Centres for Research Development: Contributions to Sustainable Innovation Systems

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Context for Innovative Centres Program

- 2000 Creation of Canadian Institutes of Health Research as Canada’s premier health research funding agency - 13 Institutes, broad research themes and knowledge translation
- 2001 cross-country consultations by Institute of Population and Public Health (IPPH) identified lack of population and public health research infrastructure
- Seven Centres funded for up to six years (2004-2010) (non-renewable), at $400,000 per year
- Addressed research to understand and address the impacts of physical and social environments on health
- Viewed as innovative, first of their kind in Canada
Centre Program Objectives

- Align capacity building with strategic health research themes and knowledge exchange activities of participating Institutes
- Better position interdisciplinary teams of researchers, in newly emerging and less developed fields, for accessing open-competition (investigator-initiated) research funding
- Promote networking and mentoring across researchers and existing institutions
- Foster meaningful interactions with research users such as policy makers, public and voluntary sector program administrators, and clinical and public health practitioners
- Create a sustainable path for the activities of Centres for Research Development, with committed multi-year funding
- Facilitate capacity building in regions of Canada with underdeveloped research strengths
Centres for Research Development

Multi-Partner Funding
# Seven Centres for Research Development

<table>
<thead>
<tr>
<th>Centre Name</th>
<th>University</th>
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<tr>
<td>Canadian Centre for Health and Safety in Agriculture (CCHSA)</td>
<td>Univ. of Sask.</td>
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<tr>
<td>Centre for urban health initiatives (CUHI)</td>
<td>Univ. of Toronto</td>
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<tr>
<td>Asthma in the Workplace Centre</td>
<td>Hôpital du Sacré-Coeur de Montréal</td>
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<tr>
<td>Population Health Intervention Research Centre</td>
<td>Univ. of Calgary</td>
</tr>
<tr>
<td>Atlantic Rural Environments and Health Centre</td>
<td>Dalhousie Univ.</td>
</tr>
<tr>
<td>Centre de recherche Léa-Roback sur les inégalités sociales et de santé de Montréal</td>
<td>Université de Montréal</td>
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<tr>
<td>Atlantic Networks for Prevention Research</td>
<td>Dalhousie Univ.</td>
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Centres Program Evaluation Development Process

- Participatory approach to evaluation framework and reporting mechanisms (2004-2005)
- Progress reports (2006-2007) and feedback from Institute of Population and Public Health (IPPH)
- Mid-term evaluation (by peer review committee) to assess individual Centre performance and recommend funding for remaining period (2008-2009)
  - Continuation of funding for all 7 Centres
Centres for Research Development Logic Model

**Goal:** support the development of sustainable, integrated programs of research and knowledge exchange that build understanding of the impacts of physical and social environments on health, and design and test new interventions to achieve population-level health benefits.

**Inputs**
- From CIHR/IPPH
  - Strategic choice of research themes
  - Grant funds
  - Peer review resources
  - Administrative resources
  - Support for Centre networking and collaboration

**Activities**
- CIHR/IPPH
  - Program management activities
  - Facilitation of communication and networking among Centres

**Outputs**
- Research capacity outputs
  - In strategic theme areas:
    - Recruitment and integration of researchers and students from newly emerging and less developed PPH research fields into integrated interdisciplinary research program development
    - Interdisciplinary training and mentoring of students and postdoctoral fellows
    - Research activities leading to the submission and winning of investigator-initiated competitive research funds from CIHR and other sources

**Research capacity results**
- In strategic theme areas:
  - Increased interdisciplinarity of population and public health research, leading to greater capacity for more comprehensive answers to research questions
  - Recognized methodological and conceptual advances in population and public health research
  - Increased quantity of population and public health research funded in open competition
  - Increased quality and success of population and public health research in open competition
  - Engagement of Centres as catalysts for advancing PPH research in Canada

**Research capacity impacts**
- In strategic theme areas:
  - Better opportunities and career paths for researchers new to population and public health research, leading to retention of those newly recruited through Centers
  - Increased quality and total amount of Canadian population and public health research and researchers in areas aligned with strategic priorities
  - Sustained research platforms and infrastructure in areas aligned with strategic priorities

**Centres for Research Development**
- Implementation of a shared governance structure engaging researchers and partners
- Interdisciplinary and intergenerational research development activities involving researchers, partners and students: work leading to access of more and sustainable funding, new research platforms in areas aligned with strategic priorities
- Activities leading to the creation or consolidation of specialized research nodes that can share expertise nationally and internationally
- Activities supporting the networking, mentoring and collaboration of researchers/students and partners at all research phases (question identification to results application/utilization)

**Collaboration outputs**
- Mechanisms and tools for interaction and collaboration among researchers/students from different disciplines and regions
- Climate of mutual transparency and trust among Centre members
- Enhanced consciousness of potential contributions from other disciplines

**Collaboration results**
- Denser and stronger linkages among researchers across disciplines and regions:
  - Including research platform development that would not have occurred with these participants
  - Expansion of existing research nodes

**Collaboration impacts**
- Increased capacity to bring all necessary resources and disciplines to bear on research problems
- Population and public health research capacity in more provinces, allowing more health jurisdictions to access research resources

**Knowledge exchange outputs**
- Effective shared governance
- Mechanisms and tools for meaningful interactions with research users

**Knowledge exchange results**
- Greater prominence and perceived indispensability of population and public health research among research users
- Integration of knowledge exchange into routine activities of research teams

**Knowledge exchange impacts**
- Increased capacity for research-grounded policy and program design
- Increased capacity for sustained productive dialogue/interaction between researchers and research users
### Research capacity impacts

In basic strategic theme areas:
- Better opportunities and career paths for researchers new to population and public health research, leading to retention of those newly recruited through Centres
- Increased quality and total amount of Canadian population and public health research funded through open competitions
- Sustained research platforms and infrastructure in areas aligned with strategic priorities

### Collaboration impacts

- Increased capacity to bring all necessary resources and disciplines to bear on research problems
- Population and public health research capacity in more provinces, allowing more health research jurisdictions to access research resources

### Knowledge exchange impacts

- Increased capacity for research-grounded policy and program design
- Increased capacity for sustained productive dialogue/interaction between researchers and research users
Centres Summative Evaluation (2010-11): Program-level

• Centres program prominently featured in IPPH self-assessment report for 10-year international review

• Aims:
  – Assess gains from the Centres program for population and public health (PPH) research capacity in Canada
  – Assess Centres’ program model as a tool for research development
Centre Program Evaluation Questions

• To what extent has the Centres’ program achieved its intended results, adding capacity that would not otherwise have been attained, in research development, collaboration and knowledge exchange? How has the program contributed to CIHR’s strategic outcomes?

• How effective was the Centres’ model as a research development strategy in population and public health? How effective were its features of: multi-year funding offered to a small set of geographically dispersed Centres, with co-governance structures enabling research user involvement?
Evaluation Approach

• Document review:
  – Progress and final self-evaluation Centre reports
  – Peer review committee and cross-learnings reports

• 20 semi-structured key informant interviews
  – Centre representatives (n = 12)
  – Key stakeholders (e.g. decision-making partners) (n = 5)
  – Mid-term peer review committee members (n = 3)

• Centre Directors reviewed draft summative evaluation report
Evaluation: Limitations

- Data are largely self-report, not possible to systematically validate against objective sources
- Key informants (other than the mid-term reviewers) able/willing to comment on the Centres they were familiar with, not the overall program
- Small number of interviews
Program-level Evaluation Challenges

• Not designed as case study-based evaluation
• Trade-offs between telling Centre-specific “story” vs. program-level focus of summative evaluation
• Comparisons between individual Centre programs of research
• Centres operating within heterogeneous contexts and organizational structures
• Attribution vs. contribution of Centre program given complex environment
Selected Program-level Findings

Research Capacity Development

• Centres made clear and significant contributions to population and public health research capacity
• Increased level of engagement by different disciplines
• Research outputs: highly productive
• Accessing funds: moving to increased success in peer-reviewed funding competitions
Figure 2: No. of disciplines of Centre researchers

- CCHSA
- RURAL
- PHIRC
- ANPR
- CAW
- CUHI
- CLR

2005 - 2008 - 2010
<table>
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<tr>
<th>Research proposals generated by Centres (2003-2010)</th>
<th>Total</th>
<th>Mean</th>
<th>Range</th>
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<tbody>
<tr>
<td>Number of research projects supported with seed funding</td>
<td>175</td>
<td>25.0</td>
<td>14-43</td>
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<tr>
<td>Number of seed funded projects that led to submission to peer-reviewed funds</td>
<td>61</td>
<td></td>
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<tr>
<td>Number of research protocols submitted to granting agencies by Centre members</td>
<td>306</td>
<td>44</td>
<td>9 – 108</td>
</tr>
<tr>
<td>Number of successful peer-reviewed grant applications</td>
<td>183</td>
<td>26.1</td>
<td>7-52</td>
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Research Capacity Development

• Training and mentoring
• Significant synergies with other complementary initiatives
  – Training platforms, MPH and Schools of Public Health, etc.
• Catalyzing population and public health research
  – Alignment between research chairs and Centre programs of research
Program-level Findings

Sustainability

• Variety of pathways:
  – Sustain research ideas (emergence of research groups)
  – Sustained infrastructure (some Centres still in place)
  – Sustain collaborative mechanisms

• Collaboration:
  – Denser and stronger linkages
Program-level Findings (2)

• Knowledge translation and exchange
  – Co-governance structure involving research users found to be innovative and very effective
  – Varying receptor capacity across Centres:
    • Use of incentives to foster engagement by research users
  – Difficult to document sustained capacity for evidence use by research users
Opportunities and Challenges for IPPH with Centres Program and its evaluation

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<th><strong>Opportunities</strong></th>
<th><strong>Challenges</strong></th>
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<tr>
<td>• Individual Centres address different themes of research</td>
<td>• Stimulate cross-Centre collaboration to build fields of research</td>
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<tr>
<td>• Some early signs toward building intervention research field</td>
<td>• Evaluation trade-offs between program-level vs. individual Centre focus</td>
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<td>• Mission-driven, programmatic thrust to research</td>
<td>• Mid-term evaluation requirements and delays</td>
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<tr>
<td>• Synergies with other complementary capacity building investments</td>
<td>• Decision not to continue funding of Centres</td>
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Conclusion: Centres as innovative model

• Program was a strategic choice/risk for Institute of Population and Public Health
• Seen as highly successful overall
  – Advanced the overall aim of research capacity development and achieved specific program objectives
  – Adopted by other funding agencies
Conclusion: Centres as innovative model (2)

• Co-governance with research users
• Multi-year infrastructure funding – catalyzed mission driven, flexible, thematic and programmatic research
• Broadened conceptualization of paths to sustainability (from evaluation)
Lessons Learned: Evaluator’s Perspective (1)

• Simple “Centre” idea with few requirements gave rise to a vastly diverse set of structures, approaches and results
  – Flexible evaluation process needed to consider range of contextual realities and outcomes
• Development of framework and face-to-face meetings
  – Critical for establishing trust and representing Centre interests
Lessons Learned: Evaluator’s Perspective (2)

• Funded Centre entities do not easily adopt a program-level focus
  – Resistance to applying common evaluation framework to “my special case”
  – Self-reported data was aimed at funders and competitors
  – Drop-off in assiduity of data collection after mid-term review
THANK YOU!
QUESTIONS / DISCUSSION