

Research Canada **UPDATE**

December 2016

NEWS FOR PARLIAMENTARIANS ON CANADIAN HEALTH RESEARCH



The Health Research Caucus event, Frailty Among the Aged in Canada, October 24, 2016.

SENIORS, INFLUENZA AND VACCINE-PREVENTABLE DISABILITY: MAKING HEALTH LAST

Influenza is more than just a bad cold, especially for older adults who experience the majority of influenza-related hospitalizations and deaths. Canadian researchers, such as Dr. Janet McElhane, are helping to unravel the connection between influenza and frailty to explain why seniors are so vulnerable. McElhane, a geriatrician in Sudbury, Ontario, has seen first-hand the impact of influenza on her older patients who are at higher risk of hospitalization and death.

Why is influenza so much worse among older adults? Not only can influenza trigger serious medical events like strokes and heart attacks, but hospitalization itself can lead to additional complications and loss of the ability to perform activities of daily living (ADL). Thus, single acute infection in seniors can initiate a cascade that leads to “catastrophic disability” (or the loss of 3 or more ADL), increased frailty and ultimately the loss of independence. Those in the field call this the “spiral of dependency.”

McElhane has also coined the term “vaccine-preventable disability” to describe the idea that this spiral can be preventable through immunization. While vaccines are among the best tools we have to prevent influenza, vaccine effectiveness among older adults is about half that of younger adults. However, newer vaccines, such as the high-dose influenza vaccine which was approved for use in the US in 2009 and in Canada in 2015, is one example of a new generation of vaccines tailored to augment protection for seniors.

As the first influenza vaccine to have evidence of significantly improved protection against influenza among adults over 65, the high-dose influenza vaccine is now being studied in Canada and elsewhere for its ability to prevent influenza-related complications among other vulnerable patient populations. Toronto-based cardiologist, Dr. Jacob Udell, is leading a multi-center, multi-year North American clinical trial to evaluate the effectiveness of the high-dose influenza vaccine among cardiac patients, while Dr. Deepali Kumar, an infectious diseases specialist in Toronto is exploring the high-dose vaccine’s utility among transplant patients. In addition, implementation evaluation projects are underway to explore the high-dose vaccine’s use in long-term care facilities through a project being led by the Ontario Long-Term Care Association. Other research projects conducted or supported by the Canadian Frailty Network, the Canadian Center for Vaccinology and Sanofi Pasteur are also adding to this body of knowledge.

Given the growing population of seniors over the next 2 decades, preventative measures will be needed to keep older adults active and healthier for longer. Access to these new interventions as well continued research in the area of frailty, infectious disease and immunization will be key to keeping seniors independent, out of hospitals and in their homes for longer.

Next Event

Luncheon 12:00 p.m. - 1:30 p.m.

February 13, 2017

Health Research Caucus

Neuroscience Research in Canada

Recent Event

Frailty

Among the Aged in Canada

October 24, 2016



Co-hosted by the Canadian Frailty Network

Sponsoring participants of the Health Research Caucus event, Frailty Among the Aged in Canada, included:

Sanofi Pasteur
Innovative Medicines Canada
AstraZeneca
Dalhousie University
Health Sciences North

To see all participants and to learn more about the event, please visit:
rc-rc.ca/hrc-frailty-among-aged-canada/

Sanofi Pasteur has generously sponsored the production of this Research Canada Update

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RESEARCHERS ASKING CANADIANS ABOUT THEIR PRIORITIES FOR FRAILTY RESEARCH

Researchers at Toronto Rehabilitation Institute – University Health Network and University of Toronto are reaching out to older adults, their friends, family and caregivers, as well as health and social care providers who work with them, about their priorities for frailty research.

The study, the Canadian Frailty Priority Setting Partnership, is supported by the Canadian Frailty Network and follows the methods of the James Lind Alliance.

This is an opportunity for Canadians who have personal or professional experiences of frailty to have a say in setting priorities for Canadian research.

For more information, visit:
<http://www.cfn-nce.ca/>



CIHR:

ADDING LIFE TO LATER YEARS

Seniors are the fastest growing age group in Canada. By 2026, seniors will represent over 20% of the Canadian population. The CIHR Institute of Aging (CIHR-IA), under the leadership of Dr. Yves Joanette, supports the work of researchers in universities and hospitals across the country, and brings together different stakeholders including seniors themselves, to increase our knowledge about aging and ultimately add life to later years. Frailty is an important strategic priority for the Institute. CIHR-IA is part of the Government of Canada's commitment to providing our aging population with the support needed to live healthy and independent lives.
www.cihr-irsc.gc.ca

RESEARCH PROFILE: McMASTER UNIVERSITY



McMaster University is home to some of the best minds and research facilities in the country.

Research at McMaster is undertaken across all six of their Faculties and within their affiliated hospitals. Whether it's one of their institutes or centers, a lab or

a research facility, McMaster has more than 100 research units pursuing new opportunities in strategic areas where they have already made significant strides. Many of these research units are engaging with industry to move research out of the lab and into communities where it can change lives for the better.

CENTRE FOR ADDICTION AND MENTAL HEALTH RESEARCH ON INDIVIDUALS WITH MENTAL ILLNESS IDENTIFIES FRAIL PEOPLE AT RISK OF POOR OUTCOMES IN OLD AGE

Whether people have had a mental illness the first time in youth, adulthood, or late in life, their resiliency and ability to bounce back in late life is diminished. A depression anytime in one's life doubles the risk of Alzheimer's dementia, whereas with one late in life, this risk is quadrupled. People with schizophrenia have double the risk of developing dementia. Such an association seems to be true with other mental illnesses including bipolar disorder and traumatic-related illnesses. People living with mental illness are also at high risk of developing physical comorbidities related to their illnesses and the medications that they are exposed to, rendering them even more frail.

At CAMH, we are conducting studies that combine clinical, cognitive, genetic, imaging, and neurophysiologic approaches to better understand the trajectories and predictors of frailty in people with mental illness. In two related studies, we follow up patients with a diagnosis of bipolar disorder or schizophrenia, age 50 or above yearly until death, with comprehensive clinical, neurocognitive, neuroimaging, and peripheral biomarkers assessments. CAMH is developing innovative non-pharmacological interventions that combine neurostimulation, cognitive remediation, and rehabilitation approaches to prevent overall decline and dementia among these frail and high risk populations. We are leading the largest study in Canadian history to prevent Alzheimer's dementia in older patients with depression

or mild cognitive impairment (MCI). Called Preventing Alzheimer's Dementia with Cognitive Remediation and transcranial Direct Current Stimulation in Mild Cognitive Impairment and Depression (PACt-MD), this 5-site study will enroll 375 older patients with depression or MCI into classes that combines computerized cognition training with electrical stimulation over 5 years to prevent dementia.

CAMH is pioneering standardization of care for older patients with mental illness to ensure that the risk factors that increase frailty in these patients are addressed systematically. Such standardization ensures that the multiple physical, mental, and social impairments and conditions that older patients with mental illness experience are addressed comprehensively in a coordinated and efficient approach.

Given that 1 in 5 Canadians will experience a mental health or addiction problem in a year and that 15-50% of older persons with a mental health problem experienced their first episode late in life, understanding and preventing frailty in these high risk populations will have a tremendous impact on our society.