

## GUEST EDITORIAL

# Pathway to prevention: great progress has been made but we are not yet there

In September 2009, Montreal, Quebec hosted the International Psychogeriatric Association's 14th International Congress, in collaboration with the American Association for Geriatric Psychiatry, the Canadian Academy of Geriatric Psychiatry, the Canadian Coalition for Seniors' Mental Health, the Canadian Geriatrics Society, and the Société Québécoise de Psychogériatrie. The theme of the Congress was the "Pathway to Prevention", and the presentations focused on progress made to date on the prevention of late-life mental disorders, barriers the field is still facing, and future achievements that will be needed for this goal to be achieved.

Presentations pertaining to dementia included plenary sessions on preventing behavioral disturbances in dementia, preventing caregiver burnout in dementia, and preventing dementia itself. A wide range of other dementia-related symposia took place addressing topics such as the spectrum from subjective cognitive impairment to dementia, preventing antipsychotic adverse events, automobile collisions in dementia, and preventing delirium. Strategies discussed went beyond medication to include lifestyle and psychosocial interventions, systems and living situations.

Presentations pertaining to depression included two plenary sessions addressing whether depression and suicide can be prevented in late life, while a series of symposia discussed the neurobiology and cognitive impairment of late-life depression, the management of treatment resistant or psychotic depression in the elderly, and the evidence supporting the use of psychotherapy and electroconvulsive therapy in preventing relapse.

A great deal of optimism was expressed by the presenters and attendees, but it was also mixed with a degree of caution in interpreting results. Overall, there was a sense of being at the beginning of a new era in geriatric psychiatry in which prevention is becoming an increasing focus. At the conference, the guest editors met with Professor David Ames, Editor-in-Chief of *International Psychogeriatrics*, in order to plan for a thematic issue of the Journal that would highlight some of the ideas presented at the Congress. Shortly after the meeting in Montreal, a request was sent out to speakers inviting them to submit a paper on the topic of their presentation which would undergo peer review for consideration

for publication in the Journal. We received many submissions, the best of which were accepted for publication in this edition.

Dr. Eric Larson's selective review, "Prospects for delaying the rising tide of worldwide, late-life dementias," begins with a historical overview of how we got to where we are now on the path to prevention of dementia, highlighting the transition away from the normative view of age-associated cognitive decline, and trends towards increasing detection of dementia, and recognition of vascular and environmental risk factors. He reviews the association among dementia, vascular risk factors, education, occupation, social networks, and physical and mental activity, using the effects of these factors on brain plasticity as a link. Describing decreasing rates of age-associated cognitive decline in the U.S.A., he emphasizes the tangible benefits of the more realistic goal of delaying the onset of dementia.

Dr. Larson comments on the paucity of published studies conducted in non-Western countries. Note that 12 of the 13 studies included in a recent review of longitudinal studies focusing on dementia were conducted in Europe or North America. By contrast, one of the strengths of the Congress was its international representation, and the inclusion of data from developing and emerging countries. In their paper, Dr. Scazufca *et al.* present a new cross-sectional analysis of the Sao Paulo Ageing and Health Study that demonstrates staggeringly high rates of three of the risk factors for dementia described at the Congress and in Dr. Larson's review. Of the 2,003 participants, about a third were illiterate, and about half had non-skilled occupations. Furthermore, about a third fell below the low income threshold of U.S.\$85.00 per month. As expected, dementia was associated with greater age, illiteracy, non-skilled occupations, and low income. Using a mathematical model assuming that each factor "caused" dementia, and adjusting for age and gender, the authors estimated that approximately half of dementia cases in this Brazilian population were attributable to these three modifiable risk factors. The authors acknowledge the important limitations of a cross-sectional design when hypothesizing causality, and the lack of control for

potential mediating factors such as smoking and diet. They emphasize that Brazil is taking steps to improve literacy and occupational competence in its youth, to address the unacceptable social factors leading to increased risk of dementia and other diseases. At the same time, they acknowledge that these initiatives will not have meaningful effects on the current elderly or middle-aged cohorts.

At the Congress, Dr. Lutz Frolich from Mannheim University in Heidelberg, Germany reviewed the epidemiological studies of dementia risk factors. He summarized evidence pertaining to these risk factors and concluded that there was moderate to strong evidence for detrimental effects of midlife hypertension and hypercholesterolemia, moderate evidence for harmful effects of midlife diabetes and obesity, moderately high evidence for protective effects of physical and psychosocial activity in midlife, and moderate evidence for the protective effects of cognitive activity and education. However, he cautioned that inconsistencies in definitions of exposures, diagnoses and outcomes, and failure to account adequately for confounders or attrition limit the validity and generalizability of many epidemiological studies.

At the Congress, both Dr. Frolich and Dr. Mary Sano, from Mt Sinai Hospital in New York, outlined difficulties with the design of randomized prevention trials in dementia, including short duration of trials, deciding on appropriate targets and outcomes, difficulties with adherence to the protocols, and ethical challenges. Still, large-scale epidemiological studies conducted to date are allowing guarded optimism about the potential of delaying dementia by improving education, literacy, physical activity, and cardiovascular factors. Unfortunately, we are not quite half-way down the path, given what Dr. Larson called at the Congress the humbling “promising leads and dashed hopes” of clinical trials of antioxidants, NSAIDs, Ginkgo biloba, and cholinesterase inhibitors for the prevention of dementia.

In his paper “Preventing late-life depression: a clinical update”, Dr Robert Baldwin reviews the published studies of primary prevention of geriatric depression published over the past decade. He concludes that selective prevention with antidepressant medications or problem-solving therapy can be effective in older patients at risk for depression, e.g. those with macular degeneration or following a stroke. It also appears promising among family caregivers of those with dementia. Similarly indicated prevention in those with subthreshold depression appears possible with one small positive study completed and two larger studies ongoing. By contrast, there is no evidence yet to support universal prevention of depression at the population

level despite the identification of general risk factors such as poor diet, vascular disease, or insomnia. Baldwin concludes that primary prevention of late-life depression is feasible and that we now need to embed it in a model of care (e.g. collaborative care) and convince potential funders to support these interventions based on economic data. These conclusions are congruent with presentations at the Congress, which concluded that there is no role currently for universal screening or prevention for geriatric depression but there is a role for health promotion, health policy and societal changes that could reduce risk factors for depression in the general population. Presenters highlighted the feasibility of selected and indicated prevention and the need to explore further the future role of technology in these primary prevention strategies.

In their paper, Dr Karen Rose and her collaborators report on an analysis of readiness to engage in self-management strategies (i.e. behavioral and environmental changes) that reduce functional disability and prevent further decline among community-dwelling elderly aged 70 years and over who presented with functional difficulties. They assessed variables that predict readiness at study entry and over six months. They found that depression at baseline was associated with readiness to participate at the start of the intervention, with 59% of participants in the precontemplation/contemplation stage of readiness being depressed, 41% of those in the preparation stage, and 27% of those in the action/maintenance stage. An obvious interpretation of this cross-sectional association is that depression decreases willingness to engage and participate in an intervention targeting functional disability. However, there was no association between baseline depression and likelihood to move from a pre-action stage to the action/maintenance stage over the following six months. Thus, these results suggest that preparing for, or being engaged in, behavioral and environmental changes may prevent depression. This alternative interpretation is supported by a higher sense of control at baseline in those in the preparation and action stages than in those in the contemplation stage of readiness.

Finally, Roy Sriwattanakomen and collaborators compare known risk factors for depression in older white and black participants with subsyndromal depression who were enrolled in a study of indicated prevention. Black participants had higher levels or frequencies for 8 of the 16 risk factors: lower median income and years of education; worse cognitive status and executive function; and higher rates of living alone, functional disability, obesity, and past history substance abuse. The authors comment

that the higher prevalence and overall greater mean number of risk factors should place black people at higher risk for depression than white people. It will be important to see whether the intervention (Problem Solving Therapy) has differential efficacy in preventing the onset of major depression in the two groups.

On the basis of the presentations at the Congress and these papers, one would conclude that our field is on the threshold of being able to prevent late-life mental disorders. This approach will help up to mitigate the increasing demands geriatric psychiatry will face with the significant aging of the world population. However, most clinicians have not been trained in this approach and financing mechanisms need to be put in place. As we begin to address these issues, we look forward to further advances in prevention strategies.

MARK RAPOPORT<sup>1</sup> AND BENOIT H. MULSANT<sup>2</sup>

<sup>1</sup>Associate Professor, Department of Psychiatry, University of Toronto, Canada and Staff Psychiatrist, Sunnybrook Health Sciences Center  
Email: mark.rapoport@sunnybrook.ca

<sup>2</sup>Physician in Chief, Center for Addiction and Mental Health, Toronto, Canada and Professor and Vice-Chair, Department of Psychiatry, University of Toronto, Canada  
Email: Benoit\_Mulsant@camh.net

## References

- Baldwin, R. C.** (2010). Preventing late-life depression: a clinical update. *International Psychogeriatrics*, 22, 1216–1224.
- Larson, E. B.** (2010). Prospects for delaying the rising tide of worldwide, late-life dementias. *International Psychogeriatrics*, 22, 1196–1202.
- Rose, K. C., Gitlin, L. N. and Dennis, M. P.** (2010). Readiness to use compensatory strategies among older adults with functional difficulties. *International Psychogeriatrics*, 22, 1225–1239.
- Sczufca, M., Almeida, O. P. and Menezes, P. R.** (2010). The role of literacy, occupation and income in dementia prevention: the São Paulo Ageing and Health Study (SPAH). *International Psychogeriatrics*, 22, 1209–1215.
- Sriwattanakomen, R. et al.** (2010). A comparison of the frequencies of risk factors for depression in older black and white participants in a study of indicated prevention. *International Psychogeriatrics*, 22, 1240–1247.