

# GERONTO-McGILL

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## “WHAT DO YOU EXPECT? YOU'RE JUST GETTING OLDER”: HOW OUR ATTITUDES ABOUT AGING CAN HAVE A POSITIVE IMPACT ON OUR QUALITY OF LIFE

by Elaine Waddington Lamont

How do attitudes about aging influence diseases like osteoarthritis? This is one of the questions addressed in a recent article by Monique Gignac, Aileen Davis, Gillian Hawker, James Wright, Nizar Mahomed, Paul Fortin, and Elizabeth Badley in the journal *Arthritis & Rheumatism*. They used focus groups, a research tool widely used in the business world. It is a small group of people talking about particular issues in a structured way. Subjects in the control condition talked about the effect of general age-related health changes on their health, their quality of life, what

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## INNOVATING ELDER CARE THROUGH RESEARCH

*An interview with Dr. Jane McCusker, St. Mary's Hospital and Department of Epidemiology, Biostatistics and Occupational Health, McGill University*

by Daniel Auld

Dr. Jane McCusker, who leads the Department of Clinical Epidemiology and Community Studies at St. Mary's Hospital, is passionate about helping Montreal's older adults. Her desire to help people drives her research, which focuses on improving the quality of life for aged people in and out of the hospital.



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## POLICY AND POLITICS 'SNOW BIRDS' FLYING SOUTH FOR FASTER HEALTH CARE

by Tania Elaine Schramek

The term 'Snow Birds' is typically used to describe Canadians that flee the chills of the Canadian winter to head down to the warm, sun-filled days of the coastal cities of Florida. Here, however, we refer to those Canadians who will be heading even further south to have surgeries that they would likely have to wait several months to have in Quebec because of long waiting lists.

So, where are these 'Snow Birds' going? To the warm shores of Cuba. This Caribbean island has long been welcoming Canadian tourists to its many resorts and holiday retreats. But anyone who has ever

been to Cuba can likely attest to the fact that life outside the hotel districts is anything but easy. The fall of the Soviet Union in the early 1990's and the US embargo on Cuban trade have left the country in dire straights with tourism being the country's most important and lucrative industry. Adding health tourism to this will presumably help Cuba in its desperate quest for foreign currency.

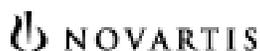
### A new budding industry?

Some of Cuba's top doctors were recently in Canada finalizing plans to bring Canadian

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**An interview with Dr. Jane McCusker, St. Mary's Hospital and Department of Epidemiology, Biostatistics and Occupational Health, McGill University**

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Originally trained as a medical doctor at McGill, she then went on to complete a doctoral degree in Public Health from Columbia University. After holding various positions at several institutions, Dr. McCusker returned to McGill in 1993, where she joined the Department of Epidemiology and St. Mary's Hospital. It was at this point that she shifted her focus to the special needs of the older adult.

In general terms, Dr. McCusker's research focuses on improving health care services for the older population. Specifically, she is most interested in their special needs in the Emergency Room (ER) setting, as well as in certain mental health issues, such as depression and delirium.

In the ER initiative, Dr. McCusker's research addresses the problem that there is generally poor follow-up care provided to older patients. Accordingly, particularly vulnerable older individuals, such as those who have a poor support network, are more likely to return to the ER and to suffer a decline in functional independence. This relates to the fact that the issues leading to their ER admission tend not to be fully addressed by the treatments provided. In short, the ER does not address the big picture by following patients after their discharge.

Dr. McCusker believes that if at-risk individuals can be identified during their visit to the ER, they could then be singled out for special attention by medical professionals and social workers. Something as simple as a telephone call to the local CLSC or family physician could be a very useful step. Ultimately, this kind of initiative should improve the quality of life and reduce future ER visits of at-risk individuals by more appropriate care. Taking steps in this direction, Dr. McCusker has designed and validated a screening tool (comprised of a

questionnaire) that identifies older people in the ER who are most at risk. A randomized trial to test a 2-step intervention, in which a nurse assessed high risk patients and made recommendations for treatment and follow-up, significantly reduced subsequent functional decline.

Some hospitals in Montreal and beyond are already utilizing similar strategies. In fact, there is a larger trend for staff to be educated in elder care issues. As part of this movement, Dr. McCusker recently organized a special session focusing on elder care at an international meeting of Emergency Medicine that was held in Montreal in 2005. She hopes that the increased appreciation of issues pertaining to ER care will result in better care, fewer ER visits and improved quality of life for at-risk older adults.

Dr. McCusker has similar ambitions for certain mental health issues. Take, for instance, delirium, which is an acute state of confusion and disorientation that affects some older adults in the hospital. Factors prompting delirium can include surgery, injury, blood loss, infections, and medications. The delirium is quite disturbing to the individual and their loved ones. Dr. McCusker assisted a colleague at St. Mary's Hospital, Dr. Martin Cole, who had hoped that an intervention by a psychiatrist or geriatrician working with a geriatric nurse would identify and hopefully rectify the cause of the delirium, and would improve outcomes for these patients. Unfortunately, both delirium and maintenance of independence were not improved by the intervention versus standard care. In the face of this set-back, Dr. McCusker has shifted her focus to the nursing home, where there is a high occurrence of delirium. In this setting, her research will focus on precisely identifying factors that contribute to delirium. With this fine-tuned knowledge

in hand, her next step will be to specifically design interventions that will address the identified risk factors.

Dr. McCusker is also addressing another major mental health problem facing some older adults, namely depression. Once depressed elders were identified in the hospital, they were visited by a psychiatrist or geriatrician who made care recommendations to their family physician. These recommendations included advice on medication and involved a nurse liaison. The biggest barrier to the success of the program turned out to be non-compliance on the part of the patients and/or family physicians. Simply put, they did not very often follow the treatment recommendations. Nevertheless, Dr. McCusker feels that success could be had if follow-up with the patient and with the family physician were greater.

To begin testing this, she has run a small-scale pilot study to test her hypothesis. In this scheme, once identified and consulted by a geriatrician or psychiatrist (who would again make treatment recommendations to the family physician) a paramedical professional subsequently visited the patient, their care-givers and their family physician to help improve the continuity of care. Notably, the patient was educated in identification of the signs of depression and the family physician's treatment was monitored. Much of this follow-up could be done by telephone, making it easier and more economical to complete, thus increasing the chances that the research program will be widely implemented, if it proves to be successful. Right now, Dr. McCusker has planned a large study to definitively test her intervention. It is planned to take place at several family

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## 'SNOW BIRDS' FLYING SOUTH FOR FASTER HEALTH CARE

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patients south. Interestingly, a company by the name of Health Services International charges clients a 200\$ fee to send their medical records to Cuba for an evaluation by Cuban doctors. Three days later, the patient will get a response telling them whether or not the Cuban doctors deem the surgery necessary. This same company will help the patient arrange to fly to Cuba to undergo the procedure, which can be performed as early as two weeks after the initial evaluation.

So why are Canadians entrusting important health matters to what most consider a third-world country? The answer is two-fold. First, despite difficult living conditions and a struggling economy, the Cuban health care system is very well-considered internationally. This is partly due to the fact that while the Soviet Union was footing the bill, the Cuban National Health Care system developed into one that was envied by many, including North America, with state of the art equipment and top-notch training. Despite the considerable decrease in cash-flow since then, the Cuban health care system remains a top priority in the Castro government and as such continues to receive substantial funding.

Second and most importantly, many Canadians are tired of waiting to undergo surgery here, where in some cases the wait can be up to a year long.

### Who's the target market?

For the most part, the target market will consist of 50+ adults owing to the nature of the surgeries being offered. The Cuban government provides easy access to hip replacements and eye surgery (cataract surgery in particular). Although younger adults do at times require such surgical procedures and are subject to the same waiting lists, older adults are arguably the most common recipients of these procedures. High-risk surgeries like heart

surgery will, for obvious reasons, not be offered.

Prices for these procedures are - in private medicine terms - very low. The average hip replacement costs between 5000-6000\$ and eye surgery will cost about 2000\$. According to Alexandre Rhéaume, a spokesperson for Health Services International, these prices represent half of what they would be in a private clinic here and one-tenth of what they would be in the Mayo Clinic in the US.

### Where does government stand?

When asked about this new service, Quebec's Health Minister (who also happens to be a surgeon), Philippe Couillard stated that "Personally I would never do this, I would never go abroad to have surgery from a doctor that I would never see or see with a lot of difficulty afterwards. It's extremely imprudent to do this".

Clearly the Health Minister does not support this endeavour. However, it is difficult to reconcile his view on the matter with the very policies developed by the Canadian and Quebec governments relating to wait time guarantees in our health care system. Specifically, in order to address the problem of long waiting lists, the government has promised that if one has to wait for longer than 6 months for hip replacement or cataract surgery, the government will pay for the procedure in a private clinic. Were these private services not available locally, then the government would foot the bill to have the patient flown (out of city, province, or country) to have the surgery. Wherein lays the difference?

In all fairness to the Minister however, government sanctioned and supported surgeries abroad would likely result in easier post-operative follow-up care within the local health care system and easier communication in the event of complications than would privately obtained surgery in Cuba.

This raises another interesting question and a potential international topic for debate. What would happen if something went wrong during surgery in Cuba? What if malpractice occurred? What type of recourse would one have? The unfortunate answer to that all of these questions is: we don't know. On this matter, Health Services International states that customers could simply seek the help of physicians in the Canadian health care system.

Interestingly, international law relating to medicine does not even exist as such so this would be completely uncharted territory on the international front. Were something like this to occur, this would indeed be a difficult fight for an older adult who simply wanted a new hip within a reasonable time delay.

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### Health Care in Cuba

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Pindera, L. (2006) *Winds of Change: Quebec's proposed wait time guarantees*. *CMAJ* April 11, 2006; 174 (8).

### Official Policy Document Health Canada

#### Wait time guarantee

<http://www.fin.gc.ca/budget06/bp/bpc3ee.htm>

## “WHAT DO YOU EXPECT? YOU'RE JUST GETTING OLDER”: HOW OUR ATTITUDES ABOUT AGING CAN HAVE A POSITIVE IMPACT ON OUR QUALITY OF LIFE

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they have done about age-related health changes, the effect of these changes on their future, and on their relationships. Subjects in the osteoarthritis groups were asked these same 5 questions, but instead of general age-related health changes, they were asked specifically about their osteoarthritis. Unsurprisingly, subjects in the osteoarthritis groups reported a lot of pain and stiffness. What was a surprise was that older osteoarthritis sufferers have an easier time with their illness than younger sufferers. Older subjects tended to minimize their symptoms, saying they were just part of aging. In contrast, younger sufferers were more frustrated

by their symptoms. They received less sympathy from family members and even from doctors who reportedly said things like “What do you expect? You’re just getting older.” Older subjects felt that slowing down and choosing less athletic activities was more related to maturity and gradual changes in their interests, whereas younger osteoarthritis sufferers were less willing to give up an active lifestyle. This study highlights the importance of a positive attitude in dealing with both normal aging and disease, but it also shows how valuable focus groups can be for pointing to future directions for research on aging.

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## ARE YOUNG ADULTS AND OLDER ADULTS THAT DIFFERENT? LESSONS FROM NEUROANATOMY

by Tania Elaine Schramek

From the looks of it, many things decline with age: attention, speed, memory, and even the size of the brain. In fact, “age-related decline” is one of the most frequently used expressions in research articles comparing young and older adults, regardless of the topic. A new study, however, may just have thrown a monkey wrench into this widely accepted notion.

Numerous studies have found that the size of a brain structure called the hippocampus (HCP) appears to get smaller with age. This atrophy is often attributed to pathological processes inherent to aging. Importantly, this decline in HCP volume, when it occurs, does not happen at the same rate in everyone. What this translates to when trying to find the average HCP size is considerable variability. In statistical

terms, in the older population, there is a wider range of scores that come together to comprise the average (e.g. small variability: 3, 3, 2.5, 3 = average of 2.8 versus large variability: 1, 5, 4, 1.2 = average of 2.8).

A Montreal-based team of researchers compared the average size of the HCP of adults between the ages of 18 to 85. They expected to find that younger adults would have less variability around their group average than older adults because age-related decline is not yet part of the equation. Interestingly, they found that the range of scores comprising the group averages was NOT different in young and older adults. In addition, they showed that 25% of young adults had a HCP as small as the average of adults between 60 to 75 years of age.

What this suggests is that the ‘smaller’ HCP observed in older adults that was attributed to the aging process could instead simply be the HCP size that these older adults have had over the course of their life and not necessarily one that has declined with age. So, young and older adults may not be as different as we might have thought, at least neuroanatomically anyway.

### Source:

S.J. Lupien, A. Evans, C. Lord, J. Miles, M. Pruessner, B. Pike and J.C. Pruessner (2007). *Hippocampal volume is as variable in young as in older adults: Implications for the notion of hippocampal atrophy in humans. NeuroImage 34, Issue 2, 479-485.*

## VON ECONOMO NEURONS AND FRONTOTEMPORAL DEMENTIA: LINKING DYING NEURONS WITH EMOTIONAL AND SOCIAL PROBLEMS

by Daniel Auld

Have you ever heard of von Economo neurons? Probably not and that is not surprising. In fact, in the animal kingdom, these brain cells are actually quite rare. They have only ever been identified in mammals that have highly complex social and emotional interactions, namely the great apes, whales and humans. von Economo neurons are found in an area of the brain called the frontal lobe and they are specifically located in the anterior cingulate cortex and the fronto-insula. Not coincidentally, these areas have been found to be important for cognition, emotion and social behaviour. This has led to speculation that von Economo neurons may contribute to the ability of humans and a few other species to exist in complex social groups. Interestingly, researchers at the University of California at San Francisco and the California Institute of Technology have made a fascinating discovery, one that forces us to consider that our most precious social interactions have their root in these small cells that extend their connections through the frontal lobe. They found that von Economo neurons are devastated in frontotemporal dementia, which is a common form of dementia that is characterized by a failure of social and emotional awareness and is distinct from Alzheimer's disease. In this neurodegenerative disease, over 75% of these neurons are completely lost and the remaining 25% are damaged and abnormal. The authors hypothesize that the presence of von Economo neurons in humans seems to have given us a particular vulnerability to this specific type of dementia. Importantly, the identification of the selective vulnerability of von Economo neurons in frontotemporal dementia gives scientists a new avenue to explore in order to understand this disease. Hopefully, this knowledge can ultimately be used to help identify new treatments.

*W. Seeley et al. (2006) Early Frontotemporal Dementia Targets. Neurons Unique to Apes and Humans Annals of Neurology 60:660-667*

*An interview with Dr. Jane McCusker, St. Mary's Hospital and Department of Epidemiology, Biostatistics and Occupational Health, McGill University*

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practice settings across Canada, and she hopes to receive funding to push this project forward.

As is clear, Dr. McCusker's research is very practical and is focused on getting real results that will be important for individuals suffering from problems that are significant for the aging population. Her practical approach is also evident in the way that she advances her work based on lessons learned from less successful studies. Broadly stated Dr. McCusker's goal is essentially this: to find a better way to focus the resources that exist within the health care system on certain health problems that plague older adults in the most effective fashion possible. In doing so, she believes that not only will the health and quality of life of many older adults be improved, but the strain on the health care system will be reduced. Geronto-McGill wishes her all the success in the world.

## SCIENCE HERE AND NOW

### WALKING WHILE THINKING: THE MULTIPLE TASKS OF DR. KAREN LI

by Elaine Waddington Lamont

Picture a lovely hike in the woods with friends. When the going is easy, conversation is lively, but as the terrain gets a little more difficult, conversation wanes until you are back on level ground. If there are older people in the group, will they talk less than the younger members of the group in order to concentrate on walking? This is an example that

Dr. Karen Li uses to describe her interest in multiple task performance in adulthood and aging. Dr. Li is an Associate Professor with the Department of Psychology, Concordia University, and Associate Director of the Centre for Research in Human Development (CRDH). She received her Ph.D. from the University of Toronto in 1996. She then worked as a postdoctoral fellow at Duke University and at the Max Planck Institute for Human Development in Berlin before joining Concordia University in 2000. She describes her research this way: “My general research interest concerns the cognitive and attentional processes involved in multiple-task performance in adulthood and aging. An important theme in my research is to understand the adaptive strategies that older adults develop in response to gradual declines in cognitive and sensorimotor abilities”<sup>1</sup>.

Part of Dr. Li’s work concerns the way that people perform cognitive and motor tasks as they age. An example of this is a study that examined walking while memorizing, published in the journal *Psychological Science*<sup>2</sup>. Both older and younger subjects were given the dual task of walking a track while trying to memorize a list of 16 words. One or both tasks could be made more difficult (walking task-obstacles; memory task-less time to memorize words). She found that with older people, the memorization task suffered when walking was made more difficult. For young people, increasing the difficulty of walking had no effect on memorization. Walking was not affected by increasing the difficulty of the memory task for both older and younger adults. When both tasks were made more difficult, younger subjects made effective use of a memory aid (increased time), while older adults made effective use of a handrail to improve walking performance. “In old age, walking and maintaining balance are

prioritized at the expense of memory performance”<sup>2</sup>. Dr. Li suggests that older people put their focus on the walking domain because this is more important to them, but whether this is a deliberate strategy or a result of the task is open to further study. This could be useful information in the design of assistive devices for ageing people. It is important to do a cost-benefit analysis to assess whether they will actually use the device, and not simply whether they can use the device.

Dr. Li, along with collaborator Dr. Virginia Penhune, recently received funding from the Canadian Foundation for Innovation to establish the Laboratory for Motor and Cognitive Performance Across the Life Span, at Concordia’s Loyola Campus. The lab is equipped with a series of cameras that can map changes in the position of muscles and joints during a movement. Dr. Li hopes by studying the interaction of cognitive and motor tasks, she will help adults to live independently in their homes for as long as possible<sup>3</sup>.

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