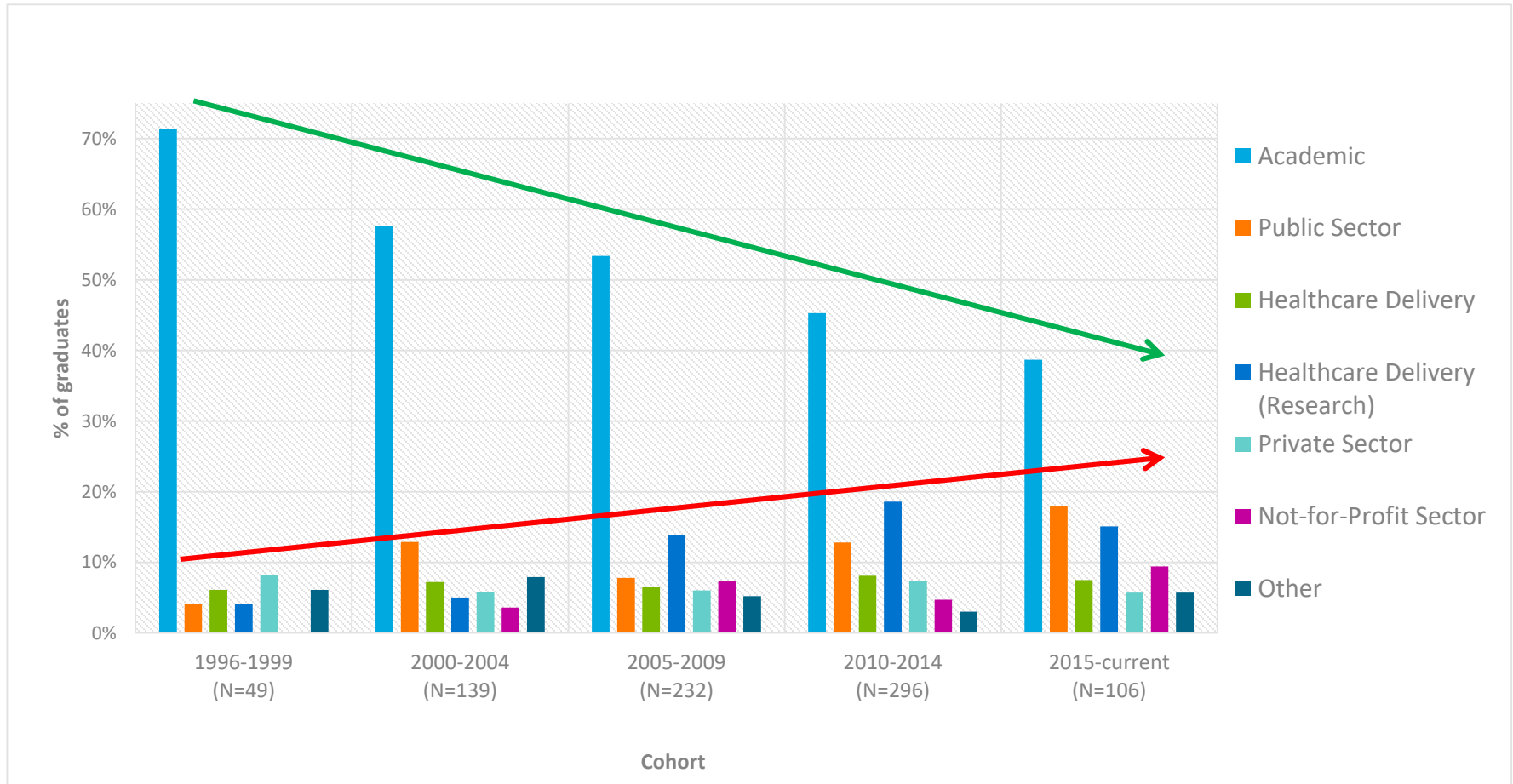
Learn more: McMahon, Habib & Tamblyn (2019). The Career Outcomes of Health Services and Policy Research Doctoral Graduates. *Healthcare Policy*.

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The problem:
Mismatch between career trends & PhD training

Extent to which HSPR PhD training programs provide explicit training in enriched core competencies (0 indicates no training and 7 indicates substantive training), 2016

CHSPRAeEnriched core (professional) competencies

Competency	Value
Networking	4.2
Dialogue and Negotiation	3.7
Interdisciplinary Work	5.5
Change Management and Implementation	2.9
Project Management	3.5
Leadership, Mentorship and Collaboration	3.9

Extent to which program provides training in the selected competency

The action: Training Modernization Co-Leads

Dr. Stephen Bornstein
Director
Newfoundland and Labrador
Centre for Applied Health Research Professor
Memorial University

Dr. Adalsteinn Brown
Dean
Dalla Lana School of Public Health
University of Toronto

A Training Modernization Strategy For Canada

STRATEGIC OVERSIGHT, ENGAGEMENT & COMMUNICATION

01. Enriched Core Competencies

Blending traditional academic & new professional competencies

02. Pan-Canadian Curriculum & Course Materials

To deliver the enriched core competencies

03. Experiential Learning Opportunities

For doctoral trainees and post-doctoral fellows

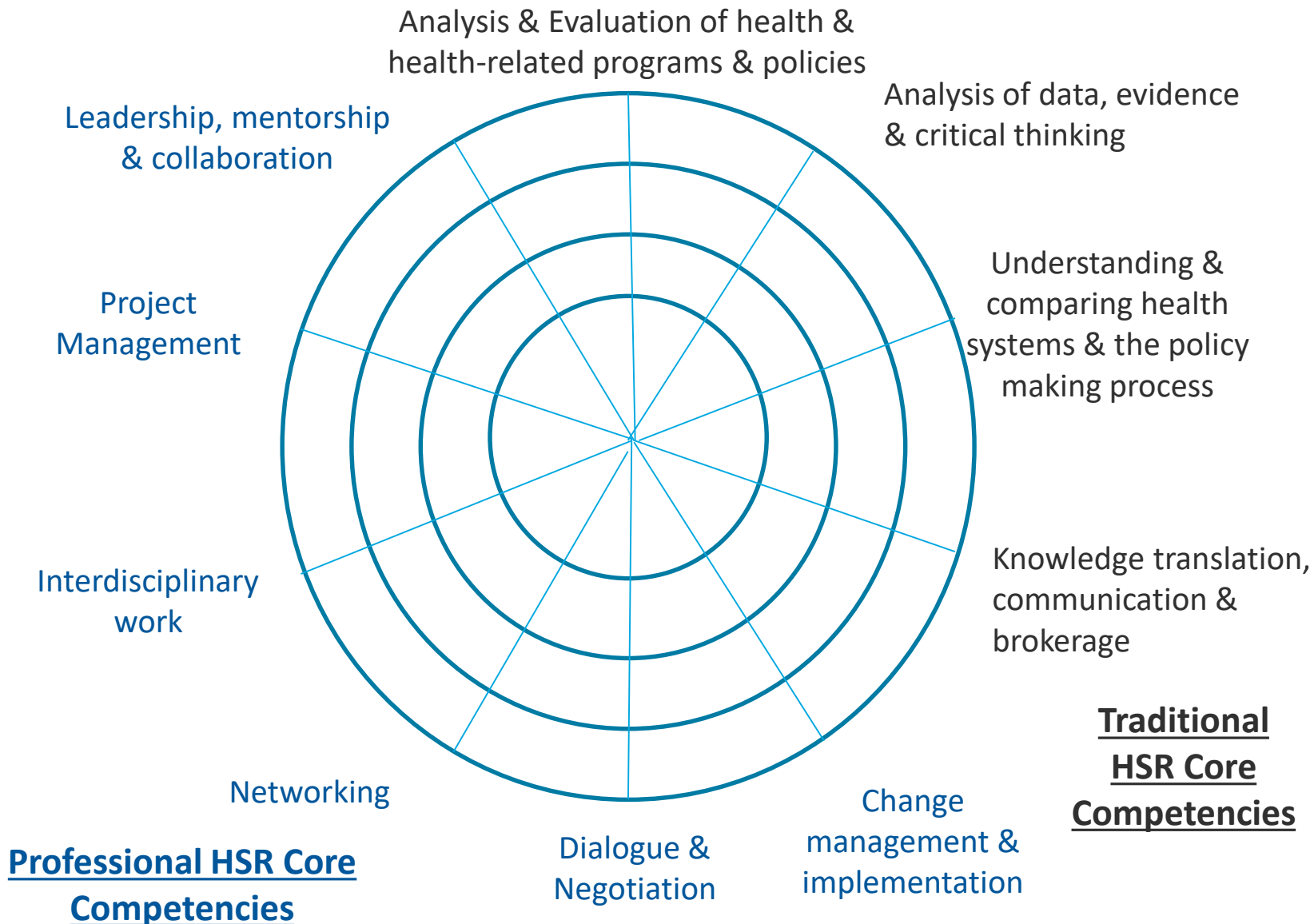**04.** New Evaluation Criteria & Access to Funding Linked to Curriculum and Competencies

To encourage change

05. Tracking & Social Media Marketplace

To document and understand career trajectories and contributions

CHSPRA

The Enriched Core Competencies

Analysis & Evaluation of health &
health-related programs & policies

Analysis of data, evidence
& critical thinking

Leadership, mentorship
& collaboration

Project
Management

Understanding &
comparing health
systems & the policy
making process

Interdisciplinary
work

Knowledge translation,
communication &
brokerage

Networking

Dialogue &
Negotiation

Change
management &
implementation

**Traditional
HSR Core
Competencies**

**Professional HSR Core
Competencies**

A solution: The Health System Impact Fellowship

1

Support Impact-Oriented Career Paths

- Elevate PhD trainees' and post-doctoral fellows' career readiness and ability to make an impact in a broader range of employment sectors.

2

Expand and Enrich the Traditional Training Environment

- Engage health system and related organizations in preparing a cadre of promising PhD-trained individuals for successful, impactful careers.

3

Increase Organizations' Awareness of the Value of PhD-trained Individuals

- Provide health system and related organizations with direct opportunities to realize and harness the benefits that PhD-trained individuals can bring to such organizations.

Our goal: Prepare the next generation of health services and policy PhD graduates with the professional skills, competencies, experiences and networks to make meaningful and impactful contributions throughout their careers, within and outside of academia.

A snapshot of the HSI Fellowship cohort

The National Cohort
(2017, 2018, 2019 cohorts)

146 fellows (40 PhDs + 106 PDFs)
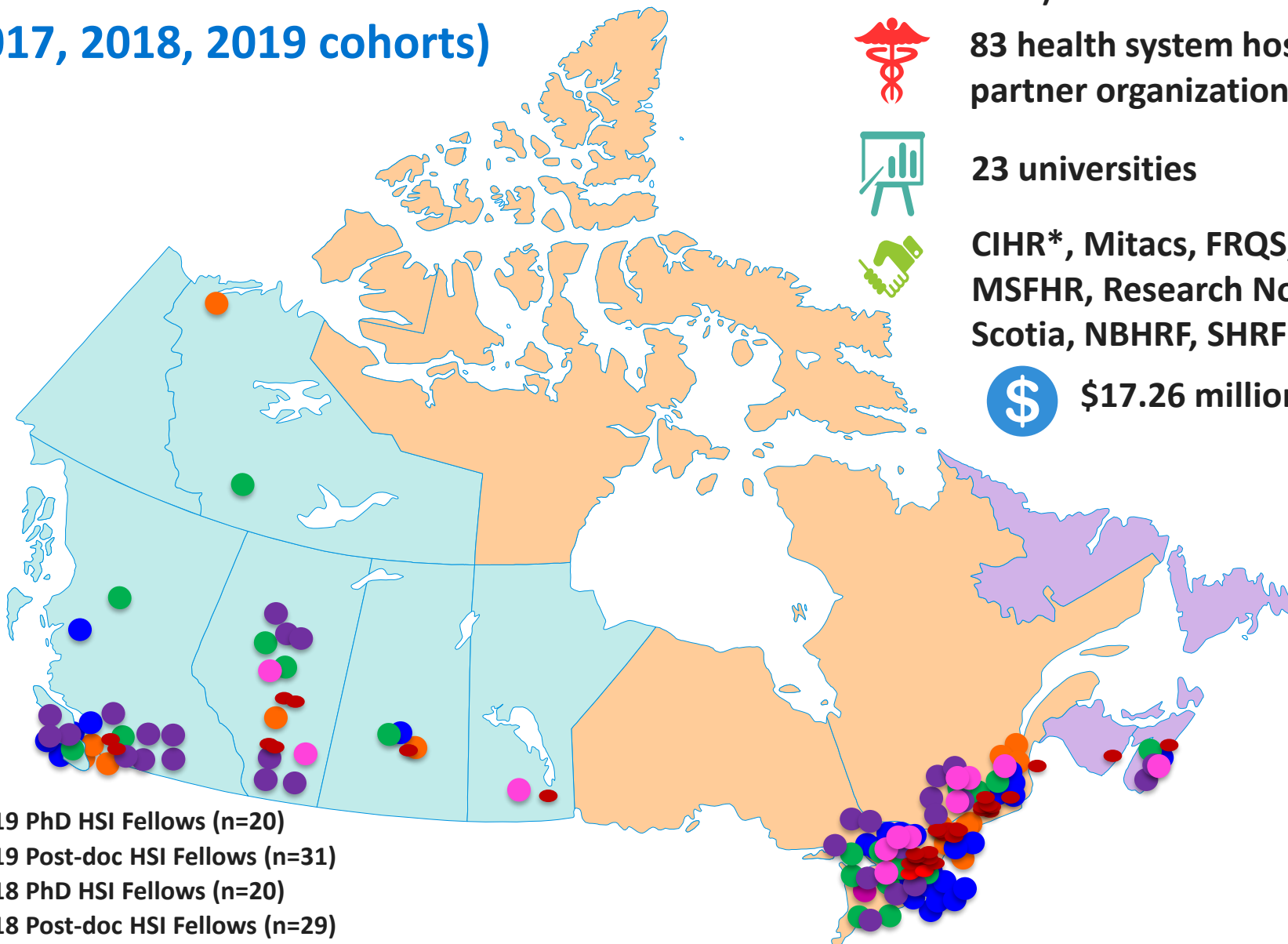
83 health system host partner organizations

23 universities

CIHR*, Mitacs, FRQS, MSFHR, Research Nova Scotia, NBHRF, SHRF

$17.26 million

- ● 2019 PhD HSI Fellows (n=20)
- ● 2019 Post-doc HSI Fellows (n=31)
- ● 2018 PhD HSI Fellows (n=20)
- ● 2018 Post-doc HSI Fellows (n=29)
- ● 2017 Start-Up Grant Fellows (n=11)
- ● 2017 HSI Fellows (n=35)

(*IA, ICR, ICRH, IGH, IHSPR, III, IIPH, IMHA, INMD, INMHA, IPPH, SPB)

A program founded on partnerships

Meet the Fellows

Visit the HSI Fellows Profile webpage to learn about the fellows, their backgrounds and career goals, host partner organizations and embedded programs of work.

2017 cohort: http://www.cihr-irsc.gc.ca/e/50660.html
2018 cohort: http://www.cihr-irsc.gc.ca/e/51201.html
2019 cohort: https://cihr-irsc.gc.ca/e/51695.html

Health System Impact Fellowship (for doctoral trainees and post-doctoral fellows): Program Objectives

The Health System Impact Fellowship: Key Components

Immersion in a health system organization

(expansion of traditional training environment)

Impact-oriented project(s) of high priority to health system organization

(adapt PhD skills to complex challenges in complex settings)

Co-supervision and mentorship

(from health system & academic leaders)

Emphasis on Enriched Core Competencies

(supported with a professional development training allowance)

Protected academic time

(for post-doctoral research /doctoral commitments)

National Cohort

(to build community & connect with other fellows & mentors)

The goal: Prepare the next generation of health services and policy PhD graduates with the professional skills, competencies, experiences and networks to make meaningful and impactful contributions throughout their careers, within and outside of academia.

Professional Development Planning, linked to the Enriched Core Competencies

September 2020	January 2021	August 2021	August 2022
Baseline: Fellow Self-Assessment and Target Competencies	3-months: Fellow self-assessment & mentor assessment	1 Year: Fellow self-assessment & mentor assessment (final for 1-year fellows; mid-point for 2-year fellows)	2 Years: Fellow self-assessment & mentor assessment (final assessment for 2-year fellows)

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What does this mean for you?

✓ You will have the chance to adapt and contribute your PhD skills to solving real world health system challenges in complex, dynamic settings (i.e., within organizations at the coal face of health policy and service delivery).

✓ You will learn through first-hand experience how health system organizations work, how decisions are made, what challenges they face, and how research skills can contribute to addressing key challenges;

✓ You will acquire unique professional development training and develop an expanded set of competencies (e.g., leadership, negotiation, project management) designed to accelerate your professional growth and better prepare you to embark on a wider range of career paths with greater impact;

✓ You will receive mentorship and supervision from health system and academic leaders.

✓ As a participant of a national cohort of fellows and health system and academic leaders, you will expand your network and benefit from mentorship and opportunities for collaboration.

✓ Keep at the forefront of research developments by maintaining a portion of your time for academic research

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Health System Impact Fellowship (for doctoral trainees and post-doctoral fellows): Award Details

Eligibility

You're eligible to apply if you are:

Doctoral Trainee

- Enrolled full-time in a doctoral degree, studying HSPR or related fields (e.g., public health, economics, public policy, health informatics) for their doctoral training, at Canadian CIHR eligible institution by the award start date.

Post-Doctoral Fellow

- Obtained PhD degree in an HSPR or related field (e.g., public health, economics, public policy, health informatics) no more than five years prior to the application deadline **or** has completed their PhD requirements by the start date of the award (Sept 2020)
- Registered with CIHR eligible institution at time of award start date

- <u>Not</u> a current/former employee of their proposed host partner organization (unless the candidate falls within the special case exception**)
- Be a Canadian citizen, permanent resident or citizen of another country but undertaking fellowship at a host partner organization located in Canada

AND you have a host partner organization and a health system supervisor in that organization:

- A health system supervisor that is a senior-level decision maker from a health system or related organization** in Canada (and who is a different individual than the academic supervisor) that has committed to hosting the trainee for the experiential learning opportunity must be identified as a Primary Supervisor.

AND you have an academic supervisor:

- An academic supervisor who has an academic appointment with a university-based graduate training program in Canada and who conducts research in health services and policy or a related field (and who is a different individual than the senior-level decision maker supervisor) must be identified as a Supervisor.
- For applicants to the doctoral stream, the academic supervisor must be the trainee's primary PhD supervisor.

**What is an eligible host partner organization?

- **Eligible: A public, private for-profit, or not-for-profit organization** at the local, regional, provincial/territorial, or federal/national level that contributes to direct service delivery; mandated quality monitoring; the development of policy or programs that affects the health of individuals, populations and/or the health system; the development, provision or evaluation of technologies/products/services; or consulting services aimed at improving health outcomes and/or health system effectiveness and efficiency.

- **Not eligible:** universities and university-based research institutes, CIHR-funded entities.

- **Non-exhaustive list of examples**: national health or health-related organizations, ministries of health, hospitals, health authorities, quality councils, public health units, health charities, consulting firms undertaking health or health-related work, pharmaceutical companies, health-related professional associations.

Check out our Partner Linkage Tool to help you find a host partner org

- Health system and related organizations are enthusiastic to host fellows → 55+ profiles in our partner linkage tool

- **Review their profiles and reach out to organizations of interest → START NOW!!!**

- Check back weekly, as more organizations are joining

- **Tool is an optional resource –** **applicants can alternatively reach out to their own self-identified organizations**

https://cihr-irsc.gc.ca/e/51721.html

Examples of Ontario-based Organizations in the Linkage Tool:
- **BlueDot (disease surveillance)**
- **Canadian Autism Spectrum Disorder Alliance**
- **CIHI (seeking 4 fellows)**
- **Canadian Patient Safety Institute**
- **Canadian Red Cross**
- **Choosing Wisely**
- **Deloitte**
- **MOHLTC, Economic Analysis Unit**
- **MOHLTC, Evidence Synthesis Unit**
- **Health Standards Organization**
- **Heart & Stroke Foundation**
- **Peel Public Health**
- **PHAC**
- **KITE, Toronto Rehabilitation Institute**
- **North York General Hospital**
- **Ontario Hospital Association**
- **Public Health Ontario**
- **Southlake Regional Health Centre**
- **St. Michael's Hospital Academic Family Health Team**
- **Women's College, WIHV**

Award Details

PhD trainee*

1 year duration

60% time embedded in health system organization (min)

$45,000 stipend per year + $5,000 PD training allowance per year

Post-doctoral fellow**

2 year duration

70% time embedded in health system organization (min)

$70,000 stipend per year + $7,500 PD training allowance per year

*Eligibility: Enrolled full-time in a PhD degree in Canada and studying HSPR or related fields (e.g., population health, epidemiology, health informatics, economics). Not a current/former employee of organization.***

Eligibility: Obtained PhD in HSPR or related fields within last 5 years of application deadline or will complete it by the start date of the fellowship. Not a current/former employee of organization.*

A program founded on partnerships

- Partnered funding model → 70:30*
- 70% of total award value comes from CIHR (IHSPR, IA, ICRH, III, INMD, INMHA, IPPH, Healthy Cities Research Initiative), MSFHR, FRQS & Mitacs
- 30% (min**) of total award value comes from the applicant's host partner organization***

*The host partner organization's 30% commitment is equal to:

   1 year PhD award = $15,000 (30% of $50,000)

   2 year Postdoc award = $23,250 <u>per year for two years</u> (30% of $77,500)

**organizations may contribute more than 30% to the fellow's stipend if desired

***The NBHRF & SHRF have partnered to cover all or a portion of the 30% contribution fellows embedded within organizations in their respective provinces. Visit the funding opportunity for details.

Funds available: 44+ Awards!!!

20+ Doctoral awards

24+ post-doctoral awards

Regionally allocated (defined by location of host partner organization):
Western funding pool: BC, AB, SK, MB, YK, NWT
Central funding pool: ON, QC, NT
Eastern funding pool: NS, NB, NL, PEI

Supported by CIHR (IHSPR, IA, ICRH, III, INMD, INMHA, IPPH, Healthy Cities Research Initiative), MSFHR, FRQS and MITACS

IPPH's Equitable AI Initiative

Equitable AI is one of IPPH's strategic priority areas. Aims to build capacity to use AI approaches in public health research:

- Through training initiatives that will support next generation of researchers with necessary tools in an evolving environment
- Prioritizes health equity to ensure that health solutions benefit everyone

IPPH is supporting 8 HSI Fellowships that align with the institute's Equitable AI priority <u>and</u> are focused on developing /applying AI approaches to public health challenges, with trainee hosted at a provincial or federal public health agency :

- 4 doctoral awards (1-year)
- 4 post-doctoral awards (2 years)

Learn more: https://cihr-irsc.gc.ca/e/51204.html

Submitting an application

Expression of interest process

Step 1: Applicants explore potential host partner organizations (via the partner linkage tool, or self-identified)

Step 2: Applicants submit expressions of interest (EOIs) to organizations (multiple EOIs are permitted)

Step 3: Organizations meet with applicants of interest to discuss ideas and explore fit

Step 4: Confirm partnership and develop CIHR application

How to Apply

1

Project Biosketch (a more concise version of the Canadian Common CV)

- Fellow + Health System Supervisor + Academic Supervisor
- Note: <u>Start early</u> – it is not feasible to do at last minute!

2

Program of Work Proposal

- Only 5 pages total, but must demonstrate a lot in 5 pages
    - Motivation for applying and value-add (1 page)
    - Relevant accomplishments & abilities (1/2 page)
    - Training environment & support (1.5 pages)**
    - Project/program of work proposal (2 pages)

    **The 1.5 page training environment and support section is to be primarily written by the health system and academic supervisors, in collaboration with the fellow

3

Letters of Support from the Health System & Academic Supervisors

- Very important! See funding opportunity "How to Apply" section for details.

4

Degree Information, Transcripts, and Other

- Degree information: specify your PhD program, the name of the department and university administering the program, and how the PhD is relevant to HSPR
- Transcripts (for doctoral applicants only): undergraduate + graduate
- Certificate of Completion for CIHR interactive module on sex and gender in research

Peer Review Criteria

1 **Achievements and potential of the applicant (25%)**
- Professional & academic achievements
- Leadership potential

2 **Quality of the host partner organization's and academic institution's training, supervision and mentorship (35%)** ⭐
- Clarity, quality and career impact potential of the PD & mentorship plan, including extent to which both supervisors are involved
- Supervisors' (health system and academic) commitment to program objectives
- Quality & fit of learning environments

3 **Quality, potential impact and feasibility of the applicant's project/program of work proposal (20%)** ⭐
- Extent to which project addresses organization's impact goal & impact potential
- Appropriateness of program of work approach & KT/knowledge user engagement strategy
- Clarity & feasibility of proposal

4 **Potential value-add to the applicant and the host partner organization (20%)** ⭐

⭐ *Requires input from the supervisors*

* The funding opportunity includes an extract from the Reviewers' Guide for the HSIF. Applicants are **strongly encouraged** to review it (in the "Additional Information" section of the funding opportunity.

Key Dates

December 2019	April 1, 2020	May/June 2020	July 20, 2020	Sept 1, 2020
Funding Opportunity Launch Date	**CIHR Application Deadline**	**Peer Review of Applications**	**CIHR Notice of Decision**	**Funding and Fellowship Start Date**

Partnership Development, Expression of Interest, Application Development Phase

Fellow meets with Host Partner Organization and encourages it to establish an agreement with fellow's academic institution to transfer its 30% there (exception is when host partner is a CIHR eligible organization)

What have we learned?

1. Health system organizations are interested in embedding PhD talent within their teams

2a. Fellows target 3 competencies for development but develop all 10 during the fellowship
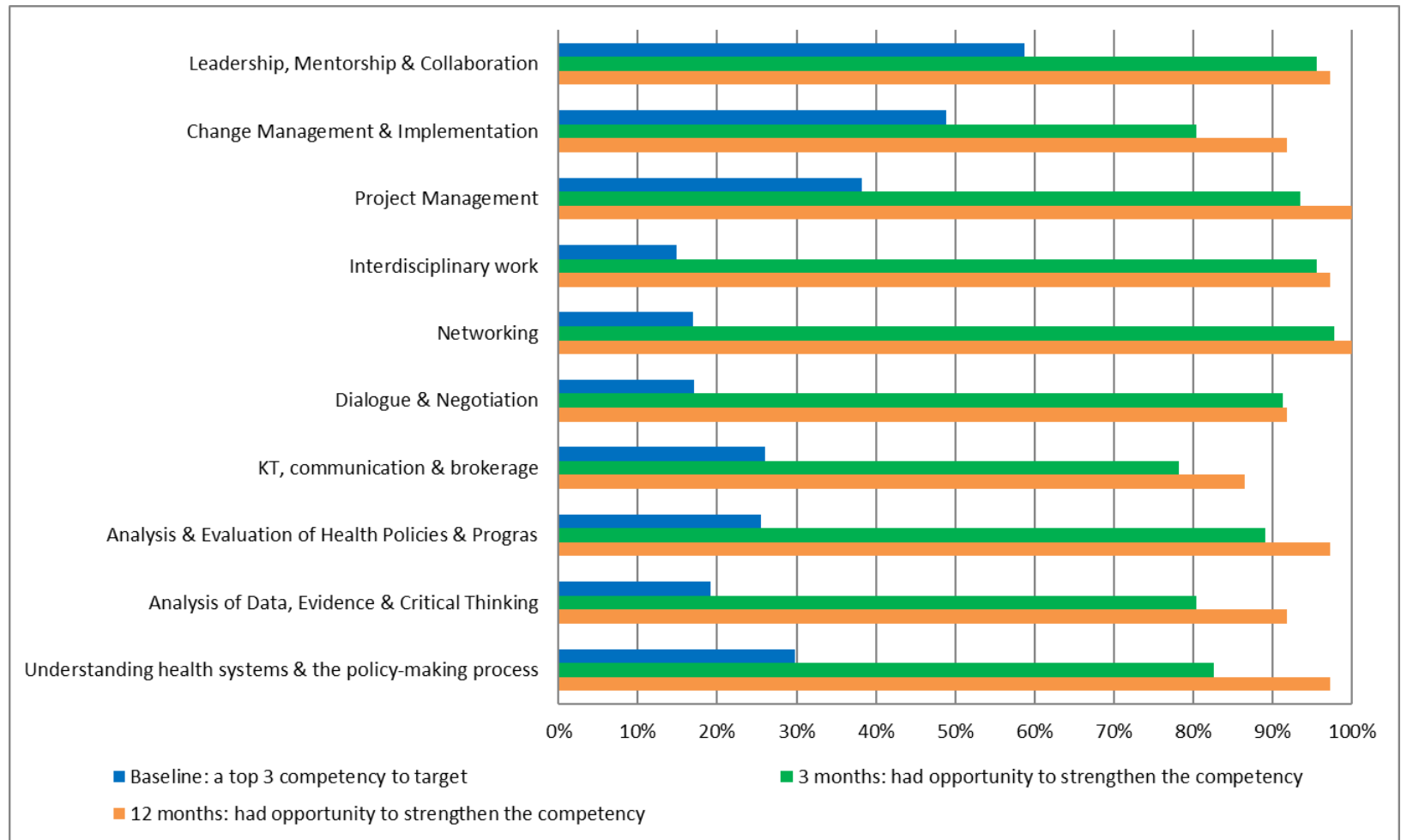
Categories (top to bottom):
- Leadership, Mentorship & Collaboration
- Change Management & Implementation
- Project Management
- Interdisciplinary work
- Networking
- Dialogue & Negotiation
- KT, communication & brokerage
- Analysis & Evaluation of Health Policies & Progras
- Analysis of Data, Evidence & Critical Thinking
- Understanding health systems & the policy-making process

X-axis: 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Legend:
- Baseline: a top 3 competency to target
- 3 months: had opportunity to strengthen the competency
- 12 months: had opportunity to strengthen the competency

2b. Fellows' competencies develop over time, from all perspectives

Competency	Fellows Mean (SD) (n = 38)	Supervisors Mean (SD) (n = 69)	Δ Mean, baseline to 12 months (fellows)	Δ Mean, 3 to 12 months (supervisors)
Leadership, mentorship and collaboration	3.81 (0.61)	4.00 (0.73)	0.61	0.5
Change management and implementation	3.50 (0.95)	3.45 (0.93)	1.07	0.41
Project management	3.68 (0.93)	3.96 (0.93)	0.59	0.46
Interdisciplinary work	4.21 (0.70)	4.13 (0.82)	0.61	0.49
Networking	4.03 (0.72)	4.26 (0.72)	0.9	0.53
Dialogue and negotiation	3.76 (0.79)	3.67 (0.93)	0.85	0.4
KT, communication and brokerage	3.76 (0.71)	3.97 (0.82)	0.76	0.55
Analysis and evaluation of health policies/programs	3.82 (0.77)	3.94 (0.94)	0.33	0.71
Analysis of data, evidence and critical thinking	4.14 (0.66)	4.30 (0.77)	0.43	0.58
Understanding health systems and the policy-making process	3.74 (0.89)	3.87 (0.78)	0.89	0.68

3. The National Cohort provides a platform for building relationships & collaboration (and informing our program learning)

4. HSI Fellows' career paths are diverse and promising

Academia
- Assistant Professor (Laval, Ryerson, St. Francis Xavier University, Canadian Mennonite University, University of Central Florida, Universite du Quebec a Trois-Rivieres)
- Post-doctoral Fellow (n=4)

Public Sector
- Research Scientist (AHS, PHAC, SK Health Authority, Norwegian Institute of Public Health)
- Analyst, Statistics Canada (x2)
- Science Professional, Methodologies, INESSS
- Scientific Evaluator, Health Canada

Not-for-profit sector
- Director, Strategy & Operations, Canadian Autism Spectrum Disorder Alliance
- Embedded Scientist, Canadian Blood Services
- Director, WoodGreen Community Services

Health service delivery organization
- Project Manager, Sinai Health Systems
- Scientist, SickKids Global
- Biostatistical Lead, BC Children's Hospital Research Institute
- Physician & Director of Research, Emergency Department, Sunnybrook

Other
- Health System Impact Fellow (renewed, n=7)
- Entrepreneur & CEO

What's it really like?

Dr. Jonathan Lai
Director, Canadian Autism
Spectrum Canadian Autism
Spectrum Disorder Alliance

Health System Impact Fellow
alumnus

Sophie Roher
PhD candidate, Dalla Lana
School of Public Health

Health System Impact Fellow
alumnus

Dr. Daniala Weir
Trillium Health Partners-
IHPME Health System Impact
Fellow

Helpful Resources

- [HSIF funding opportunity](#)
- [Host partner organization Linkage Tool](#)
- [Frequently Asked Questions](#)
- [Profiles of Health System Impact Fellows](#)
- Modernizing Training in HSPR: http://www.cihr-irsc.gc.ca/e/50024.html
- Healthcare Policy special issue on Training for Impact: Modernizing Health Services and Policy Research Training https://www.longwoods.com/publications/healthcare-policy/25977
- IJHPM series of papers and commentaries on the HSIF:
  - Sim et al. http://www.ijhpm.com/article_3584.html
  - Cassidy et al. http://www.ijhpm.com/article_3620.html
  - Hunter http://www.ijhpm.com/article_3624.html
  - McKee http://www.ijhpm.com/article_3634.html
  - McMahon & Tamblyn http://www.ijhpm.com/article_3653.html
  - Rycroft-Malone & Langley http://www.ijhpm.com/article_3737.html
  - Eljiz et al http://www.ijhpm.com/article_3693.html
- CIHR Health Research Training webpage: http://www.cihr-irsc.gc.ca/e/50507.html

THANK YOU!