“Shaping Research on Aging in Canada: Strategic Initiatives of the CIHR Institute of Aging”

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Overview of Presentation

- Situating CIHR re aging research
- Research Priorities of the Institute of Aging:
  - Cognitive Impairment
  - Mobility in Aging
  - Canadian Longitudinal Study on Aging
  - Health Systems for Aging Populations
- Citizen Engagement
- Capacity Building
- International Collaborations
- Alignment with CIHR’s Roadmap
What is CIHR?

- Major health research agency for Canada
- Launched on June 7, 2000
- Supports 13,500 researchers in universities, teaching hospitals, research institutes across Canada
- Replaces the Medical Research Council of Canada and NHDRP of Health Canada
- Structure for funding research:
  - virtual institutes
  - multidisciplinary approach
“To excel, according to internationally accepted standards of scientific excellence in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system…”
In 2009-2010, CIHR invested over $122 M in studies on aging or aging-related disorders.
CIHR – Research Themes

- Biomedical
- Clinical
- Health services and health systems
- Health of populations, societal and cultural dimensions of health, and environmental
Figures exclude CRC’s, CECR’s and NCE’s.
Percent Change is ((200708 Expenditures)-(199900 Expenditures))/(199900Expenditures)
Over 4000 applications per year; fund ~ 20%

Application pressure ↑ 70% since 2000-01

March 2010 competition:
- duration ranged from 1 to 5 years
- funding ranged from $60K to $1.7M
- 2/3 of received applications - biomedical

Total grant value & duration vary by Pillar:

<table>
<thead>
<tr>
<th></th>
<th>Biomedical</th>
<th>Clinical</th>
<th>Health Systems</th>
<th>Population Health</th>
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</thead>
<tbody>
<tr>
<td>Average Value</td>
<td>644K</td>
<td>542K</td>
<td>392K</td>
<td>376K</td>
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<tr>
<td>Annual Average</td>
<td>141K</td>
<td>150K</td>
<td>133K</td>
<td>114K</td>
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<tr>
<td>Duration</td>
<td>4.5</td>
<td>3.6</td>
<td>2.8</td>
<td>3.1</td>
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Averages based on 2009/10 Competition Results
CIHR - Institutes

- Health Systems and Policy Research
- Circulatory and Respiratory Health
- Aboriginal Peoples' Health
- Cancer Research
- Musculoskeletal Health and Arthritis
- Nutrition, Metabolism and Diabetes
- Neurosciences, Mental Health and Addiction
- Human Development, Child and Youth Health
- Population and Public Health
- Genetics
- Gender and Health
- Infection and Immunity
- Aging
Mission: advance knowledge in aging to improve the quality of life and the health of older Canadians (Note: knowledge creation and application)

Funding Research: from cell to society, to policy and practice and product

Not explicit ‘disease-based’ focus (AD exception)

Consequences of living with disease; transitions and trajectories
How CIHR Funds

~70%  Open Competition
   - Researchers develop proposals and submit applications
   - Operating grants, salary awards, training awards, equipment grants, etc

~30%  Strategic Initiatives
   - Targeted to address major health challenges
   - Requests for Applications (RFAs)
   - Developed by Institutes* (and now aligned with CIHR Roadmap)

(Appraisal based solely on peer-review for both)
Aging Research Commitments Across CIHR

Aging Research Funded across CIHR

Percent of CIHR Budget

Strategic-Targeted Priorities
Open Investigator Initiated
Percent of CIHR

Thousands ($)

Relevance: Five Priority Research Areas

- Healthy and successful aging
- Biological mechanisms of aging
- Cognitive impairment in aging
- Aging and maintenance of functional autonomy
- Health services and policies relating to older people
Caregiving in Dementia: Research Initiatives
- Biological causes / prevention
- Clinical: treatment (vascular dementia)
- Health services and caregiving/management

Canadian Dementia Knowledge Translation Network
- Partnerships/collaborations: enhance relevance of research and optimize research impact
- Information, educational and clinical tools:
  http://www.lifeandminds.ca/
Goals:
• delay onset and progression - early intervention & diagnosis;
• improve quality of life and access to quality care;
• enable healthcare system to deal more efficiently with rising number of individuals with dementia

Objectives:
• Common priorities for research
• Scientific international collaborations, to accelerate research efforts
• Funding partnerships worldwide
• Shared methodologies, technologies and platforms, to provide added value to research
ICRSAD

Status:

- France-Canada-Québec funding initiative
- EC Joint Programming Initiatives (24 countries);
- Int’l NCE Neurodegeneration Research (Germany, UK, Canada);
- US (ADNI)
- Additional focus on a national Canadian network and collaborative structure
Strategic Research Focus: Mobility in Aging (since 2005)

- Understanding and defining mobility
- Maintaining and restoring mobility
- Measures, tools, and technologies in research, assessment and mobility aids
- Supportive designs for mobility in aging: housing, communities, and transportation
Mobility in Aging: Status of Initiative

Nine National Teams funded:

- Technology:
  - Optimizing gait and balance
  - Understanding whole-body mobility and falls in residential and outdoor environments
  - Optimizing wheeled mobility
- Determinants of mobility trajectories (CLSA)
- Built environment & determinants of health
- Causes of gender differences in MiA
- Prevention & improving outcomes of hip fractures
Canadian Longitudinal Study on Aging (CLSA)

Principal Investigators:
- Parminder Raina, McMaster
- Christina Wolfson, McGill
- Susan Kirkland, Dalhousie
80 Co-Investigators:
- Biology, genetics, medicine,
- Psychology, sociology, demography, economics
- Epidemiology, nursing, nutrition
- Health services, biostatistics, population health

140 collaborators (all provinces)

Duration of study: 20 years (2009 – 2029)

Funding secured:
- CIHR $30M (Implementation: 5 year phase)
- CFI $26M Infrastructure
- Partners: Provincial governments, Veteran’s Affairs Canada, Health Charities, etc.
Protocol Design

50,000 women and men aged 45 - 85 at entry

20,000 (Tracking Cohort)
Randomly selected within Provinces

30,000 (Comprehensive)
Randomly selected within 25 km of an academic centre in 11 sites

Questionnaire
• By telephone

Questionnaire
• By telephone and in person

Clinical/physical tests
Neuropsych tests
Blood, Urine

Follow up every 3 years; interim contact

Data Linkage
# CLSA - Data Domains

- Health status, Quality of life, healthy aging
- Activities of daily living/disability/injuries
- Frailty/co-morbidities
- Function/Performance
- Physical measures
- Chronic diseases
- Cognitive function, Mental Health
- Oral health
- Vision, hearing
- Medications
- Health and Social Services Use
- Institutional care
- Genetics/Biology
  - Disease susceptibility/longevity genes
  - Epigenetics
  - Biomarkers
- Nutrition
- Lifestyle/behaviours
- Social networks, participation, social support
- Mood, psychological distress
- Care giving/Care receiving
- Adaptive functioning, coping
- Work to retirement transitions
- Social inequalities
- Mobility
- Built & physical environment/Housing
- Economics/Wealth
- Demographics

## Linkages
(to “secondary” data bases)

- Health care use
- Disease registries e.g. Cancer
- Environmental
- Drugs
Infrastructure Supporting Population Research on Aging (CFI)

Computer-Assisted Telephone Interview Centres
Collect health and psychosocial data (Halifax - Sherbrooke).

Data Collection Centres
Collection of nutrition, physical, clinical data, & biological specimens. (11 across Canada)

National Coordinating Centre
Oversight, project management (McMaster - Hamilton)

Biological Processing Centre
Bio-banking, biomarker discovery & analysis (McMaster - Hamilton).

Genetics and Epigenetics Centre
Genotyping, epigenetic analysis, and bioinformatics, (UBC - Vancouver)

Statistical Analysis Centre
Assimilation, distribution and analysis (McGill - Montreal).
Regional Seniors' Workshops on Research

- Prairies – Regina (June 2004)
- Atlantic – Halifax (November 2004)
- British Columbia & North Regions – Vancouver (March 2005)
- Ontario – Toronto (November 2005)
- Quebec – Montreal (May 2006)
The leading health issues identified as priorities for research on aging by seniors and advocates across the country were:

- Health care and health services
- The housing-care continuum
- Health promotion
Research on Health Services and Systems:

- *Partnerships for Health System Improvement*

- Next steps re ‘scoping’ strategic focus:
  - Canadian Health Services Research Foundation – regional consultations re aging
  - “Boomerangst” Conference, Vancouver 2011

- Framing of next strategic focus – Spring 2011
Support Knowledge Translation activities:
- Betty Havens Prize in Knowledge Translation
- Meetings, Planning and Development Grants (local, national, international)

Support Capacity-Building:
- Catalyst Grants (new data/ high-risk idea)
- Trainee and Investigator Awards
- Summer Program in Aging (SPA)
Gold Prizes for Research on Aging:
IA - NLCAHR

- PDF level
- Dr. Michelle Ploughman
- *Health, Lifestyle and Aging with Multiple Sclerosis: Building an Evidence-Based Self-Management Program*
- Awarded CIHR PDF
- Top ranked PDF last year relevant to IA
- Received a CIHR Recognition Prize in Aging
Summer Program in Aging (SPA)
Students and Trainees: Awards, Prizes and Activities

Age + Awards:
- Publication
- Travel

Prizes:
- CIHR IA Recognition Prizes in Research in Aging
- CIHR IA Réjean Hébert Prize (Cdn Geriatrics Soc.)
- Cdn. Assoc. Gerontology-IA Student Poster Competition

CIHR IA Activities at the Canadian Association on Gerontology (CAG) Annual Meeting:
- CIHR IA Student Lunch
- CIHR Awards Crafting Workshops

http://www.cihr-irsc.gc.ca/e/30793.html
Health Research Roadmap: Creating innovative research for better health and health care

CIHR’s Strategic Plan
2009-10 – 2013-14
CIHR Research Roadmap: *Health and health system research priorities*

- Promote **patient-oriented research** & target science and technology innovations to improve health outcomes and health systems
- Support a high quality, **accessible & sustainable** health care system
- Decrease **health inequities** in Aboriginal Peoples & other vulnerable populations
- Promote health & reduce the burden of **chronic disease** & mental illness
- Prepare & respond to existing & emerging **global threats** to health
Roadmap Initiatives relevant to Aging

- **International Collaborative Research Strategy for Alzheimer’s Disease**

- **Strategy on Patient-Oriented Research**
  - National initiative implicating public (provinces, NGOs) and private (Rx&D) stakeholders
  - Goal of “Improving health outcomes through research”
  - Continuum from “first in patients” studies to how new and old drugs, devices and procedures are integrated into health systems

- **CLSA as an ‘enabler’ of research - infrastructure**
International Research Connections – Institute of Aging

- Canada – China (CIHR) 7 grants
  - neurodegeneration, epigenetics, frailty, culture/memory
- Canada – Japan (CIHR) 4 grants
  - neurodegeneration, genetics/senescence, older worker & retirement
- IA – New Dynamics of Aging (UK) 10 grants
  - continence, frailty, stair mobility, IT use, technology prompts, rural connectivity, integrating longitudinal data
- IA – EPSRC (UK) – technology for dementia living & care
- Associate Member ERA-AGE 2 (European Research Area) - FutureAge: European Roadmap for Ageing Research
- USA through harmonization of CLSA measures with Health & Retirement Survey (and SHARE)
Priorities align with CIHR’s Research Roadmap

10 year Review of CIHR and Institutes: Winter 2011

Scientific Director Succession:
- Change in Administration July 31, 2011
- National ‘call’ for applications – January 2011
- Selection process – April 2011
Summary - Symposium:

- CIHR and the Institute of Aging
- Research Priorities of Institute of Aging:
  - Health services and systems (2011 - ?)
- Citizen Engagement and Capacity Building
  - Role of stakeholders in defining priorities/ “KT”
  - Building research capacity
- Strategic Initiatives:
  - Cognitive Impairment in Aging
  - Mobility in Aging
  - CLSA