Over 5000 of the most brilliant minds from 70 countries gathered in Toronto during the Alzheimer Association International Conference this year presenting 1700 posters, 425 oral presentations and 90 sessions.
Lindsay Wallace, Alzheimer Society Research Program/Canadian Consortium on Neurodegeneration in Aging Doctoral Award recipient examines the relationship between biomarkers of Alzheimer’s disease and frailty in dementia. Her findings show that frailty is strongly related to biomarkers that appear later in the disease.

Selected Presentations and Posters at the Conference

Presentations on Accelerating the Development, Testing and Dissemination of Home Based Dementia Care Interventions:

Laura Gitlin of Johns Hopkins University School of Nursing emphasized how important it is to get in to the home of persons diagnosed with dementia early, as it is in the early stages when the greatest impact is possible in closing the excess disability gap. But, of course, what a person does and what they actually can do can be a gap at any stage which health care providers need to systematically assess and address.

Quincy Samus, of John Hopkins Medicine, reported on a comprehensive needs assessment tool to develop individual care plans. Not surprisingly, with a comprehensive care plan that includes care education, skills training and active care coordination, people receiving this intervention rather than usual care were able to stay at home longer. Their program, called “MIND at home”, is trying to describe in detail what “care coordination” really is in order to implement standardized approaches.

Helen Kales of the University of Michigan Health System reported on a clinical trial of a caregiver web based algorithm for behavioural and psychological symptoms of dementia. She and her team wanted to call it “Caregiver College” but caregivers hated the term, saying it was too intimidating (a good reminder to us all that sometimes our “great ideas“ aren’t so great!). Caregivers wanted information in a quick to access format - no big manuals- to choose the context of the behavioural and psychological symptoms of dementia and then the system suggests strategies that are tailored to their situation. The developers also try to train caregivers as they go along – e.g. show that pain can be expressed by behavioural and psychological symptoms of dementia. Caregivers can sign up to get “prescriptions” each day for themselves, such as a “prescription” to take some time out of the day to do something nice for themselves. They also can get daily tips in the form of a supportive message (like “remember to breathe”). Caregivers reported really liking these!

Chris Callahan of Indiana University talked about how people know what to do to stay well but generally don’t do what they need to do until a crisis comes along. For example, 20% of Americans still don’t use seatbelts and
only 1 out of 3 people who have hypertension have it well controlled. In order to change behaviour, we must solve a problem that a person has or may not know yet that they have. For example, think about placing our brochures in a Starbucks instead of just in pharmacies and other health care settings (most Americans live within a 5 mile radius of one). Chris made the argument that there is a lot of demand for coffee but not so much for geriatric tools until there is a crisis. What if the Alzheimer Society had a partnership with Starbucks where people got information with their coffee?

The biggest challenge, as we know, is Knowledge, Transfer and Exchange and dissemination of evidence based information. Perhaps we need to learn more about supply chain management.

During Monday’s plenary session, Dr Laura Baker of Wake Forest University Health Sciences talked about the relationship between exercise and memory decline. According to Dr Baker, the evidence about the benefits of exercise just keeps mounting. But it seems that aerobic exercise might even lower the risk of dementia in those with the highest genetic risk. It seems to actually be able to influence “gene expression”.

Dr Baker and her team studied adults with mild cognitive impairment who were sedentary at the outset and then enrolled them in an aerobic exercise program of 45 minutes per day, four days per week for 6 months. Most of the positive impact of this intervention was in the frontal area of the brain and thus influenced executive functioning.

In dementia, people with early stage dementia participated in the same routine and were shown to remain stable in their activities of daily living, their short term memory improved and their hippocampal volume increased.

But exercise studies vary considerably. For example, frail older adults who participated in light exercise studies have been found to improve their gait and reduce their frailty but not necessarily improve their cognition. Was the “dose” of exercise high enough? If the studies had been longer, would there have been different results? Trials need to be longer as it seems clear that “dose” matters. Dr Baker also recommended that harmonizing methods and outcomes is necessary so that research in this area is studying the same elements. Community programs need to be funded to provide this very specific evidence-based regime to members of the public since clinicians have nowhere to send their patients. Dr Baker is engaging the YMCA in trials and, if successful, will work to roll programs out across the USA via YMCAs.

Presentations on Innovative Programs and System Improvements:

Dr Sube Banerjee from the United Kingdom shone light on the fact that few health care providers have the skills needed to care for people with dementia. To build a better work force requires the rebalancing of our attitudes and the value we place on chronic disease management. Dr Banerjee described a program that links undergraduate students with clients in the community whereby they visit four times per year for two years. This program helps to open the students’ eyes to the challenges of being older and frail in the community and teaches students the skills of interacting with families and individuals as human beings rather than solely as health care providers. The program will be delivered to all undergraduate programs in the southeast part of England in the short term.
Presentations on Dementia Care Improvements:

Dr Henry Brodaty of Australia stepped in to talk about reducing the use of antipsychotics in long term care homes. He emphasized that health care providers are not the only ones nervous about doing this – families are also scared to ‘rock the boat’. However, most of the subjects studied started antipsychotics when they entered LTC and in a whopping 84% of those cases there was no consent documented!

In his study, 80% of those who came off antipsychotics remained de-prescribed with no re-emergence of symptoms. His finding includes that both families and staff need to be trained about behavioural and psychological symptoms of dementia and non pharmacological strategies as nurses are often the ones to ask doctors to give a resident/client a medication without any other strategies attempted.

Kathleen Hunter, an Edmonton-based researcher with whom Alzheimer Society of Canada has partnered in our tools to support a better emergency department visit (English: [http://www.alzheimer.ca/en/Living-with-dementia/Caring-for-someone/Hospital-visits](http://www.alzheimer.ca/en/Living-with-dementia/Caring-for-someone/Hospital-visits) and French: [http://www.alzheimer.ca/fr/Living-with-dementia/Caring-for-someone/Hospital-visits](http://www.alzheimer.ca/fr/Living-with-dementia/Caring-for-someone/Hospital-visits) ) put on her ‘other hat’ and presented on her work in incontinence. She challenged the typical staff belief that incontinence is an inevitable part of aging and decline, saying that staff can be trained in strategies to help individuals maintain their independence in this area longer.

Presentations on international perspectives on dementia and aging in indigenous populations:

Dr Kristen Jacklin from the Northern Ontario School of Medicine and well known to the Alzheimer Society shared her learning from research with indigenous peoples saying that colonization disrupted the supports for healthy aging including elder roles and access to healthy foods and activities. Dementia is often viewed as a situation where a person returns to the child role in a normal cycle of life; this helps indigenous people to know how to care for a person with dementia. Health care providers who truly respect and understand the indigenous culture help to foster trust and disclosure. When rural and remote communities without a family physician have a rotating doctor flown in, this does not help in building strong relationships. Dementia has recently joined the list of the diseases impacting indigenous populations and so the need for sensitivity and cultural training amongst health care providers has never been more urgent.

Leon Flicker from the University of Western Australia disclosed that Australia has the widest gap in life expectancy between Aboriginal and non –Aboriginal people in the world. However, the myths that pervade health care are not unique to Australia and create barriers to excellence in care. These include that indigenous people do not live long enough for dementia to develop and dementia in these populations is almost always alcohol related.

Presentations on the Journey of Dementia- caring and deciding:

Mary Schulz of the Alzheimer Society of Canada chaired this session that included Kathryn Lord from the United Kingdom. Kathryn shared the “Decide Study” that has created resources to help family caregivers make the very difficult decisions that they so often are faced with, such as deciding if and when to consider a move to long term care.
Kathy Hickman of the Alzheimer Society of Ontario presented a session entitled, “Empowering people with early stage dementia to live well through a dialogue education approach”. Kathy explained how Alzheimer Society of Ontario has applied this approach in facilitating learning series for caregivers, sharing the positive results that they have gathered to date.

Jordan Ali of British Columbia reported on “Mourning Me: An interpretive description of grief and identity loss in older adults with mild cognitive impairment”. They found that clinicians do not pay enough attention to the grief and loss that people with MCI may experience.

Andrea Ubell of the Alzheimer Society of York Region and Mary Schulz co-presented on “Dementia and Staff Grief”, shining light on the issues and sharing tips and strategies as outlined in the Alzheimer Society of Canada resource available at (English) http://www.alzheimer.ca/~/media/Files/national/For-HCP/staff_grief_e.pdf and (French) http://www.alzheimer.ca/~/media/Files/national/For-HCP/staff_grief_f.pdf

Kayla Regan of the University of Waterloo reported on Alzheimer Society of Ontario evaluation of the Minds in Motion® program as originated in British Columbia and now is being delivered in many sites across Ontario. The program outcomes include physical activity levels, mood and knowledge outcomes among people diagnosed with a dementia and their caregivers.

Debate: Should Biomarkers Ever Be Used for Clinical Care?

Larry Chambers, Scientific Advisor to the Alzheimer Society of Canada and former Society CEO, Mimi Lowi Young chaired this debate. Universal access to neuroimaging such as functional MRI, PET scanning, and CSF assays for persons with dementia is not possible unless they enrol in a clinical trial. The Alzheimer Association and the US Centers for Medicare & Medicaid Services (CMS) recently funded ($100 million) the Imaging Dementia—Evidence for Amyloid Scanning (IDEAS) study. The aim is to determine clinical usefulness on patient-oriented outcomes of a brain positron emission tomography (PET) scan that detects amyloid plaques, a core feature of Alzheimer’s disease. Third party payers need to know whether they should cover the cost of these biomarker technologies for use in routine clinical care. Biomarkers are sometimes referred to as ‘halfway technologies’ because biomarkers may prolong survival without curing the condition, possibly enabling individuals to survive into later stages of the condition. The debate provided a novel and entertaining approach about this controversial topic.

The debaters arguing biomarkers will be useful in clinical care were Michel Grignon (Hamilton) -- Centre for Health Economics and Policy Analysis and Howard Feldman (San Diego) – University of California. On the not useful for clinical care side were Martin Knapp (London UK) – London School of Economics and Political Science and Eric Larson (Seattle, Washington) – Group Health Research Institute. The majority of the 150 in attendance at the debate voted for biomarker use in clinical care before the debate and voted the same way at the end of the debate.
dementia, their caregivers, and the community at large.

The Canadian Consortium for Neurodegeneration in Aging presented this poster on Major Dementia Research Milestones in Canada.


Aynsley Moorehouse, Alzheimer Society of Toronto, presented her poster on “Moment by Moment: A Reflection on Art, Dementia Personhood and Love”
Researchers from Baycrest Sunnybrook Hospital and University of Toronto conducted a qualitative study to inform the design of a program to assist drivers and ex-drivers with dementia and their caregivers. The program focuses on issues related to driving cessation. The study reported in the poster showed the program components should include: driving and dementia education-awareness raising; Coping with loss and grief; Mobility support; Identity and meaning preservation; and, Adjustment to change.
The Geriatric Research Program at Toronto Rehab/University Health Network introduced a new palliative approach to care in 2012. Surveys of staff in 2013 and then again in 2015, revealed the palliative care working group obtained feedback from inter-professional teams and helped develop strategies. Ongoing discussions with families helped them with their goals of care and guidance with care issues benefited through partnerships with local ethics and local palliative care clinics.

The Alzheimer Society of Saskatchewan reported on its evaluation of the outreach component of its First Link Program.

Sharlene Webkamigad, Alzheimer Society Research Program /Canadian Consortium on Neurodegeneration in Aging/Canadian Network on Frailty Masters Award recipient, reported how health promotion materials about dementia can meet needs of Indigenous people and their caregivers in Sudbury, Ontario. Results were shared using a tree as a symbol which reflected the following:
1. Seeds: Community members can share information through group sessions.

2. Branches: Educate based on visual traditions and knowledge sharing.

3. Trunk: Develop connection through offering and storytelling.

4. Roots: Make it meaningful by offering education and awareness of indigenous history.

Wendy Schettler, CEO, Alzheimer Society of Manitoba, and chair, Alzheimer Society First Link Task Force, reported on the first pan-Canadian evaluation of operation First Link programs in Society offices. Findings showed high adherence to Program standards and that a common measurement system would help improve ability to collect data and to improve evaluations of the program.

Jim Mann, person diagnosed with dementia, Joanne Bracken, CEO and Saskachewan, and Joanne Michael, Director of Education and Support Services presented an Ethical Framework which guides Alzheimer Society staff on how to adhere to the principle: “nothing about us without us” when providing care to persons with dementia and their caregivers.
Mary Schulz and Sylvia Davidson present on Intimacy, Sexuality and Dementia: The Last Taboo. This poster includes an approach to supporting and enabling sexual expression among persons living with dementia.

Kathy Hickman, Alzheimer Society of Ontario, presented findings on the importance of putting Dialogue Education principles into action.
Jacqueline Pettersen presented her study on Cerebral Autosomal-Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy. This is a hereditary stroke disorder which can be exacerbated by hypotension. Further studies are needed to assess contributing factors to this disease.

David Munoz presented his team’s poster on the Impact of Hypertension on Delusion in Patients with Severe AD. Results of this study found no significant associations between vascular pathologies and cognitive or functional status in this group of patients.

Alzheimer Society Research Program recipient Frederic Calon presented findings from his study showing brain markers associated with symptoms of early Alzheimer’s disease which point to the need for further investigations of their role in Alzheimer’s disease pathogenesis.
At the Conference’s “Canadian Pavilion”, the Honourable Art Eggleton, Government of Canada Senator for Ontario, visits with Debbie Benczkowski, Alzheimer Society of Canada; Jim Mann, person with dementia from British Columbia; and Lynn Beattie, University of British Columbia and member of the Board of the Alzheimer Society of Canada.

Listening to Honourable Dipika Damerla, Ontario Minister Responsible for Seniors Affairs, speaking to Conference attendees at the Canadian Pavilion.
Early Career Researcher Reception

A networking event for junior and new investigators co-hosted by various partners including the Alzheimer Society of Canada.

Tips offered to new investigators and junior researchers during the early career researcher reception:

1. Have humility to accept I will make mistakes.
2. I can’t succeed by myself
3. Have the humility to recognize that science is greater than me.

Heather Snyder, Director, Medical & Scientific Relations, Alzheimer’s Association, United States

Keynote speaker Jose Abisambra, Sanders-Brown Centre on Aging, College of Medicine, University of Kentucky

Networking with investigators and funding agencies at the Early Career Reception, with

Nalini Sen, Alzheimer Society of Canada;
Amanda Duncan, Canadian Consortium on Neruodegeneration in Aging; Alzheimer Society Research Program Postdoc Trainee, Amanpreet Badhwar, University of Toronto; Jaqueline Patterson, University of British Columbia

Nalini, Amanda and Alzheimer Society Research Program Postdoc Trainee, Pradeep Reddy Ramana, Simon Fraser University
The Alzheimer Society organized an exquisite art Exhibit created by people living with dementia, care partners and researchers, presented during the AAIC 2016. The exhibit was sponsored in part by Revera and the Canadian Consortium on Neurodegeneration in Aging.
Japanese study shows that a higher bean intake may be a protective factor against cognitive decline among elderly Japanese women.

ASRP/CCNA postdoctoral fellow, Amir Sepehry presents on findings from a case-series of patients with Obsessive Compulsive Disorder (OCD), prior to FTD, which show abnormal brain imaging in terms of atrophy and hypo function. Future studies are needed to report on the magnitude of atrophy change over time.
ASRP funded research presents findings that cardiovascular burden affects hippocampal connectivity and reactivity in different brain regions.

Reception for Canadian Researchers and International Partners:
Alex Mihailidis, AGE-WELL; Michael Borrie, CSR, Anthony Lombardo, CAG; Parminder Raina, CLSA; Susan Kirkland, CLSA; Anthony Phillips, CIHR INMHA; Yves Joanette, CIHR IA; Debbie Benczkowski, ASC; Tom Mikkelsen, OBI.
Researchers from UofT share findings that both older adults and cerebral small vessel disease groups recruited salience, motor and posterior working memory regions more than the healthy younger adults. Further understanding of effects of white matter hyperintensities and reaction times is required through quantification of white matter lesions.
Join Us in London

A Global Forum to Advance Dementia Science.