

## Canadian Academy of Geriatric Psychiatry 2013 Annual Scientific Meeting Abstracts

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### PLENARY SESSIONS

#### Implications of the DSM-5 for Diagnosis in Geriatric Psychiatry

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**Background/Discussion:** The DSM-5 was published in May 2013 after six years of literature reviews, input from experts, field trials, secondary data analyses, and public commentary. Changes were guided by clinical utility (e.g., decreasing diagnosis of over-inclusive diagnoses; drawing attention to under-recognized conditions; reducing stigma); research evidence; maintaining continuity with DSM-IV; and harmonization with ICD-11. The DSM-5 promotes a lifespan perspectives with chapters ordered based on when disorders manifest in life. Changes that impact older individuals include eliminating the 2-month wait before diagnosing a major depressive disorder following bereavement; listing hoarding disorder as a new disorder and persistent complex bereavement disorder as a condition requiring further study; classifying agoraphobia separately from panic disorder; and reorganizing the cognitive disorders, now called neurocognitive disorders (NCD). To decrease stigma, dementias and MCI are called major and mild NCD. Both are subtyped based on 13 probable or possible etiologies and associated with specifiers indicating behavioural disturbances (e.g., psychotic symptoms, mood disturbances, agitation, or apathy) and severity (i.e., functional dependence). The DSM-5 acknowledges that: boundaries between normal cognition, mild NCD, and major NCD are arbitrary; substantial decline in only one cognitive domain is needed to diagnose major NCD, making it broader than dementia; the importance of neuropsychological assessment; and the potential utility of biomarkers (e.g., genetics, neuroimaging).

#### Advances in Therapeutic Psychiatric Brain Stimulation Panel—Implications for the Field of Geriatric Psychiatry

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**Background:** Transcranial direct current stimulation (tDCS) has been investigated in psychiatry since the 1960s. The last ten years have seen a resurgence of interest in this modality as a potential treatment for depression. Recent data on the efficacy of the tDCS in depression will be presented and the implications for this treatment in late-life depression and cognitive impairment will be discussed. Electroconvulsive therapy (ECT) remains the most effective treatment for severe and refractory depression. Recent advances in parameters of ECT will be presented as a background to a newer form of convulsive therapy. Magnetic seizure therapy (MST) has been investigated in small studies as a potential alternative to ECT as there is a significantly better cognitive adverse effect profile. Data on the efficacy and cognitive adverse effect profile of MST will be presented from a series of older adults with depression.

### WORKSHOPS

#### Difficult Conversation: How to Disclose Dementia Diagnosis to Older Persons and their Family Caregivers

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**Goal:** The goal of this interactive solution-based workshop is to enhance knowledge, confidence, and skills of practitioners to better prepare for and manage the disclosure of a diagnosis of dementia to older persons and their family caregivers.

**Purpose:** The aim of this interactive workshop is to provide practical and evidence-based recommendations for a

person-centred, progressive, and comprehensive approach to dementia diagnosis disclosure to assist practitioners to adequately prepare and manage this critical encounter.

**Background:** Dementia is one of the most feared diagnoses by older adults, and the diagnostic process is one of the most fundamental elements in the experience of dementia. Many practitioners admit having difficulty disclosing a diagnosis of dementia, and identify communication about the diagnosis as one of the most difficult aspects of dementia care.

**Method and Results:** The disclosure of a diagnosis of dementia is an evolving and dynamic process, involving: a) pre-disclosure evaluation and preparation, b) timely, individualized, honest, and sensitive disclosure, and c) post-disclosure follow-up educational and supportive interventions. Practical tips will be provided to meet the two intertwined key needs of patients/caregivers at each step during this process: their information/educational needs and their emotional/support needs. These include recommendations to develop rapport, explore perceptions, help gain insight, maximize comprehension, respond to emotional reactions, and foster a sense of hope and meaning. There will be opportunity for the participants to: a) work on a case study; b) reflect on their practice; c) relate the content to their realities; d) exchange ideas and experiences; e) solve problems; f) develop communication strategies. Handouts and educational resources will be provided.

**Conclusion:** It is hoped that this approach will help practitioners better prepare for this encounter in order to optimize their patients'/caregivers' responses.

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### **The Role of Neuroimaging in Cognitive Disorders: a Review from the Fourth Canadian Consensus Conference on the Diagnosis and Treatment of Dementia (CCCDTD-4)**

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**Goal:** To provide a practical overview of the clinical and research utility of neuroimaging in cognitive disorders.

**Purpose:** This is an interactive workshop that provides an overview of the current evidence for the clinical and research utility of key neuroimaging modalities in patients with cognitive impairment in old age.

**Background:** Speakers in this workshop were among the neuroimaging expert group that reviewed and summarized

the evidence and made recommendations to the CCCDTD4 regarding the clinical and research utility of various neuroimaging modalities in cognitive disorders. This work was accepted for publication in two review papers which the audience can access for more details.

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### **An Algorithm to Guide Pharmacotherapy for Late-Life Depression**

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**Goals:** To optimize the outcomes of pharmacotherapy when treating older patients with late-life depression.

**Background:** Depression is the most prevalent treatable psychiatric disorder in late life. An increasing number of older persons are being treated for depression, and pharmacotherapy with antidepressants is the main modality used by psychiatrists and by family physicians. More than 70 placebo-controlled trials and meta-analyses of these trials support the efficacy of these medications guidelines based on this body of evidence have been published and disseminated. However, up to half of older depressed patients do not receive adequate pharmacotherapy and most do not benefit from it. In this workshop, the panelists will discuss the clinical relevance and applicability of the evidence supporting the benefits and the risks of antidepressant and other psychotropic medications in the treatment of late-life depression. They will also discuss the relative merits of a systematic (“algorithmic”) versus an individualized approach to the pharmacotherapy of late-life depression. The audience will be invited to participate in these discussions. At the conclusion of the workshop, participants will have improved their ability to optimize outcomes of pharmacotherapy when treating patients with late-life depression.

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### **CONCURRENT PAPER PRESENTATIONS**

#### **Medical Effects of Psychotropic Medications in Older Adults with Mood Disorders**

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**Goal:** To learn an evidence-based approach to the prevention and management of medical effects associated with psychotropic medication use in late-life mood disorders.

**Purpose:** In this session, we will review the available literature regarding medical effects of psychotropic medications commonly used in older adults with mood disorders. We will also present data from Canadian studies, including some of our own work in this area.

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### The Use of Artificial Intelligence in Detecting and Monitoring Falls in Geriatric Psychiatry Patients in Hospital—Development of a Proof of Concept Study

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**Goal:** To evaluate the advantage of artificial intelligence fall detection in conjunction with traditional clinical monitoring.

**Purpose:** This presentation will summarize risk event and falls data, and describe the role of artificial intelligence in detecting and monitoring falls in this population.

**Background:** Due to multiple intrinsic and extrinsic risk factors, patients in psychogeriatric hospitals are frequently at higher risk for falls. Regardless of whether or not an injury occurs, once a patient has experienced a fall, the care team, as well as the individual, fear recurring falls which then can lead to decreased activity and loss of strength and mobility, resulting in increased risk of falling and reduced quality of life.

**Methods:** The study goal was to evaluate the impact of the HELPER (Health Evaluation Logging and Personal Emergency Response) system in a tertiary-care psychiatric hospital in London, Ontario, Canada. Developed by Dr. Alex Mihailidis and collaborators at Toronto Rehabilitation Institute, HELPER (<http://tinyurl.com/falldetection>) is a ceiling-mounted artificially intelligent system that automatically detects if a person within the field-of-view has fallen. The system was set up at Regional Mental Health Care London in selected patient bedrooms geared to the care of older adults living with behavioural and psychological symptoms of dementia, and affective and psychotic disorders with complex medical polymorbidity. Data from falls as measured by the HELPER system were linked with existing clinical data (e.g., types of medications, information from the Resident Assessment Instrument including the aggression scale, the Fall Risk Assessment Tool, the corporate Patients' Safety Reporting System data). Focus group data were also collected to understand the impact of this new system on health-care providers.

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### How to Set Up a Geriatric Telepsychiatry Service

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**Goal:** To facilitate the ease of setting up a clinical geriatric psychiatry telemedicine service.

**Purpose:** This workshop is intended to be a practically oriented look at issues and considerations involved in setting up a geriatric psychiatry telemedicine service. It is aimed at anyone considering involvement on either side of the consultation process—specialists, family doctors, primary care staff, and those responsible for commissioning such services.

**Background:** Canada has many rural and remote communities where accessing specialist services is a major barrier to health-care provision. Telemedicine offers a solution to this by allowing such communities to have synchronous contact with specialists at a remote site, removing or reducing significantly the need for patient or specialist to travel. Recent literature has demonstrated the effectiveness and tolerability of such services to users and providers.

The workshop will use a didactic introduction and literature review, plus significant time in small group discussions of issues in the planning and operational stages of service development, with review and summary in the larger group. The evolution of the Waterloo-Wellington Geriatric Psychiatry clinic will be used as a framework to stimulate discussion.

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### Towards “Medical Aid in Dying” in Québec: a Selective Review of the Psychiatrist’s Role in Euthanasia and Assisted Suicide

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**Goals:** To selectively review international experience of psychiatrists with matters of euthanasia and physician-assisted suicide. To appreciate the challenges posed to psychiatrists by the possible legalization of “medical aid in dying” in Québec, and other recent legal developments in Canada.

**Purpose:** To selectively review international experience of psychiatrists with matters of physician-assisted suicide/euthanasia, and to appreciate challenges posed to psychiatrists by the discussed legalization of “medical aid in dying” in Québec.

**Background:** Euthanasia and physician-assisted suicide have been legalized or tolerated in a few jurisdictions over the past half-century. This impacts predominantly patients of geriatric age. The introduction of “medical aid in dying” legislation in Québec was discussed in a National Assembly Select Committee, which released its report in 2012. A bill implementing “medical aid in dying” was presented in June 2013 to the Québec National Assembly. The reports published in Québec recommend that psychiatrists be consulted to assess patients requesting “medical aid in dying” when competency is debated, or when the impact of mental illness or cognitive impairment on patients’ decision-making is unclear.

**Methods:** We selectively review international psychiatric experience with assessment of patients requesting assisted dying. We review challenges pertaining to the assessment of competency in this population. We also review ethical challenges these assessments pose to psychiatrists.

**Conclusion:** The involvement of psychiatrists in other jurisdictions has been rather limited. The proposed implementation of “medical aid in dying” will present challenging issues to psychiatrists, particularly in assessing competency in patients requesting assisted dying.

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### Teleconsultation for Behavioural and Psychological Symptoms of Dementia

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**Goals:** Improve knowledge about teleconsultation programs for BPSD in order to stimulate implantation of that kind of service in Canada and increase accessibility to experts in this domain.

**Background:** In 2011, it was estimated that about half a million Canadians were suffering from dementia, about 60% of Alzheimer’s disease. Behavioural and psychological symptoms of dementia (BPSD) are highly prevalent, to the point that about 80–97% of patients with dementia will present some kind of BPSD in their evolution. However, patients and families are still confronted with difficulties to access expert’s opinions and services. Caregivers have a lack of education in this field and are often not skilled to intervene appropriately when BPSD arise. This situation is associated with suboptimal care and overuse of medication, mostly antipsychotics, even though the risks linked to this medication are well known. Numerous studies indicate the feasibility of assessing the elderly people’s cognition via teleconsultation and establish the efficacy of teleconsultation on behaviour of patients with BPSD.

**Methods:** With this in mind, the BPSD team at Institut Universitaire de gériatrie de Montréal (IUGM) developed a program of telepsychogeriatrics (teleformation and teleconsultation) for BPSD with two partners located in distant areas of the province of Québec. We will describe the operating procedures and some results.

**Conclusion:** This kind of program is efficient in educating caregivers about BPSD and in increasing quality of care for these patients. We believe that it is easily transferable to other partners, and is an easy way to increase accessibility to expert opinion in the evaluation and management of BPSD.

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### Implications for Resources and Expertise Resulting from an Examination of Patterns of Referral, Diagnostic, and Treatment Issues in the Over-Ninety Age Group Presenting to Senior’s Mental Health in Thunder Bay: Are these Patterns Representative of the Provincial Experience and Are We Prepared? Can We do More?

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**Goal:** To present four years of data collected from 2009 to 2013 on patients over ninety years of age who presented to Senior’s Mental Health in Thunder Bay. The patients come from seven different points of referral, have the full spectrum of psychiatric diagnoses, and may be growing faster than other age groups heralding a greater need for geriatric services not previously seen.

**Background:** The North West LIHN is Ontario’s largest LIHN geographically, covering 45% of Ontario’s land mass and home to a quarter of a million inhabitants, many living on remote reserves north of the largest city, Thunder Bay (population 120,000). The North West LIHN projections for people over the age of sixty-five in 2010 were 35,000 individuals, of whom 1600 were over ninety. Data exist on the numbers that presented to Senior’s Psychiatry, point of referral, and diagnosis from the 2009 to 2013.

**Methods:** We wish to present information comparing the general rise (i.e., over sixty-five) in referral rates to the specific rise in the over-ninety-years-of-age group and explore the future implications in terms of resources and expertise issues. Furthermore, we wish to explore the range and categories of diagnoses across the over-ninety age group of presenting seniors in that same four-year span. By 2030, the number of individuals over ninety will almost double in North Western Ontario LIHN. We are particularly interested in determining if the percentage of presenting patients over ninety will remain the same or stabilize at some percentage, and the impact

and demands on Senior's Mental Health. What is unknown is what other LIHNs are experiencing in terms of the oldest of the old and the wider view of this as an emerging concept on its own. In addition, it is increasingly apparent that there is considerable risk in providing pharmacological treatment to this group, even in the absence of dementia.

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### **The Primary Care—Dementia Assessment and Treatment Algorithm (PC-DATA): a Dementia Knowledge Translation Project in Primary Care**

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**Goal:** To disseminate recent findings from a novel study examining knowledge translation of dementia best practices in a primary care setting.

**Background:** Alzheimer's disease (AD) and related forms of dementia are common in primary care settings. The quality of care (QoC) provided by primary care providers (PCP) to older adults with AD could be improved through adherence to best practices identified in dementia guidelines. This project evaluates the effects of a guideline knowledge translation intervention with PCPs to improve the QoC of older adults with AD in primary care.

**Methods:** PCPs in seven locations in south-east Ontario are participating in the Primary Care—Dementia Assessment and Treatment Algorithm Project (PC-DATA). The intervention consists of an educational session introducing the DATA tool and Web-based resource supported by a dementia care manager to optimize adherence and uptake of the DATA protocols. A booster session will occur six months following the initial education session. The primary outcome for the study will be the change in the number of QoC process quality indicators achieved by PCP in the three years preceding the intervention, compared to the year following the intervention, using chart audit reviews. Selection of content for the DATA tool and website has been informed by literature reviews and focus groups with PCP, and persons with dementia and their caregivers to identify and address knowledge gaps in the current system of dementia care. The evaluation of education sessions will be presented. The roles and activities of the

dementia care manager during the initial implementation will be described, along with a profile of individuals evaluated by the dementia care managers. The PC-DATA project is a novel collaborative approach to the provision of care for the growing population of older adults with AD. Through this project we hope to improve the QoC for older adults with AD, and provide greater access to supports and services for PCPs caring for this population.

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### **POSTER ABSTRACTS**

#### **Continuous Positive Airway Pressure (CPAP) Adherence in Elderly Patients**

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#### **2013 CAGP Resident Award Winner**

**Goals:** To examine the CPAP-ADH in elderly patients in a mental health (MH) and non-mental health (NMH) setting and elucidate possible contributing factors associated with CPAP adherence.

**Introduction:** Obstructive sleep apnea (OSA) is a common sleep disorder with significant medical and psychological consequences. The prevalence of OSA is high in adults over sixty, up to 37.5–62%. Continuous positive airway pressure (CPAP) therapy is an effective first-line treatment in adults with OSA. However, a number of studies have reported CPAP adherence (CPAP-ADH) as a problem in both younger and older adults.

**Methods:** Demographic, baseline polysomnography and CPAP-ADH data from 2009–2012 were retrospectively collected for 464 patients (389 from NMH and 75 from MH setting), sixty-five years of age and older who have been referred from Ottawa area sleep disorders clinics. Adherence data has been downloaded from CPAP machines loaned to patients during their initial 30 day trial.

**Results:** Preliminary analysis using Spearman Correlation Coefficients showed that in NMH setting, age is negatively correlated to CPAP-ADH (cumulative usage  $r = -.183$ ,  $p = .0003$ ), while initial apnea hypopnea index (AHI) is positively correlated to CPAP-ADH (cumulative usage  $r = .147$ ,  $p = .026$ ). No such correlations are found in patients from a MH setting.

**Conclusion:** This suggests that different factors contribute in CPAP-ADH in the elderly patients referred from a MH versus NMH setting. We speculate that underlying co-morbid

medical and mental health issues and other psychosocial factors (e.g., marital status, living arrangements) play a key role in CPAP-ADH.

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### **Cognitive Remediation Therapy for Patients with Late-Life Schizophrenia: a Pilot Study**

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#### **2013 CAGP Resident Award Winner**

**Objective:** Cognitive deficits are among the strongest predictors of function in patients with schizophrenia. There have been no pharmacological interventions that have been shown to improve cognitive function in patients with schizophrenia. Age-related deficits only serve to compound cognitive challenges. A number of studies have shown benefit from cognitive remediation (CR) in improving cognitive function in patients with schizophrenia. To date, the efficacy of cognitive remediation in the geriatric patient population with schizophrenia remains to be studied. We have been adapting cognitive remediation to focus on the cognitive and functional aspects of schizophrenia that are particularly impaired and relevant in late life. The ultimate goal is not only to improve cognition but also to facilitate or “bridge” this improvement in the patients’ daily lives.

**Methods:** Our work targets improving executive function and social cognition using an open-label, non-controlled study of 20 older patients with schizophrenia, aged sixty or above. Techniques used include weekly two-hour group treatment sessions including computerized drills, in-class strategic monitoring, with an emphasis on bridging cognitive skills practiced in-session to everyday life. Subjects work on homework drills throughout the week to consolidate the concepts and skills practiced during the weekly sessions. Baseline and follow-up clinical, cognitive, and functional assessments are conducted before and after the intervention.

**Results:** Baseline and follow-up clinical, cognitive, and functional assessments are conducted before and after the intervention. We have just completed our first patient cohort.

**Conclusion:** The goal of cognitive remediation is to improve basic and higher order aspects of cognition, such as attention (including its subcomponents of selective attention and sustained attention), working memory, processing speed, declarative learning, and executive functions. The ultimate goal is not only to improve cognition but also to facilitate or

“bridge” this improvement in the patients’ daily lives. To date, the efficacy of cognitive remediation in the geriatric patient population with schizophrenia remains to be studied. Should this pilot project prove to be successful, we plan on testing CR in a randomized controlled design.

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### **Fountain of Health: an Initiative for Health Promotion in Seniors**

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#### **2013 CAGP Resident Award Winner**

**Goal:** To decrease the burden associated with mental/cognitive illness, and to encourage seniors to maintain a sense of meaning when facing challenging end-of-life issues

**Introduction:** As Nova Scotia has the highest provincial percentage of seniors per capita in Canada, the potential for increased demands on the health-care system has reached unprecedented levels. In order to mitigate the impending repercussions of the “silver tsunami”, there remains a distinct paucity of primary prevention programs targeted towards the elderly. The Fountain of Health is an initiative currently in the second phase of a ten-year project targeted towards health promotion for seniors. The aim is to provide support in reducing their risk of long-term illness and disability through the dissemination of six key evidence-based messages throughout Nova Scotia. The goal is to increase awareness in the elderly and pre-senior population of concrete strategies to improve their own health outcomes, in addition to enhancing collaboration and communication among caregivers.

**Methods:** Six key evidence-based messages were identified for dissemination including positive aging, social activity, anti-ageism, physical activity, mental health, and lifelong learning, with the author playing a role in message development and data analysis of surveys released at three points during the year-long phase. Current literature on knowledge translation using a Seniors Mental Health network was reviewed, and a strategy for information dissemination to health-care providers has been developed, with the intention of completing a quality assurance initiative in conjunction with the educational component of the Fountain of Health.

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### **Prescribing Practices in End-Stage Dementia**

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**Goals:** Identify medications that may no longer be appropriate in end-stage dementia. Identify nutritional supplements that may be contributing to overall health burden in end-stage dementia.

**Introduction:** Elderly nursing home residents often have multiple medical comorbidities and are prescribed numerous medications. With the use of more medications comes the risk of adverse drug reactions due to pharmacokinetic and pharmacodynamic changes, as well as drug interactions. Previous studies have found a relation between polypharmacy and a higher number of care problems (falls, pain, etc.). There are various criteria regarding medications that are potentially inappropriate in the geriatric population, such as the Beers criteria; however, there is less known about the use of medications and nutritional supplements, which are generally not considered harmful but may no longer be providing benefit, and which may be worsening quality of life.

**Methods:** After appropriate ethics approval, we conducted a chart review on nursing home residents with advanced dementia (Fast Stage 7) living on dementia units at four nursing homes. De-identified data were sent to a clinical advisory team consisting of a pharmacist, a specialist in the use of nutrient supplements, a family physician with expertise in the care of the elderly, and a geriatric psychiatrist. The advisory team members completed standardized questionnaires regarding the appropriateness and potential problems with each medication and nutritional supplement, taking into consideration a clinical summary (prepared by the first author) on each study participant. Results were summarized by the first author.

**Results:** Many vitamins were prescribed at excessive doses, while other recommended vitamins were not prescribed at adequate doses, or frequency. Reasons for administration of PRN medications were often not specified, contributing to the risk of prescribing of those medications for inappropriate reasons.

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### Antidepressants and Driving in the Elderly: a Systematic Review

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**Goal:** To provide an update on the current literature concerning the possible effects of antidepressants on driving in senior populations.

**Background:** The potential effects of psychoactive drugs on motor vehicle operation have been investigated perfunctorily in recent literature, but many studies focus on a young or middle-aged population. Many seniors are diagnosed with depressive disorders, for which antidepressant drugs are commonly prescribed medications. The increasing number of senior drivers makes the possible consequences of antidepressant use on driving skills in a senior population a pressing issue.

**Method:** A systematic review was conducted using MEDLINE, targeting articles specifically pertaining to antidepressants and driving. Relevant articles were dichotomized into epidemiological or experimental categories. These were subsequently filtered for articles focusing on an elderly population or subgroup ( $\geq 55$  years of age).

**Results:** An initial search yielded 233 references, thirty-six of which attended to the effects of antidepressants on driving. Of these thirty-six, one was experimental and six were epidemiological studies which assessed a senior population. The experimental study focused on imipramine and nefazodone, concluding that imipramine was detrimental to standard deviation of lateral position for highway driving. The epidemiological studies assessed a wide range of antidepressant drugs—often in addition to other psychoactive medications—and generally indicate that most of the antidepressants investigated have significant negative effects on driving performance.

**Conclusions:** Results of this review highlighted a dearth of knowledge concerning the effects of antidepressants on driving performance in the elderly. Few conclusive statements are made in the existing literature, and there is a growing need for further research in this area.

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### Differences in Resting-State Functional Connectivity Between Late-Life Depression and Amnesic Mild Cognitive Impairment

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**Background:** Older adults frequently present with co-morbid mood and cognitive symptoms, posing a diagnostic challenge for clinicians to differentiate late-life depression (LLD) and amnesic mild cognitive impairment (aMCI), a prodrome of Alzheimer's disease. This study compared functional connectivity (FC) between LLD and aMCI using resting-state functional magnetic resonance imaging (rsfMRI).

**Method:** Eleven non-depressed aMCI, six LLD, and nine healthy comparison subjects (HC) (age  $M = 70$  years,  $SD = 5$ ; ten males, sixteen females), all free of psychotropic medications and neurological disorders, were scanned at 3T for 10 minutes at rest (eyes closed, alert state). Neuroimaging data were analyzed by Partial Least Squares (PLS) with a left posterior cingulate cortex (PCC) seed to identify patterns of FC common and distinct across groups. The Kruskal-Wallis test was used to test differences in the patterns of FC to the PCC amongst groups.

**Results:** Seed PLS identified a common pattern of FC to the PCC that included the right medial prefrontal cortex and right inferior temporal gyrus ( $p < .001$ ). A second pattern showed greater connectivity between the PCC and right orbitofrontal cortex (OFC) in LLD, relative to aMCI and HC ( $p = .001$ , Kruskal-Wallis test). aMCI and HC did not differ in this pattern.

**Conclusions:** The common pattern suggests similarities in default network connectivity across groups. Greater connectivity to the OFC in LLD relative to aMCI or HC suggests that the affective network in LLD may be active even at rest, possibly accounting for emotion dysregulation in depression. Larger sample sizes are needed to confirm these initial observations and the clinical utility of rsfMRI.

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### **The Meaning, Values, and Challenges of Caregiving from the Perspectives of Caregivers of Family Members with Alzheimer's Disease and Related Dementia: a Pilot Qualitative Study Using Focus Group Methodology**

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**Background:** Numerous studies have documented that family members taking care of individuals with Alzheimer's disease and related dementia (ADRD) experience high levels of stress, which are disproportionately associated with risk of depression and various physical symptoms and disorders.

**Method:** In this study, the focus group methodology was employed to obtain information directly from five adult

children and five spouses about their role as caregivers for family members with ADRD.

**Results:** Upon framework analysis of the transcribed focus group discussions, seven major themes were identified: Meaning of Caregiving and Caregiver Self-Definitions, Attempts to Fulfill Self-Expectations and Perceptions, Making Sense of Changes in the Relationship, Satisfaction Experienced by Caregivers, Frustrations Experienced by Caregivers, Needs of Caregivers, and Support Available to Caregivers. These themes were organized into a dimensional matrix that highlights their interconnectedness and dynamic nature.

**Conclusion:** The rich narrative gave researchers, clinicians, and policy-makers insights into the emotional and psychological challenges that caregivers encounter both in their relationships with the ADRD individuals, and their experiences and engagement with supportive services and community programs. This information may be utilized to help guide the design and delivery of appropriate programs to support them meaningfully in the task.

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### **Multi-Site Psychoeducational Project in Geriatric Psychiatry: a CanMEDS-Directed Geriatric Psychiatry Subspecialty Residents Preliminary Project**

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**Goals:** Collaborate with other educators to research regarding psychoeducation.

**Background:** Psychoeducation is an extremely valuable tool in our interaction with patients. In geriatric psychiatry, psychoeducation is a valuable and cost-effective intervention for treatment of psychiatric illness. Given the increased population of geriatric patients, it is essential that we empower those who provide care. Over the course of the next two years of our subspecialty training, we will provide wider access to standardized psychoeducation modules targeted to groups who care for geriatric psychiatric patients.

**Method:** We wish to design appropriate seminar series to multiple groups: family physicians, family members, and staff of long-term care facilities. The University of British Columbia Psychiatry program has three current training sites for subspecialty residents (Vancouver Coastal Health, Fraser Health Authority, and Vancouver Island Health Authority). Our project will connect these three health regions in order to provide wider access to psychoeducation in British Columbian long-term care facilities. The Royal College CanMEDS roles are the cornerstone of resident education. CanMEDS



roles we will specifically fulfill are: advocate, communicator, manager, and collaborator. Being able to distill information (communicator) in a succinct manner to caregivers while advocating (advocate) for better care of these patients is our main goal. We strive to provide a service that will provide more efficiency to the burdened health-care system (manager). Through this CAGP poster presentation, we hope to collaborate (collaborator) with others in Canada who have similar interests in psychoeducation and gather insight from their experiences.

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### **A Case Series Describing the Successful Treatment of Disruptive Vocalization in Dementia with Electroconvulsive Therapy**

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**Purpose:** To describe how we successfully treated five patients with disruptive vocalization using ECT.

**Background:** There is emerging evidence that electroconvulsive therapy (ECT) can help with the behavioural and psychological symptoms of dementia. One of the most distressing behavioural symptoms of dementia is disruptive vocalization. Previous small case series have suggested that antidepressants and ECT can be beneficial for this distressing condition.

**Method:** A retrospective chart review of the five patients with dementia of mixed etiologies was conducted comparing pre- and post-treatment using the Cohen Mansfield Agitation Inventory. All five patients had unsuccessful treatments with non-pharmacologic methods and pharmacotherapy including antidepressants.

**Results:** After completion of a series of ECT, the reduction in the verbal agitation score went from  $6.8 \pm 0.5$  to  $2.3 \pm 1.0$  ( $p < .001$ ). Although further research is needed, these findings support consideration of the use of ECT for disruptive vocalization in dementia.

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### **Diagnostic Test Accuracy of the Mini-Cog in Community, Primary Care, and Tertiary Care Settings: a Systematic Review and Meta-Analysis**

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Psychiatry, Sunnybrook Health Sciences Centre, Toronto, ON, Canada; <sup>5</sup>Cochrane Collaboration, Dementia and Cognitive Improvement Group, Oxford, UK.

**Background:** The diagnosis of dementia is important although cognitive tests can be time consuming, which may serve as a barrier to timely assessment of cognitive complaints. The Mini-Cog has been proposed as a quick and accurate cognitive test that may be suitable in a range of health-care settings. In the current study, we evaluated the diagnostic test accuracy (DTA) of the Mini-cog in community, primary care, and tertiary care settings.

**Methods:** Electronic databases were searched through the Cochrane Dementia and Cognitive Improvement group. We included all studies that evaluated the Mini-Cog when compared to reference standard dementia diagnostic criteria. Information on sensitivity, specificity, predictive values, and likelihood ratios were derived from individual studies. Random effects bivariate meta-analysis was used to determine pooled sensitivity and specificity. The quality of studies was assessed using QUADAS 2 criteria.

**Results:** A total of 11 studies (three community setting, four primary care, and four tertiary care) were identified, including a total of 4,622 participants. In meta-analysis combining all study settings, the pooled sensitivity of the Mini-Cog was 87.6% (95% CI: 71.3% to 94.9%,  $p = .002$ ) and specificity was 77.3% (95% CI: 62.0% to 87.8%,  $p = .005$ ). Overall the quality of included studies was high.

**Conclusion:** The Mini-Cog is a relatively accurate brief cognitive test that may be useful in a number of health-care settings. Further information is required in order to compare accuracy of the Mini-Cog to other brief cognitive tests.

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### **Cognitive Status of Older Adults Impacts Functional Outcome Through Participation Effort in High-Intensity Rehabilitation**

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**Goal:** To report findings of a study that aims at determining which clinical factors predict rehabilitation success.

**Background:** More than half of community-dwelling seniors will experience at least one disabling medical event, such as hip fracture or stroke, within a four-year period. Given that successful inpatient rehabilitation is a major determinant of long-term functional outcome, knowledge of factors predictive of rehabilitation success is critical. In

the current study, we examined mood, and cognitive and physical factors at admission, as well as patients' level of participation during rehabilitation, and their impact on functional outcome.

**Methods:** Patients (N = 50, 31 F, M age = 82 years, SD = 10.2) admitted to a four-week geriatric high-tolerance rehabilitation unit were assessed at admission using the Geriatric Depression Scale (GDS), State Trait Anxiety Inventory (STAI), Montreal Cognitive Assessment (MoCA), Visual Analogue Scale for Pain (VAS-pain), gait speed, Berg balance, and Instrumental Activities of Daily Living (IADL). Effort during physiotherapy sessions was rated using the Pittsburgh Participation Measure (PPM). Outcome was assessed using the Functional Independence Measure (FIM). Linear regression models were used to determine predictors of discharge FIM and PPM.

**Results:** A model which included admission FIM, GDS, STAI, VAS-pain, IADL, and PPM as significant predictors, accounted for 79% of discharge FIM. MoCA, VAS-pain, gait speed, and Berg balance were significant predictors in a model which accounted for 61% of PPM.

**Conclusion:** These findings suggest that, while mood and anxiety impact overall rehabilitation outcome, cognition specifically predicts level of participation during physiotherapy, an important mediator of outcome. Future work should examine how cognition impedes effort during physiotherapy, and focus on developing interventions to improve functional status in patients with cognitive difficulties.

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### Distinct Neural Network Responses to Emotional Appraisal in Late-Life Depression and Amnesic Mild Cognitive Impairment

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### 2013 CAGP Best Poster Competition Award

**Goal:** Report findings in a study that examines neural correlates underlying emotional processing in late-life depression and amnesic mild cognitive impairment.

**Background:** Both late-life depression (LLD) and amnesic mild cognitive impairment (aMCI) are risk factors for Alzheimer's disease (AD) and are frequently co-morbid and, although in both conditions alterations in emotional processing and abnormalities of the amygdala are evident, they have not been directly compared. This study compared neural responses during appraisal of facial emotions in aMCI, LLD and healthy comparison subjects (HC).

**Method:** Twelve non-depressed aMCI, nine LLD, and ten HC, all free of psychotropic medications and neurological disorders, were scanned at 3T while they viewed and rated the distress level of happy, sad, fearful, and neutral facial expressions. Neuroimaging data were analyzed using partial least squares (PLS).

**Results:** Mean-centred PLS identified a set of covarying corticolimbic regions that showed greater modulation during the appraisal of sad faces in both aMCI and LLD, but to happy expressions in HC ( $p < .005$ ). Using the left amygdala as the seed, seed PLS delineated a functional neural network that was modulated during three groups' appraisal of fearful faces, in addition to happy and neutral in aMCI. In contrast to HC, this network was not modulated in response to sad faces in LLD and aMCI ( $p < .001$ ).

**Conclusion:** The observed positivity bias in HC and negative emotional bias in LLD converge with the literature but, similar to LLD, aMCI showed greater coactivation of corticolimbic regions in response to sad faces. While these are preliminary results, this heightened neural response to sad faces in aMCI, in the absence of clinically significant mood symptoms, may contribute to risk of depression.