

**25<sup>th</sup> Annual Scientific Meeting  
Canadian Academy of Geriatric Psychiatry**

# **Book of Abstracts**

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**Paradigm Shifts for Research & Clinical Care**

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## **Symptômes comportementaux et psychologiques de la démence: Nouvelles tendances**

Evelyn Keller, Marie-Andrée Bruneau, François Rousseau

### **Contexte**

Les SCPD sont des manifestations inhérentes à l'évolution des différents types de démence. Ce symposium sur les SCPD est composé de trois présentations qui concernent différents aspects reliés à ces problématiques.

### **Méthodes**

Dans un premier temps, une revue des considérations épidémiologiques, cliniques et thérapeutiques sera partagée. Les principes de l'approche thérapeutique multidimensionnelle individualisée centrée sur la personne seront abordés. La deuxième présentation s'intéresse, en particulier, à un modèle d'éducation des professionnels et personnes soignantes impliquées auprès des personnes atteintes de démence. L'utilisation de capsules de formation spécifiques (e-Learning) sur les différents types de SCPD, leurs caractéristiques cliniques, leur prise en charge et leur traitement sera abordé. Les principes de mentorat pour la gestion de ces problématiques par téléconsultation seront présentés et discutés. La troisième partie du symposium concerne l'intérêt et l'utilité des unités de soins spécialisées pour l'évaluation et la prise en charge des SCPD graves et persistants qui sont difficiles à stabiliser dans le milieu de vie de la personne atteinte de démence.

### **Résultats**

Des données probantes reliées à l'évaluation et la prise en charge des SCPD seront présentées. Les conférenciers par le moyen d'une synthèse et d'une analyse de la littérature, ainsi que par le partage de leur expérience clinique vont discuter des meilleures pratiques pour une prise en charge et une gestion efficace de ces syndromes. L'importance de l'utilisation d'approches innovatrices individualisées et centrées sur les besoins des patients, des proche-aidants et des soignants sera illustrée. Des données de recherche seront présentées.

### **Conclusions**

Les SCPD sont des complications fréquentes de la démence et ils représentent un défi clinique pour leur prise en charge selon les différents stades d'évolution de ces maladies. Le développement de ressources et d'approches adaptées est essentiel pour obtenir des résultats thérapeutiques optimaux et améliorer le pronostic et l'évolution de l'état des patients atteints et de leur entourage.

## Considérations cliniques et approche thérapeutique des SCPD

Evelyn Keller

### Contexte

Les SCPD sont omniprésents chez les patients atteints de démence. Plusieurs études réalisées dans les milieux d'hébergement, ainsi que dans le communauté ont documenté une prévalence de SCPD allant jusqu'à 97% chez ces patients (I.P.A., 2012). La compréhension et la signification de ces symptômes, ainsi que des facteurs multiples qui les provoquent et les entretiennent, sont au cœur de toute intervention efficace.

### Méthodes

Une présentation des données récentes épidémiologiques et cliniques sera partagée au cours de cette conférence. Un modèle de prise en charge globale de ces problématiques complexes sera proposé prenant en considération les aspects biologiques, psychologiques et sociaux, ainsi qu'une approche interdisciplinaire.

### Résultats

Des vignettes cliniques basées sur l'expérience acquise avec cette clientèle seront présentées. L'illustration du modèle thérapeutique proposé appuyé par les résultats de la recherche sera discuté de façon interactive. Les données les plus probantes concernant les SCPD et leur traitement seront exposées.

### Conclusions

Une approche individualisée centrée sur la personne est essentielle pour optimiser l'approche thérapeutique de ces problématiques. Des nouvelles façons de gérer les SCPD sont à considérer.

## **Innovations dans la formation sur les SCPD : téléconsultations en mentorat et E-Learning**

Marie-Andrée Bruneau

### **Contexte**

La majorité des personnes atteintes d'Alzheimer ou d'une maladie apparentée présentera, à un moment de leur maladie, des SCPD. Ces symptômes sont d'une grande importance clinique, puisqu'ils augmentent l'incapacité fonctionnelle et cognitive ainsi que la mortalité et sont associés à une diminution de la qualité de vie de la personne atteinte et des proches aidants.

### **Méthodes**

Les besoins en formation du personnel sur le thème de la démence et des SCPD qui y sont associés sont bien documentés : les auteurs du rapport Alzheimer québécois déplorent l'absence ou la faiblesse de la formation offerte en ce qui a trait aux SCPD. Cette lacune conduit à une prise en charge sous-optimale de la problématique et à une trop grande utilisation des antipsychotiques, avec les risques qui y sont associés. De plus, divers organismes soulignent la difficulté d'accessibilité à une expertise spécialisée dans ce domaine. À la lumière de ces constats, un projet de téléconsultation en mentorat pour améliorer la prise en charge de cette problématique a été mis sur pied à l'IUGM, en partenariat avec plusieurs CIUSSS et CISSS.

### **Résultats**

Nous présenterons ici les modalités de fonctionnement du programme, les données descriptives et des résultats qualitatifs de ce projet de téléconsultation en mentorat. De plus, L'équipe SCPD de l'IUGM, en collaboration avec des partenaires de l'Université Laval, McGill, Montréal et Sherbrooke, a décidé de mettre sur pied un programme de formation en E-Learning dans le but d'accroître les connaissances et compétences professionnelles au niveau de la prévention et de la prise en charge des SCPD. Le programme sera ici décrit, avec quelques données sur les modalités et les retombées.

### **Conclusions**

Le programme de formation E-learning pour les SCPD et le mentorat par téléconsultation sont des outils prometteurs pour optimiser la prise en charge et le soutien au réseau de santé pour ces manifestations importantes de la démence.

## **Les unités d'hospitalisation spécifiques pour les SCPD graves : expérience clinique et données de recherche**

Francois Rousseau

### **Contexte**

La gestion des SCPD graves et persistants représente un grand défi pour les équipes soignantes en CHSLD et en milieu hospitalier de soins généraux et spécialisés. L'agitation et l'agressivité, ainsi que des symptômes psychologiques d'intensité marquée sont souvent difficiles à gérer dans le milieu de vie de la personne atteinte de démence.

### **Méthode**

Considérant cette réalité clinique, des unités spécifiques spécialisées d'évaluation et de prise en charge des SCPD graves et persistants ont été développées au niveau national et international. Une revue de littérature sera présentée au sujet des études concernant ce type de programme de soins au cours de cette présentation. Des données de recherche rétrospectives seront partagées concernant une étude pilote réalisée sur l'unité de soins spécialisée pour les SCPD graves et persistants du CIUSSS de la Capitale Nationale.

### **Résultats**

L'analyse des données publiées permet de constater qu'une approche clinique compréhensive interdisciplinaire et individualisée, mettant à contribution des aspects thérapeutiques comportementaux, environnementaux et pharmacologiques, est indiquée pour les SCPD graves. Des données de recherche seront présentées concernant une étude rétrospective sur le profil et l'évolution de 99 patients qui ont été évalués et traités sur une telle unité spécialisée à l'IUSMQ /CIUSSS-CN au cours des dernières années. 85% des sujets qui ont reçu ces services présentaient des bénéfices au départ de l'hôpital selon une revue de dossier structurée et l'évolution documentée pour certains cas avec l'échelle NPI au début et à la fin de l'épisode de soins (paired T-test: p plus petit que 0.0001).

### **Conclusions**

Les unités de soins spécialisées pour l'évaluation et la prise en charge des SCPD graves sont des ressources utiles et pertinentes dans le continuum de soins pour la gestion de ces problématiques liées à la démence.

## **An Integrated Neurostimulation and Pharmacotherapy Care Pathway for Treatment-Resistant Depression in Older Adults**

Daniel Blumberger, Benoit H. Mulsant

### **Background**

Depression is prevalent in late life and successful treatment can have a rapid and dramatic impact in an older person's level of functioning and quality of life. While an increasing number of older persons are being treated for depression, most will not receive an adequate treatment and will not achieve full remission. This workshop will summarize the evidence supporting the efficacy of antidepressant augmentation and neurostimulation therapies in the treatment of late-life depression.

### **Methods**

Results from several controlled trials will be contrasted with published data on treatment outcomes for late-life depression under usual care conditions. Data from the first large trial of augmentation pharmacotherapy in TRLLD will be reviewed. Data from two RCT's (Clinical Trials.gov ID's NCT00305045 and NCT01515215) of rTMS in depression across the lifespan will be reviewed. Individuals were randomized to one of three treatment groups in both studies (bilateral, HFL, or sham).

### **Results**

Participants on aripiprazole had a significantly higher remission rate (44%) than those on placebo (29%) with a number needed to treat [NNT] of 6.6 [95% CI 3.5-81.8]. With rTMS, remission rates differed significantly between groups: bilateral (8/20, 40%), unilateral (0/11, 0%), and sham (0/12, 0%),  $\chi^2(2) = 11.30$ ,  $p = .004$ . Remission for bilateral rTMS was significantly greater compared to unilateral (Fisher's exact  $p = .028$ ) and sham (Fisher's exact  $p = .014$ ).

### **Conclusions**

A pathway of care for older adults with depression not responding to first line antidepressant pharmacotherapy will be proposed that includes new augmentation and neurostimulation approaches.

## **Considering a Career in Geriatric Psychiatry? Meet the Experts in Education, Research, Advocacy and Community Practice**

Marla Davidson, Martha Donnelly, Rene Désautels, Nancy Vasil, Dallas Seitz, Paul Blackburn, Julia Kirkham, Soham Rej

The Canadian Academy of Geriatric Psychiatry (CAGP) Trainee Strategy formed in 2011 with the goal of creating opportunities and support for Member-in-Training (MIT) CAGP Members.

Formal and informal feedback has shown that trainees often wonder “What is a geriatric psychiatrist?” and “What would a career in geriatric psychiatry entail?” Trainees have indicated that they are interested in learning more about the lifestyle and career of a geriatric psychiatrist from experts in the field.

In response to trainees’ feedback, an interactive workshop has been created by the CAGP Trainee Strategy to explore career opportunities within geriatric psychiatry. This workshop will involve a brief introduction of the topic by co-chairs Dr. Marla Davidson and Dr. Paul Blackburn followed by a 30-minute panel presentation by experts in the field of geriatric psychiatry.

Dr. René Désautels, Dr. Nancy Vasil, Dr. Martha Donnelly and Dr. Dallas Seitz will describe why they chose a career in geriatric psychiatry while highlighting the various opportunities they have had during their careers and share their perspective of the lifestyle of a geriatric psychiatrist.

The second half of the workshop will involve trainees interacting within small groups in focused discussions with the panel experts in the areas of education, research, advocacy and community practice. This is a great opportunity for residents, fellows, and students from all disciplines to network with experts and colleagues, and ask any questions they have about their career development in a friendly setting.

## **Paradigm Shifts in Psychotherapy for Seniors: Enhanced Cognitive Behavioural Therapy (eCBT) and Novel Knowledge Transfer Initiatives Across Health Settings**

Keri-Leigh Cassidy

### **Background**

The availability of CBT to seniors with depression or anxiety is limited, likely due to an historical negative age bias in psychiatry regarding psychotherapy for seniors, a lack of psychotherapy resources and the real clinical challenges in applying CBT to a frail, senior population (eg. Visual deficits, writing or other physical limitations etc.).

These obstacles to the availability of CBT for seniors inspired the creation of a manualized enhanced cognitive behavioural therapy (eCBT) group program for seniors with depression and anxiety. The eCBT program modified CBT to better meet the needs of seniors, with content, process and presentation adapted to minimize the barriers for seniors. Previously published research on eCBT has shown significant improvements in depression, quality of life and anxiety scores with eCBT treatment.

### **Methods**

The symposium will highlight novel elements of eCBT and also explore results of three recent pilot projects in eCBT knowledge transfer (KT) and translation across a range of health settings.

### **Results**

The pilot projects presented include: 1) KT by eCBT group participants to help seniors to restructure “thoughts about aging”; 2) remote eCBT supervision and successful knowledge translation at a new academic centre and 3) adaptation of eCBT principles to deliver KT to patients in 10 minutes in the busy office visit setting.

### **Conclusions**

Providing psychotherapy such as eCBT and the knowledge transfer of eCBT principles requires innovative approaches and a shift in thinking to best serve seniors.



## **Changing Attitudes Toward Aging Using a CBT Framework and Education in Participants of an Enhanced CBT Group (eCBT) for Seniors with Anxiety and Depression**

Celia Robichaud, Meagan MacNeil, Keri-Leigh Cassidy, Janya Freer

### **Background**

Present the modifications made to the eCBT program with the goal of changing attitudes to aging and the quality assurance project designed to capture potential changes.

### **Methods**

Dalhousie's Enhanced CBT program has been running for over 7 years, and previously published research has indicated its effectiveness. Newer research suggests the importance of beliefs on aging to health outcomes in seniors, but there has been little research to date on whether beliefs on aging can be shifted, and especially in seniors.

### **Results**

Our research team added a "thoughts on aging" component to the eCBT group, utilizing techniques learned within the group as well as information from the Fountain of Health Initiative for Optimal Aging resource.

### **Conclusions**

The effect on the "beliefs on aging" intervention was measured through the following pre and post questionnaires; Attitudes to Aging Questionnaire and the Attitudes Towards Own Aging questions. Pre and post measures for anxiety and depressive symptoms and quality of life were performed as usual for the groups including the Beck Anxiety Inventory, Beck Depression Inventory and the Perceived Quality Of Life Scale. The shift in these scores was compared to previous groups without the intervention material.

## **CBT Express: Activating Healthy Aging in a 10 Minute Office Visit**

Beverley Cassidy, Keri-Leigh Cassidy, Janya Free

### **Background**

To learn about Fountain of Health tools for follow up of healthy aging behaviours.

### **Methods**

Aging attitudes have a significant impact on overall mental and physical health as we age. To promote cognitive-behavioral shifts toward healthy aging, a “LINK” model was developed to facilitate delivery of healthy aging messaging in a busy office visit. LINK is part of the Fountain of Health Initiative for Optimal Aging.

### **Results**

The LINK model provides a guide to help clinicians bridge the gap between presenting symptoms and healthy aging behaviours and cognitions. It includes: 1. Listen to presenting concern with empathic response 2. Identify presenting concern/health issue as ideal material for FOH health promotion intervention 3. Navigate a single behavioral step that can be taken to promote healthy aging 4. Keep a record of goal discussed and increase cognitive appreciation of healthy aging with 3 minute review of Fountain of Health Handbook and/or Web resources.

### **Conclusions**

LINK is currently being piloted in community-based clinical settings in Nova Scotia. It serves as a launch point to introduce healthy aging discussion and goal setting. Once healthy aging is "on the table", subsequent visits can follow up on setting SMART goals, watching the FOH video, reviewing the website and taking the healthy aging quiz.

## **A Pilot Project Using Remote Supervision to Establish an Enhanced CBT (eCBT) Group for Seniors with Anxiety and Depression in a Busy Community Psychiatric Clinic**

Linda Gobessi, Keri-Leigh Cassidy, Jennifer Cavanagh

### **Background**

Facilitate adoption of eCBT.

### **Methods**

Although research indicates that CBT is effective for seniors, there continues to be limited access due to lack of experienced clinicians working with seniors and CBT and few publicly funded programs. Geriatric Psychiatry Community Services of Ottawa (GPCSO) selected two clinicians from an interdisciplinary team, a geriatric psychiatrist and an occupational therapist who shared an interest in CBT, with the task of starting a CBT group for seniors. We were particularly interested in adopting enhanced CBT (eCBT) as it is a unique Canadian program, specifically modified to meet the needs of an older population.

### **Results**

We devised a pilot project using remote supervision with the Seniors Mental Health Team at Dalhousie University who published the manual for eCBT, to prepare and supervise the co-therapists to run their own group. The collaboration entailed regular teleconferences to review selected readings, group location, assessment and selection of patients, scales to determine effectiveness, and participation via telephone to "observe" a group in process with post supervision discussion. Following initiation of their own group, an expert eCBT therapist provided weekly telephone supervision.

### **Conclusions**

GPCSO was able to launch a successful eCBT program. The co-therapists are now leading their second group independently and plan to incorporate eCBT as a regular service available for seniors. Pre and post effectiveness measures and satisfaction surveys indicated positive results.

## Les aphasies primaires progressives

Robert Jr. Laforce

### Contexte

L'aphasiologie classique post-AVC a maintenant un nouveau partenaire lui permettant de mieux comprendre l'anatomie du langage: l'étude des aphasies primaires progressives (APP).

### Méthodes

Les premiers écrits sur les APP remontent à 1986 alors que Dr Mesulam décrivait 6 cas de troubles progressifs et isolés du langage associés à des maladies dégénératives. Vingt ans plus tard, il existe des critères définissant trois grandes formes d'APP qui sont facilement reconnaissables par le clinicien.

### Résultats

Plus encore, elles sont associées à des processus pathologiques qui sont potentiellement traitables d'où l'importance d'un dépistage précoce.

### Conclusions

Les objectifs de cet atelier sont 1. Définir les différents types d'APP, 2. Reconnaître cliniquement les principaux éléments diagnostics afin d'en orienter le diagnostic différentiel étiologique, et 3. Planifier une investigation et une prise en charge orthophoniques appropriées.

## **Entrustable Professional Activities and Trainee Evaluation in Competency-Based Geriatric Psychiatry Training**

Robert Madan

### **Background**

The Royal College of Physicians and Surgeons of Canada is working on implementing competency-based education in residency training. Entrustable professional activities (EPA) is a tool that may be used in competency based education. EPAs have yet to be implemented systematically in residency programs and has not been fully investigated.

### **Methods**

This interactive workshop will review competency-based education, the use of EPAs, and trainee evaluation and feedback. The results of a qualitative study (in progress) investigating the feasibility, utility, and barriers to using EPAs in a geriatric psychiatry residency subspecialty program will be presented and discussed. A national survey was conducted to develop EPAs in geriatric psychiatry. Residents and supervisors in the geriatric psychiatry residency subspecialty program will be participating in focus groups and interviews.

### **Results**

EPAs for senior residents (PGY5-6) must be sufficiently challenging, and tap into different expertise than a PGY3 resident. A variety of evaluation methods is required. The survey led to the re-development of EPAs for the program. The results of the qualitative study will be presented.

### **Conclusions**

The development of EPAs for competency-based education requires careful planning. Residents must be evaluated with a variety of methods and with sufficient frequency to make EPAs meaningful and valid. EPAs must be able to discriminate between levels of performance and the evaluation tools must be valid and reliable.

## **ENRICHES: A Collective Impact Plan for Caregivers 55+**

Joel Sadavoy, Jennifer Hardy, Danielle Hornung

### **Background**

Caregivers over the age of 55 are at risk of experiencing a number of physical and mental health conditions that impact their well-being, and the well-being of the person they care for. Social isolation can occur when the caregiver has inadequate quality and quantity of contact with others, further impacting their health.

### **Methods**

ENRICHES (Engagement to Reduce Isolation of Caregivers at Home and Enhancing Seniors) comprises six organizations that were funded under the Government of Canada's New Horizons for Seniors Program with the mutual goal of reducing social isolation in caregivers over the age of 55 in Toronto. In this collaborative, Sinai Health System - The Reitman Centre, Mount Sinai Hospital Foundation, The Canadian Mental Health Association Ontario Division, WoodGreen Community Services, Alzheimer Society Toronto, and North York Community House are implementing and evaluating a variety of innovative activities that will identify and engage caregivers, and connect them to services. In addition, the collaborative aims to build system support by providing training and education to service providers that work with caregivers.

### **Results**

The ENRICHES collaborative has engaged isolated older adult caregivers living in Toronto through a shared outreach strategy. Collective developmental evaluation demonstrates that the collaborative is able to improve the health of caregivers, and impact levels of social isolation.

### **Conclusions**

Collective impact projects are an innovative method of providing care to seniors, and allow organizations to strengthen community impact as a whole.

## Neurophysiological Insights into Late-Life Mental Disorders

Daniel Blumberger, Tarek K. Rajji, Sanjeev Kumar

### Background

Transcranial magnetic stimulation (TMS) is a non-invasive tool used to study brain functions such as cortical inhibition (CI) and neuroplasticity, in-vivo. CI is the brain's way to filter and process information; neuroplasticity is how the brain adapts to both internal and external stimuli. TMS can be combined with EEG to assess areas of the brain outside the motor cortex. Working memory has been found to be correlate with frontal cortical oscillations in theta and gamma bands and in particular the modulation of gamma amplitude by theta phase (theta-gamma coupling).

### Methods

Short-interval cortical inhibition (SICI) and cortical silent period (CSP) are TMS protocols that can be used to index GABAA and GABAB receptor-mediated inhibitory neurotransmission. Cortical excitation can be evaluated using intracortical facilitation (ICF): a TMS measure of NMDA receptor-mediated excitatory neurotransmission. Neuroplasticity can be measured using paired-associative stimulation (PAS), an index for LTP-like plasticity. The N-back task can be used to assess working memory and the neurophysiological correlates can be assessed while recording EEG during the tasks.

### Results

Patients with depression displays neuroplasticity deficits compared to healthy controls but not cortical inhibition deficits. Combined TMS-EEG can provide insights into working memory functioning in depression, schizophrenia and AD.

### Conclusions

TMS and combined TMS-EEG are emerging tools that provide valuable insights into the pathophysiology of a variety of disorders in late-life.

## Characterizing the Effects of Late-Life Depression on Cortical Excitability and Neuroplasticity

Daniel Blumberger, Apoorva Bhandari, Tarek K. Rajji, Benoit H. Mulsant, Z. Jeff Daskalakis

### Background

Depression is one of the most common neuropsychiatric disorders in adults aged 60 and over. Late-life depression (LLD) is associated with an increased risk of suicide, mortality from comorbid medical illness, functional disability and cognitive impairment. Transcranial magnetic stimulation (TMS) is a non-invasive tool used to study brain functions such as cortical inhibition (CI) and neuroplasticity, in-vivo. CI is the brain's way to filter and process information; neuroplasticity is how the brain adapts to both internal and external stimuli. This study aims to characterize the effects of LLD on TMS measures of cortical excitation, inhibition and plasticity. Patients with LLD will demonstrate motor cortical excitability and plasticity changes compared to age- and gender-matched non-depressed healthy controls.

### Methods

Patients over the age of 60 and age- and gender-matched healthy controls were recruited. Short-interval cortical inhibition (SICI) and cortical silent period (CSP) TMS protocols were used to index GABAA and GABAB receptor-mediated inhibitory neurotransmission, respectively. Cortical excitation was evaluated using intracortical facilitation (ICF): a TMS measure of NMDA receptor-mediated excitatory neurotransmission. Neuroplasticity was assessed using paired-associative stimulation (PAS), an index for LTP-like plasticity.

### Results

The major depressive disorder patient group did not demonstrate any significant differences in cortical excitation and inhibition compared with healthy subjects. Depressed patients displayed deficits in neuroplasticity compared to healthy controls.

### Conclusions

This is the first study to evaluate the effects of LLD on motor cortical excitability and plasticity. Our results suggest that impaired neuroplasticity may underlie part of the pathophysiology of depression in older adults.



## Deficits in Neuroplasticity and Theta-Gamma Coupling in Patients with Schizophrenia

Tarek K. Rajji

### Background

Deficits in working memory are core features in schizophrenia and depend on functional dorsolateral prefrontal cortex (DLPFC). Modulation of gamma oscillations amplitude by theta oscillations phase (“theta-gamma coupling”) is thought to mediate working memory. This study assessed deficits in coupling in response to a brain stimulation intervention delivered to the DLPFC.

### Methods

Paired Associative Stimulation (PAS), combined with electroencephalography (EEG) was applied to the DLPFC of healthy subjects and subjects with schizophrenia. PAS is a transcranial magnetic stimulation based intervention that induces long-term potentiation-like increase in cortical evoked activity (CEA) and coupling. A PAS control intervention (PAS-C) was administered to a third group of healthy subjects.

### Results

Compared with those who received PAS-C, the healthy subjects who received PAS experienced significant potentiation of CEA and coupling as captured over the DLPFC. Subjects with schizophrenia also experienced significant potentiation of CEA and coupling in response to PAS compared to baseline or those who received PAS-C. However, they were impaired compared to the healthy subjects who received also PAS on PAS-induced potentiation of CEA or coupling.

### Conclusions

Patients with schizophrenia experience deficits in PAS-induced potentiation of cortical activity and theta-gamma coupling in the DLPFC. These findings suggest that disrupted plasticity in DLPFC networks translates into abnormal theta-gamma coupling and consequently working memory deficits in patients with schizophrenia.

## Understanding the Relationship Between Working Memory and Neuroplasticity in Alzheimer's Disease Using TMS-EEG

Sanjeev Kumar, Tarek K. Rajji, Daniel Blumberger

### Background

Deficits in frontal lobe functions including deficits in working memory are common across all stages of Alzheimer's disease (AD). Working memory has been found to correlate with frontal cortical oscillations in theta and gamma bands and in particular the modulation of gamma amplitude by theta phase (theta-gamma coupling). These neurophysiological mechanisms depend upon robust synaptic neuroplasticity. Paired associative stimulation (PAS) involves repetitive pairing of electrical stimulation of the median nerve with transcranial magnetic stimulation (TMS) pulse 25 ms later to contralateral dorsolateral prefrontal cortex (PAS-25) and simulates the induction of long-term potentiation, a prototype of synaptic neuroplasticity. Relevance of these measures of neuroplasticity in AD has not been investigated so far.

### Methods

Participants with early AD and healthy controls (Mini Mental Status Exam score  $\geq 16$ ) are enrolled in this study. Baseline measurement of neuroplasticity is done using electroencephalography (EEG) during PAS using TMS-EEG. Working memory and theta gamma coupling are assessed using N-back task and simultaneous EEG recording.

### Results

Baseline measures (PAS and behavioral) suggest that compared with healthy individuals, participants with AD have (1) impaired performance on the N-back task, (2) impaired DLPFC neuroplasticity as measured by PAS induced cortical evoked activity, and (3) impaired theta-gamma coupling in association with impaired N-back performance (data will be presented at the conference).

### Conclusions

TMS-EEG can index neuroplasticity deficits in AD. This can lead to development of novel biomarkers of impaired neuroplasticity and working memory in AD.

## Advances in Late-Life Schizophrenia

Petal Abdool, Dallas Seitz, Tarek K. Rajji, Benoit H. Mulsant

### Background

Due to an increase in the aging population in Canada, it is expected that the number of those with psychotic disorders will also increase. Limited information is available about the prevalence and characteristics of late-life psychotic disorders in Ontario. Cognitive deficits are among the best predictors of function in schizophrenia. Healthy aging is also associated with decline in function. There is a need to assess to what extent aging, cognition, and other factors such as medications impact functional changes.

Standardized care is growing in popularity and there are a few studies that cite its effectiveness in enhancing patient outcomes in those with schizophrenia.

### Methods

This symposium will:

- 1) Describe the prevalence and characteristics of late-life psychotic disorders in Ontario using population-based databases at the Institute for Clinical Evaluative Sciences.
- 2) Analyze cross-sectional data obtained at the Centre for Addiction and Mental Health (CAMH) in Toronto, Canada, and during the MATRICS Psychometric and Standardization Study (PASS) from a total of 232 community-dwelling subjects with schizophrenia.
- 3) Examine the process of developing, implementing and evaluating the efficacy of a standardized pathway for a late-life Schizophrenia clinic.

### Results

The results from the above studies will be discussed in more detail and compared to other studies. Cognition is a strong predictor of functional capacity in late-life schizophrenia and, antipsychotics can contribute to functional capacity impairment.

### Conclusions

Understanding the prevalence and unique characteristics of older adults with psychotic disorders will help inform strategies such as standardized care pathways which in turn can improve the quality of care for this population.

## **Prevalence and Characteristics of Older Adults with Psychotic Disorders in Ontario**

Dallas Seitz

### **Background**

There are increasing numbers of older adults in Canada and it is expected that the numbers of individuals with psychotic disorders will increase with the aging of our population. However, there is limited information available about the overall prevalence of psychotic disorders among older adults in Ontario and the characteristics of this population have not been well described.

### **Methods**

We will describe the prevalence of primary psychotic disorders among older adults (age 66 years and older) in Ontario as of April 1, 2015 using population-based databases at the Institute for Clinical Evaluative Sciences. The characteristics of this population will be described including demographics, medical comorbidity, psychiatric comorbidity, and medication use in this population will be described.

### **Results**

Our results will be compared to those of previous epidemiological studies and the implications of our finding will be discussed in terms of planning current and future health service requirements for this population.

### **Conclusions**

Understanding the prevalence and unique characteristics of older adults with psychotic disorders will help inform strategies to improve the quality of care for this population and provide information for health service providers about how to best meet the needs of this population.

## Standardized Management of Late-life Schizophrenia

Petal Abdool

### Background

Standardized care is growing in popularity but has limited presence in psychiatry. At CAMH, a LLS Care Pathway was implemented with 105 patients currently enrolled. Indicators assessing pathway compliance include monitoring side effect burden of antipsychotic agents and cognition. Overall compliance was 84% and only 5 patients were on medications that deviated from the ICP algorithm and 8% of patients were on two antipsychotic agents. In the literature however, only six studies assessed efficacy of ICPs in schizophrenia. Five trials had control groups without randomization and one had no comparator. Only two studies demonstrated positive results in favor of ICPs in clinical outcomes such as reduced restraint use. These studies had variable designs and methodological limitations that make interpreting effectiveness difficult and none focused on late-life schizophrenia.

### Methods

We will examine the process of developing, implementing and evaluating the efficacy of a standardized pathway for a late-life SCZ clinic using a randomized controlled design.

### Results

To date we have consented and screened 16 subjects, 11 were randomized to LLS-ICP or TAU. 7 subjects completed the acute phase and 1 was lost to follow up. 4 clients experienced serious adverse events.

### Conclusions

The LLS-ICP can promote more evidence based care that is patient focused, avoids pitfalls such as polypharmacy and failure to monitor side effect burden. These can directly impact cognitive and functional outcomes. The LLS-ICP reduces unnecessary variations in care which results in more complete, accessible data collection for audit. There is a need for more robust data and literature to support these outcomes.

## Cognition and Function in Individuals with Schizophrenia Across the Lifespan

Tarek K. Rajji

### Background

Cognitive deficits are among the best predictors of function in young and middle-age individuals with schizophrenia. These deficits persist in late-life. Healthy aging is also associated with decline in function. In this presentation, our objectives are (1) to review functional changes in individuals with schizophrenia across the lifespan; and (2) to assess to what extent aging, cognition, clinical symptoms, and other factors such as medical comorbidities and medications contribute to functional changes in this population.

### Methods

We analyzed cross-sectional data obtained at the Centre for Addiction and Mental Health (CAMH) in Toronto, Canada, and during the MATRICS Psychometric and Standardization Study (PASS) from a total of 232 community-dwelling subjects with schizophrenia. Of the 232, 59 subjects aged 50 and above were recruited and assessed at CAMH, and 173 subjects were assessed during PASS. Cognition was assessed using the Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS) Consensus Cognitive Battery (MCCB), and function was assessed using the UCSD Performance-based Skills Assessment (UPSA).

### Results

While cognition remains relatively stable across the lifespan compared to healthy individuals, there is a significant decrease in functional capacity late in life. Cognition remains a strong predictor of functional capacity late in life, and independent of aging and medical comorbidities. Finally, antipsychotics contribute to functional capacity impairment in a domain that is susceptible to aging-related impairment.

### Conclusions

Our findings are encouraging as they suggest that treating cognitive impairment associated with schizophrenia is likely to improve individuals' function independent of their age or comorbidities. They also suggest that reducing antipsychotic burden could improve function. Longitudinal studies are needed to better understand these relationships as well as what factors other than cognition predict function in schizophrenia.

## **Psychiatric and End-of-Life Care in Advanced Parkinson's Disease**

Andrea Iaboni

### **Background**

Parkinson's is a chronic, degenerative condition that patients live with for decades. As treatments become ineffective and cognitive issues progress, it can be difficult for patients, families, and sometimes physicians, to come to terms with the fact that the disease has reached an advanced stage. The neuropsychiatric symptoms of Parkinson's, in particular psychosis and depression, are challenging to treat and are a significant burden to patients and caregivers.

### **Methods**

This case presentation is a 69 year old man with a 25 year history of Parkinson's disease admitted to a dementia behavioural support unit from a nursing home. He was referred due to paranoia and agitation. His behaviours included stacking and climbing furniture, running, and falling with multiple falls daily.

### **Results**

I will present a multidisciplinary approach to this patient, discussions with family, and ethical issues confronted along the way.

### **Conclusions**

There is increasing recognition of the importance of end-of-life care in individuals with long-term neurodegenerative diseases such as Parkinson's, although there are large gaps in knowledge and barriers to providing this care. There is a need for exploration of the challenging clinical and ethical questions raised by end-of-life care in Parkinson's disease.

## **An Affect Education Model for Professional Caregivers. A Two Person- Centred Approach for Managing Behavioural and Psychological Symptoms of Dementia**

Ken Schwartz, Robert Madan

### **Background**

BPSD is common and contributes to significant caregiver burnout and LTC staff turnover. Non-pharmacological approaches are the first line of treatment in most cases. However, stressed carers may unfortunately respond in ways that elicit more challenging behaviours to manage.

### **Methods**

The effectiveness of an innovative non-pharmacologic Affect Education Model for Caregivers addressing the issue of caregiver stress of staff working in 2 LTC homes, including a city-wide behaviour support unit was studied through the use of questionnaires and focus groups. Nursing and ancillary staff were taught the Affect Education Model (Zeisel, 2009) in 5 interactive group sessions and then encouraged to employ the approach in their work. A similar interactive group approach teaching the model and its use will be employed in the workshop.

### **Results**

Quantitative and qualitative data incorporating the use of Zeisel's Seven Questions Model (Zeisel, 2009) in 2 LTC homes will be presented. Also, the utility of the model in a here-and-now setting with workshop participants is expected to be demonstrated.

### **Conclusions**

The effectiveness of The Seven Questions Model (Zeisel, 2009), originally developed to improve interpersonal relationships, and adapted in this pilot study for the first time for use with individuals with BPSD is described. Caregivers, including workshop participants, benefit from learning an approach that can be used to augment their present non-pharmacologic approaches.



## **Psychotherapy Groups for Older Adults with Complex Depressive and Medical Illness**

Ken Schwartz, Angela C. Golas

### **Background**

The workshop aims to demonstrate how an evidence-based cost-effective group therapy intervention for older adults with complex depressive and medical illness at the Baycrest Day Hospital is particularly suited to help group members cope optimally with the multiple losses associated with aging and illness.

### **Methods**

Technical and countertransference challenges, clinical material illustrating themes, therapeutic factors and modifications necessary to work with this population are discussed. The benefits and challenges of adding a co-therapist with an interpersonal emphasis into a long-running established group are described. The applicability of this modified integrated psychotherapy in helping group members learn to manage expectations by accepting what they can and cannot change is shown. A series of questions designed to help workshop participants to self-reflect on their experiences of working with this population is presented.

### **Results**

The emphasis on interpersonal themes allows for increased exploration of age-related themes in the present, with increasing capacity to manage interpersonal conflicts to further strengthen group cohesion while also facilitating individual growth and expression in the final life-stage. Workshop participants will appreciate the impact of re-directing older adult group tendencies to focus on themes of the remote past to their manifestation in the “here-and-now”.

### **Conclusions**

Therapists and workshop participants, after reflection of personal feelings and attitudes related to issues of aging and illness in themselves and older patients with complex health problems, coupled with learning of techniques facilitating psychological coping and healing, become more comfortable in working in group (and individual) settings with this ever-increasing but undertreated population.

## **Autism in the Elderly**

Shabbir Amanullah

### **Background**

Leo Kanner coined the term Autism in 1943 based on clinical observation (Volkmar & Klin, 2005). The key features of the disorder include limited socialization, lack of eye contact and language deficits (Nguyen, 2002). Over the years, much research has gone into the study of Autism, with recent emphasis laid on the very diverse nature of its presentations (Mirenda & Iacono, 2009). This research has made great contributions to the field, but does little to help with the appreciation of autism presence in the elderly. In the past, literature on autism has primarily investigated its occurrence in youth and early childhood (Mukaetova-Ladinska et al., 2011). However, recent evidence has found that there is a degree of dysfunction that tends to persist later in life in people with autism (Geurts & Vissers, 2011). These deficits can be even more problematic when associated with the dementia that is observed in older populations (Evers et al., 2006). The aim of this study is to review the existing evidence for the diagnosis and management options of autism in the elderly. Better comprehension of this will help determine the most effective and efficient methods of intervention.

### **Methods**

A mesh search strategy using the terms autism, autistic spectrum, Asperger's, pragmatic language disorder, old age, elderly, signs and symptoms, diagnosis and management will be employed to identify relevant literature.

### **Results**

There were very few published articles meeting the criteria and few conference proceedings available.

### **Conclusions**

Autism in the elderly is an under recognised issue requiring much more clinical inout but also research into the modalities of interventions.

## **Anosognosia is an Independent Predictor of Conversion from Mild Cognitive Impairment to Alzheimer's Disease and a Function of Reduced Brain Metabolism: An ADNI study**

Philip Gerretsen, Jun Ku Chung, Parita Shah, Eric Plitman, Yusuke Iwata, Shinichiro Nakajima, Bruce Pollock, Ariel Graff-Guerrero

### **Background**

Anosognosia or impaired illness awareness is a common feature of Alzheimer's disease (AD) and less so of mild cognitive impairment (MCI). Importantly, anosognosia negatively influences clinical outcomes for patients and their caregivers, and may predict the conversion from MCI to dementia. We aimed to determine: (1) the relationship of [18F]Fluorodeoxyglucose PET metabolism to anosognosia in MCI and AD; and (2) the predictive utility of anosognosia in MCI for later conversion to AD even when controlling for other factors, i.e. gender, education, APOE4 carrier status, dementia severity, and cognitive dysfunction.

### **Methods**

Data for 1044 participants from the ADNI database classified as AD (n=184), MCI (n=504), or healthy controls (HC) (n=356) were analyzed. Anosognosia was measured with the composite discrepancy score of the study partner and participants' scores for the Everyday Cognition scale. Bivariate correlations and multiple regression analyses were performed to determine the relationship between anosognosia and FDG-PET glucose metabolism for each group. Lastly, multinomial logistic regression and receiver operating characteristic curve analyses were performed in the MCI sample to determine if anosognosia predicted conversion from MCI to AD.

### **Results**

Hypometabolism independently contributed to anosognosia in MCI ( $B=-0.205$ ,  $p<0.001$ ) and AD ( $B=-0.213$ ,  $p=0.004$ ), particularly in the posterior cingulate cortex and right angular gyrus. Anosognosia was associated with conversion from MCI to dementia ( $OR=3.880$ ,  $df=1$ ,  $p<0.001$ ) by 5 years, even after including covariates ( $OR=1.875$ ,  $df=1$ ,  $p<0.001$ ).

### **Conclusions**

Anosognosia in MCI and AD is modulated by brain glucose hypometabolism. Further, anosognosia is an independent predictor of conversion from MCI to dementia, which may facilitate clinical decision-making.

## **Innovations in Delivery of Post-Acute Health Care Delivery to Seniors: A Collaborative Model**

Kiran Rabheru, Linda Hunter, Danielle Sinden, Jeff Turnbull

### **Background**

CIHI data indicates that over 50% of all acute care beds are occupied by seniors and over a third of them discharged at a significantly lower function than on admission. Acute care hospitals provide excellent acute care to those who require it, but it is not provide an ideal environment for the sub-acute component of health care for seniors.

### **Methods**

The Ottawa Hospital, The Perley and Rideau Veterans' Health Centre, along with several other stakeholders including the LHIN, CCAC, and the Ministry of Health and Long Term Care are collaborating in a novel and innovative project to deliver sub-acute care to a population of seniors in a community-based facility with enhanced support from The Ottawa Hospital.

### **Results**

The principal goals are to provide rapid access of sub-acute care seniors who have the potential to benefit from up to a 30 day stay to recover medically and improve their function with discharge destination back to their own home or a retirement home. Other goals are to reduce readmission to the acute hospital and build greater capacity at the community based facility and its staff to manage the sub-acute group of patients with enhanced support.

### **Conclusions**

The project will be described and preliminary data will be shared with attendees.

## 2016 Update in Late-Life Bipolar Disorder: Medication Tolerability and Cognitive Dysfunction

Soham Rej

### Background

Late-life bipolar disorder remains very difficult to manage clinically. Two areas are a particular challenge: medication tolerability and cognitive dysfunction.

### Methods

2015-2016 Data from a few recent/ongoing studies from our group and from around the world will be presented, with different methodologies: administrative data studies, observational studies, and an ongoing randomized clinical trial.

### Results

Lithium, the gold-standard bipolar medication, may be associated with a 2-fold increased risk of chronic kidney disease. However, much of this can be attributed to lithium level elevations and inadequate monitoring. An ongoing clinical trial of statins to treat/prevent lithium-related kidney disease will be discussed. New data about the neurobiology of cognitive dysfunction in bipolar disorder will be presented: the role of BDNF, inflammation, statins, as well as the concept of "neuroprogression".

### Conclusions

Clinical implications of the new data will be explained. "Rules of thumb" will be provided on how to manage medication tolerability issues and cognitive dysfunction in late-life bipolar disorder. A good portion of the session will be dedicated to audience interaction: questions around participants' clinical cases are more than welcome.

## **Antipsychotic Use in Long Term Care in Canada – Where are we headed? Usage des antipsychotiques en soins de longue durée au Canada – où est-ce qu'on s'en va?**

Edeltraut Kröger, Andrew Wiens, Carlos H Rojas-Fernandez, Philippe Voyer, Machelles Wilchesky

### **Background**

According to the latest report from the Canadian Institute for Health information (CIHI), 39% of older residents in long term care (LTC) facilities used at least one antipsychotic in 2014 and 22.4% were chronic users. Nearly 2/3 (64.3%) of these chronic users were also exposed to other psychotropic medications, mainly antidepressants or benzodiazepines, which increases their risk of adverse events, including falls. A decrease of antipsychotic use in these residents is achievable and several Canadian initiatives have been successful.

### **Methods**

Four experts, Drs Andrew Wiens, Carlos Ruiz-Fernandez, Machelles Wilchesky and Philippe Voyer, will present 1) recently developed guidelines for deprescribing of antipsychotics from the Ontario OPEN program (AW), 2) the most important observations and challenges from the recent CIHI report (C R-F), 3) results from international and Canadian intervention studies to reduce antipsychotics in LTC (MW) and 4) non-pharmacological treatment strategies against Behavioral and Psychological Symptoms of dementia, the most frequent indication for antipsychotic use in LTC (PV).

### **Results**

This symposium will provide attendants with an up-to date knowledge on antipsychotic use among LTC residents, the challenges to reduce their inappropriate use, current international and Canadian strategies and guidance on the most promising interventions to achieve appropriate use in this highly vulnerable population.

### **Conclusions**

Inappropriate overuse of antipsychotics among LTC residents suffering from severe dementia continues to increase the risk of adverse events and suboptimal care for these seniors. The latest CIHI report, together with an update on promising and successful strategies to deprescribe antipsychotics in LTC, may foster decreased antipsychotic use across Canada.

## Deprescribing Antipsychotics in Elderly Patients in Long-Term Care

Andrew Wiens

### Background

Antipsychotics are frequently prescribed to elderly patients in Long Term Care (LTC) to manage Behavioural and Psychological Symptoms of Dementia (BPSD) or insomnia and many remain on these medications chronically. Treatment guidelines suggest re-evaluation the use of antipsychotics and that attempts be made to discontinue them. We describe and report on the development of antipsychotic deprescribing guidelines to help in this process.

### Methods

A nine clinician Guideline Development Team reviewed the evidence base for discontinuation of antipsychotics in BPSD and Insomnia. The review informed the development of strategies to identify patients suitable for discontinuation and a how to proceed with antipsychotic reduction.

### Results

A systematic review found that discontinuation of antipsychotics used to manage BPSD in LTC was safe. There was poor evidence for the use of atypical antipsychotics in insomnia.

### Conclusions

The guidelines are currently being peer reviewed (Spring 2016). Recommendations for discontinuing antipsychotics in BPSD and insomnia will be discussed in this presentation.

## Use of Antipsychotics Among Seniors Living in Canadian Long-Term Care Homes. Cause for Concern or Status Quo?

Carlos Rojas-Fernandez

Describe potential reasons for changes in secular trends in antipsychotic use.

### Background

Antipsychotic (AP) use among patients with Alzheimer's disease and related disorders in Long Term Care (LTC) continues to be commonplace. While not all use of these drugs is inappropriate, there remains concern about use of antipsychotics given the potential for adverse drug effects, and increased mortality in this population. Ongoing analyses of patterns of use of these drugs in LTC are useful to detect trends, which may represent opportunities to improve care, or to detect changes in use possibly attributable to interventions.

### Methods

The 2016 CIHI report (Use of Antipsychotics Among Seniors Living in Canadian Long-Term Care Homes) was reviewed in the context of historical data, and in consideration of clinically relevant and pragmatic issues concerning antipsychotic use in LTC settings.

### Results

In 2014, 39% and 22% of LTC dwelling seniors had at least one claim for an AP, and were using these drugs for periods exceeding 180 days, respectively. Those with more severe cognitive impairment and those with high levels of aggression were more likely to have received an AP. The most commonly used AP was quetiapine (19% of residents), followed by risperidone (14% of residents). Use of concomitant psychotropic medications such as antidepressants (64%) or benzodiazepines (15%) was commonplace. Trends in AP use varied across provinces.



## Results from Intervention Studies to Reduce Antipsychotic use in Canadian Long-Term Care Facilities

Machelle Wilchesky

### Background

A variety of intervention modalities have been implemented worldwide to reduce antipsychotic use among residents with dementia in long-term care facilities (LTCFs).

### Methods

The objectives of this presentation are to summarise these interventions with a focus on those which were conducted within the Canadian healthcare setting.

### Results

Details pertaining to several studies focusing on antipsychotic discontinuation and dose reduction in the Province of Quebec will be discussed. Finally, new evidence investigating the association between specific neuropsychiatric symptoms, the time of day in which these symptoms occur, and antipsychotic use will be presented.

### Conclusions

These findings will be discussed in the context of the overall symposium entitled "Antipsychotic use in long term care in Canada - where are we headed?"

## **Behavioural and Psychological Symptoms of Dementia: What to Know About PRN use of Antipsychotics and Effectiveness of Non-Pharmacological Interventions**

Philippe Voyer

### **Background**

Behavioral and psychological symptoms of dementia (BPSD) affect nearly all demented patients at some point. The first two objectives of the presentation are to describe the course of each type of BPSD over a period of 6 months and to identify which BPSD are associated with as-needed (PRN) antipsychotic drug use. The third objective is to determine the effectiveness of non-pharmacological interventions when applied by nursing staff in different clinical settings.

### **Methods**

The first two objectives will be answered by a secondary analysis of a data from 146 nursing home residents, drawn from a prospective, observational, multisite (N = 7) cohort study. The third objective will be answered by analyzing clinical data from the CEVQ-team (Mentoring team du Centre d'excellence sur le vieillissement de Québec).

### **Results**

Results showed that BPSD lasted for an average of 2.3 months, and that the BPSD "saying things that do not make sense" had the longest duration, with 3.6 months. PRN antipsychotic drug administration was associated with nocturnal BPSD and requesting help unnecessarily. Within 3 months, most BPSD resolved by usual care; use of PRN antipsychotic medication was not associated with behaviors that put the residents or their caregivers at risk.

### **Conclusions**

Finally, 97% of non-pharmacological interventions implemented by the CEVQ-team were effective in decreasing BPSD by an average of 71%.

## **L'organisation des soins en gériatopsychiatrie au Québec : agir ensemble, maintenant, pour les aînés du Québec**

Marie-France Tourigny-Rivard, Marie-Andrée Bruneau, Dre Geneviève Létourneau

### **Contexte**

Au Québec, les services de santé mentale pour les aînés doivent suggérer des modèles pour répondre aux recommandations du Plan Alzheimer (<http://publications.msss.gouv.qc.ca/msss/fichiers/2009/09-829-01W.pdf>) dans le contexte de la réorganisation des services de santé et la mise en place des CIUSSS et des CISSS. La Commission de la santé mentale du Canada (CSMC) a publié, en 2011 des 'Lignes directrices pour la planification et la prestation de services complets en santé mentale pour les aînés canadiens'(MacCourt et al) afin d'aider à la planification de ces services.

### **Méthodes**

En se servant judicieusement des principes décrits dans les Lignes directrices et en appliquant les cibles et jalons de dotation pour évaluer les services existants, les partenaires en soins de santé de chaque région peuvent plus facilement procéder à l'élaboration d'un plan ou proposition pour mettre en place les ressources et stratégies nécessaires à la prestation des soins requis par les aînés.

### **Résultats**

Deux exemples concrets de planification seront présentés.

1. Dr Bruneau présentera le projet pilote de l'Institut de gériatrie de Montréal pour la réorganisation des services pour la clientèle avec Symptômes Comportementaux et psychologiques de la démence (SCPD). Ce modèle d'organisation des structures de soins est inspiré des lignes directrices de la Commission de la santé mentale du Canada (CSMC) et des modèles ontariens et français.
2. Dr Létourneau présentera les travaux effectués par l'Institut universitaire en santé mentale de Montréal (IUSMM) pour la réorganisation des soins en gériatopsychiatrie du CIUSSS de l'est de l'île de Montréal (population de près de 100 000 aînés). Une cartographie de l'ensemble des services du secteur a été effectuée afin de proposer une organisation cohérente et fluide pour les trois principales clientèles rencontrées en gériatopsychiatrie, soit les personnes âgées atteintes de troubles mentaux de novo, celles qui ont souffert de troubles mentaux depuis l'âge adulte, et les aînés souffrant de SCPD.

### **Conclusions**

Durant la période de discussion, les participants nous aideront à cibler les écueils majeurs qui attendent la clientèle gériatopsychiatrique de leur région et proposer des pistes de solution qu'ils pourraient eux-mêmes poursuivre en collaboration avec leurs partenaires en planification et prestation de soins de santé.

## **Building Momentum for Optimal Aging in Canada**

Keri-Leigh Cassidy, Dilip V. Jeste, David Conn, Cindy Forbes, Mark Rapoport

### **Background**

Join the two plenary speakers of Saturday's conference, Drs. Jeste and Cassidy, for an interactive workshop on building momentum for Positive Psychiatry of Aging in Canada. Drs. Rapoport (Chair), Conn and Forbes will highlight seniors mental health promotion as a shared priority of CAGP, CCSMH and CMA.

### **Methods**

Workshop participants will engage in a mini "Think Tank" session about the new national Fountain of Health Initiative for Optimal Aging (FoH) to contribute to future directions. FoH will be reviewed in short pecha kucha style (4 slides, 4 min) in public education (Dr. Conn), health behaviour change tools (Dr. Cassidy), research (Dr. Jeste) and advocacy (Dr. Forbes). Participants will choose from: 1) public education or 2) practice tools. Participants will work in small groups for 20 minutes, explore tools and brainstorm next-steps to share with the larger group (3 min).

### **Results**

Opportunities to directly contribute to momentum of Positive Psychiatry of Aging are: using FoH clinical tools with patients; joining a Speakers' Bureau or new national FoH Workgroup, and others.

### **Conclusions**

Seniors' mental health promotion is a national health priority requiring assertive leadership by our field. The FoH national initiative offers prime opportunities for Canadian physicians to build momentum for optimal aging.

## **Risk Of QTc Prolongation and Torsades De Pointes with Citalopram and Escitalopram in Geriatric Patients**

Gabrielle Crépeau-Gendron, Hilary K. Brown, Robert Madan, Claudia Szabuniewicz, Samantha Koh, Shelley Veinish, Altaf Kassam, Linda Mah

### **Background**

A recent Health Canada warning limited the maximum recommended dose of citalopram and escitalopram because of potential for QTc prolongation, based on limited scientific evidence. We conducted a retrospective study to assess the association between citalopram/escitalopram and QTc interval, torsades de pointes, or sudden cardiac death in a sample of older adults.

### **Methods**

Electronic health records from Baycrest were searched from April 2008 to July 2015 to identify patients on citalopram/escitalopram who had an EKG within 90 days following the initiation or dosage change of these medications. When available, baseline EKGs were included for analysis to determine absolute change in QTc interval following changes in medication dosage. Charts were reviewed for reports of torsades de pointes or sudden cardiac death. We also recorded medical conditions and medications that can prolong the QTc interval.

### **Results**

Sixty-four patients on citalopram (25 males, mean age: 83 years) and 27 patients on escitalopram (10 males, mean age: 80 years) were identified. We will use linear regression to examine the impact of drug dosage on QTc as a continuous measure. Covariates (e.g., age, gender, medication conditions, other medications) will be assessed for their association with QTc. Those significant at  $p < .10$  will be included in the multivariable model.

### **Conclusions**

These findings will allow clinicians to better understand the impact of citalopram/escitalopram on the QTc interval and, therefore, be able to weigh the risk and benefits of higher dosages in an older adult population.

## Changing Patterns of Sedative Use over Time in Older Adults in Ontario

Andrea Iaboni, Susan Bronskill, Katelyn B. Reynolds, Xuesong Wang, Paula Rochon, Nathan Herrmann, Alastair J. Flint

### Background

Benzodiazepine prescription rates in older adults have been decreasing over time. Trazodone and quetiapine, two medications with sedative properties at low doses, are possibly being prescribed as alternatives to benzodiazepines. Our objective is to describe the shifting patterns of sedative prescription in older adults by comparing changes in the dispensing of these drugs over an 11-year period.

### Methods

This time-series analysis linked health-care databases in Ontario, Canada, to identify residents over the age of 66 from each quarter in the period of January 2002- March 2013, stratifying the cohort by those residing in the community and those in long-term care. We compare the rate of dispensing of these drugs in each quarter and characterize their changing use over time by age, sex, and diagnosis of dementia.

### Results

We demonstrate that the prevalence of low-dose trazodone and quetiapine use is increasing in both the community (1.8- and 4.5- fold respectively) and LTC (1.7- and 3.8- fold) over time. This coincides with a decrease in prevalence of benzodiazepine use (1.5-fold decrease in the community and 1.8-fold decrease in LTC). Both the rate of increase of trazodone/ quetiapine use and decrease of benzodiazepine use are faster in the oldest and in those with dementia. Benzodiazepines are increasingly used in combination with other psychotropic medications.

### Conclusions

Benzodiazepine use is decreasing in Ontario, but there is a shift towards 1) low-dose, off-label use of trazodone and quetiapine and 2) psychotropic polypharmacy. It is important to establish if these particular uses of sedatives are efficacious and safe in this vulnerable population.

## Negative Emotional Memory Bias in Late-Life Depression and Mild Cognitive Impairment

Linda Mah, Nicole D. Anderson, Nicolaas Paul, Bruce G. Pollock

### Background

Late-life depression (LLD) and mild cognitive impairment (MCI) are characterized by alterations in limbic brain regions which support arousal-mediated memory processes, but whether emotional memory deficits are associated with either LLD or MCI is unclear. In the current study, we compared performance on a novel emotional verbal learning test between cognitively normal (CN) older adults and those with LLD or MCI.

### Methods

Sixteen each of LLD, non-depressed MCI, and CN older adults completed an emotional verbal learning test (EmVLT), which consisted of a list of 15 words with positive, negative, or neutral valence. Words were read aloud to participants, followed by free recall. This was repeated for a total of five trials. Participants also completed mood scales and a complete neuropsychological assessment. Correct recall of words according to valence was compared amongst the groups using a mixed ANOVA. Pearson's correlation was used to examine associations between EmVLT, mood and executive function.

### Results

Relative to CN, both LLD and MCI participants showed impaired recall of positive words, while memory for negative words was intact. Negative memory bias was associated with negative attitudes regarding self and impaired executive function in CN participants, with a similar trend in LLD and MCI.

### Conclusions

These data suggest that both LLD and MCI are characterized by alterations in emotion regulation, which may result from deficits in executive function. These findings, taken together with the well-established association between neuropsychiatric symptoms and AD, suggest the hypothesis that emotion dysregulation is an early signature of risk for AD.

## Teaching ECT Skills Using Simulation: A New Standard for Credentialing?

Kiran Rabheru

### Background

Simulation has become a standard tool for training in many areas of education including aviation, the military, law enforcement, and more recently in health care. Improved patient safety by learners' ability to have multiple attempts at improving skills in high risk procedures prior to actually performing it on live patients is the key value proposition.

### Methods

Objective evaluation of learner's skills as well as knowledge and confidence in performing an intrusive procedure such as electroconvulsive therapy (ECT), is imperative. Traditional methods of teaching ECT, compared to simulation-based ECT teaching, falls short on imparting the skills necessary to perform ECT.

### Results

The University of Ottawa's evidence-based, world's first Simulation Based ECT course, meets criteria for all seven CanMEDS roles with 30 hours of Section 3 Maintenance of Certification credits, has now been offered to four cohorts of ECT practitioners nationally.

### Conclusions

This paper will summarize the experience of these four cohorts of practitioners and discuss the advantages and disadvantages of such a training modality becoming a standard for credentialing for ECT practitioners in Canada.



## **Technology and Interprovincial Education: Achieving Quality CPD in Geriatric Mental Health across Canada**

Cindy Grief, Keri-Leigh Cassidy, David Conn, Lisa Sokoloff

### **Background**

Educational technology includes webinars, videoconferencing and other strategies to optimize learning. These techniques compare favourably to face-to-face learning. Webinars and live videoconferencing promote high quality continuing professional development in geriatric mental health that bridges distance and time constraints and offers flexibility. However, a lack of coordination between provinces creates potential for duplication of resources, and missed learning opportunities. Collaboration between provincial networks is one means for engaging providers and identifying ways to optimize CPD.

### **Methods**

Baycrest Health Sciences in Ontario delivers CPD in geriatric mental health (GeMH) for healthcare professionals using videoconferencing and webinars. The Nova Scotia Seniors Mental Health Network (NSSMHN) has a well-established CPD program and connection to an Atlantic Seniors Mental Health Network. Facilitators of GEMH and NSSMHN identified synergies, shared topics in programming and identified opportunities for collaboration through educational technology. In a pilot, experts from GEMH and NSSMH partnered to form Geriatric Mental Health Interprovincial Education (GEMIE), offering two joint videoconferences and an on-line teaching module.

### **Results**

GEMIE resulted in increased participation from both provinces at the events, shared learning and dissemination. Through GEMIE, educational linkages between the Atlantic SMH Network and GEMH are being implemented.

### **Conclusions**

While there are numerous educational offerings in seniors' mental health topics in Canada, mechanisms for national coordination or interprovincial collaboration are lacking. Educational technology offers a means to promote partnerships between provinces and to build a national community of practice. A national network to promote continuing education in geriatric mental health is being explored.

## **Enjeux cliniques et éthiques de l'aide médicale à mourir (AMM) en gériontopsychiatrie**

François Primeau, Jessika Roy-Desruisseaux

### **Contexte**

L'AMM est une problématique clinique et éthique qui questionne en profondeur la pratique des gériontopsychiatres, tout en mettant en cause des aspects humains et existentiels.

### **Méthodes**

Dr. Roy-Desruisseaux est présidente du Comité ad hoc sur les soins de fin de vie de l'AMPQ. Elle a dirigé la rédaction d'un document de réflexion sur ce sujet. Elle abordera les aspects cliniques pertinents en gériontopsychiatrie: accueil et évaluation de la demande selon les critères de la loi, évaluation de l'aptitude à consentir, accompagnement du patient, de la famille et du personnel soignant, rôle du gériontopsychiatre consultant.

### **Résultats**

Dr. Primeau a témoigné à deux reprises à la Commission sur mourir dans la dignité. Il développera les aspects éthiques dans le contexte sociétal et juridique actuel, alors que le Parlement fédéral s'apprête à légiférer sur les soins de fin de vie à la lumière du jugement Carter de la Cour Suprême. Les impacts sur le droit et la médecine en général seront évoqués, de même que les risques de dérive empirique et logique de cette pratique, tel que constaté dans les autres juridictions qui ont légalisé l'euthanasie et le suicide assisté.

### **Conclusions**

Dans le contexte du vieillissement démographique et de l'accroissement du nombre de patients vulnérables, les gériontopsychiatres devront demeurer vigilants afin d'éviter toute instrumentalisation dans ce processus de fin de vie où surgissent les questions complexes des souffrances physiques, psychologiques et existentielles que vivent les patients, leurs familles et le personnel soignant.

## **Practical Aspects of Management of Behavioural Disturbance of Older Adults Admitted to Acute Care Hospital**

Kiran Rabheru, Laura Wilding, Margaret McKenzie Neil, Vera Hula

### **Background**

Articulate an approach to nursing assessment and treatment care planning of older adults demonstrate behavioral disturbances in acute care hospitals.

### **Methods**

The Geriatric Psychiatry Behavioral Support (BSO) Team at The Ottawa Hospital (TOH) is the only LHIN funded team in Ontario for in an acute care hospital.

### **Results**

It consists of a Behavioral Support Nurse and a Geriatric Psychiatrist. The team is consulted by the Emergency Room, Psychiatric Emergency Service (PES), Inpatient Medical or Surgical Program, Inpatient Mental Health Program, and Psychiatry Consultation / Liaison Teams. The BSO team works closely with the patient, the patient's family, the referring service and its clinical team, community and long term care resources, particularly with the community based BSO teams to provide a smooth transition from the acute care hospital. The BSO team's goals are to: 1) Stabilize the acute behavioral and psychiatric symptoms of the patient; 2) Prevent admission from the Emergency Room, whenever possible; and 3) Transition the patient back to the community in an expeditious, smooth and seamless manner. Its overarching goal is improve the patient's safety, quality of care, and experience during the hospital stay and following discharge.

### **Conclusions**

This symposium will outline a systematic practical approach by TOH's BSO team to assess patients in acute care settings using a case-based approach. The BSO team will discuss various patient scenarios based on actual cases and involve active audience participation.

## **Evaluating Medication Related Adverse Events Using Administrative Health Data: Research Methods and Clinical Implications for Geriatric Psychiatry**

Andrea Iaboni, Dallas Seitz, Andrea Iaboni, Krista Lanctot

### **Background**

The increasing array of publications cautioning about the risks of psychotropic medications in older adults poses a challenge to the geriatric psychiatrist. Much of the literature on risks comes not from randomized controlled trials, but from observational studies. How valid are the findings from these studies, and how can they be applied to practice?

### **Methods**

Dr. Dallas Seitz will review the basics of pharmacoepidemiology using administrative health data, including their strengths and limitations. He will discuss aspects of methodology and design, as well as strategies for controlling for confounding in observational studies.

### **Results**

These principles will then be applied to studies of the risks of falls related to antidepressant use (Dr. Andrea Iaboni) and mortality with antipsychotics (Dr. Krista Lanctot).

### **Conclusions**

There are many challenges of translating risk-related research to practice. The symposium will end with some interactive case presentations to illustrate how this information can be applied in clinical practice.

## Using Administrative Health Care Databases to Evaluate Medication Safety in Older Adults

Dallas Seitz

### Background

Older adults are frequently prescribed medications for both medical and psychiatric disorders. While randomized controlled trials can provide answers to many questions related to medication safety, observational studies using administrative health care databases also provide important opportunities to study medication safety in this population. Administrative health care databases have several advantages in understanding medication safety in older adults by including "real world" representative populations and large study samples to study novel or infrequent adverse events. This presentation will provide an overview of common methods used in pharmacoepidemiology and provide attendees with an understanding of the strengths and limitations of these studies.

### Methods

An overview of observational study designs will be provided along with a discussion of the strengths and limitations of these studies. Using examples from geriatric psychiatry some common strategies used to control for confounding in pharmacoepidemiology studies will be provided. Advanced methods in pharmacoepidemiology including propensity scores, self-controlled study designs and instrumental variables will be reviewed.

### Results

Properly conducted observational study designs can provide important information on medication safety and different methodological strategies can be useful to reduce the risk of confounding and bias in these studies.

### Conclusions

Administrative health care database research can provide important information about medication safety in older adults. Understanding the strengths and limitations of these study designs is important in order to interpret and apply evidence from these studies into clinical practice.

## Getting to the Bottom of Antidepressants and Falls

Andrea Iaboni

### Background

Over the past 15 years, there has been a proliferation of observational studies demonstrating an increased risk of falling and falls-related injury (in particular fragility fracture) for older adults receiving SSRI antidepressants. This gave rise to their inclusion as potentially inappropriate medications in the 2012 American Geriatric Society Beers criteria. This presentation will review the interpretation of these observational studies in the context of the many confounders in the association between falls and antidepressant use.

### Methods

I performed a systematic review of observational studies linking falls and SSRI with a focus on community-based studies of at least fair methodological quality. I reviewed the studies to identify potential sources of bias and confounders.

### Results

Antidepressant use is associated with falls in older adults. The effects of depression, medical comorbidity, polypharmacy, cognitive impairment, and allocation bias may distort the magnitude of the relationship between antidepressants and falls. Biologically plausible mechanisms underlying an SSRI-falls association remain unclear.

### Conclusions

Observational studies provide important information about the relationship between falls and antidepressants. I will discuss what they can tell us about safer antidepressant prescribing in older adults.

## **Mortality Associated with Use of Antipsychotics in Dementia: Reviewing the Evidence**

Krista Lancot

### **Background**

Meta-analyses of randomized controlled trials (RCTs) have reported a significant increase in risk of mortality between patients treated with antipsychotics and those treated with placebo. In particular, studies suggest an increased risk of mortality associated with use of these medications in dementia, which has resulted in a black box warning being issued for atypical antipsychotics. With the increasing incidence of dementia in the aging population, both conventional and atypical antipsychotics have become standard of care for treating agitation and aggression in these patients. Observational studies have consistently supported these RCT findings.

### **Methods**

This presentation reviews observational studies on mortality with antipsychotic use in dementia, with a focus on their interpretation in the context of factors suggesting causality in observational studies, such as strength of association, temporal relationship, biologic gradient and consistency with other knowledge.

### **Results**

Observational studies have provided important data on long-term safety, dose response relationships and comparative risks of antipsychotics. This session will review the data from observational study designs, providing information relevant to the safety of antipsychotics in those with dementia.

### **Conclusions**

Observational studies have provided important evidence that has been used to delineate risks associated with antipsychotic medications in late-life.

## **La naissance d'un service innovateur pour la gériatopsychiatrie à l'IUSMM : le service d'hospitalisation à domicile et de résolution de crise**

Cynthia Bellavance, Isabelle Paquette, Angela Geloso, Geneviève Létourneau, Marye Charron, Rosita Punti

### **Contexte**

Le nouveau service d'hospitalisation à domicile et résolution de crise (HDRC) de l'Institut universitaire en santé mentale de Montréal (IUSMM) pour la clientèle en gériatopsychiatrie est entré en action le 7 avril 2015.

### **Méthodes**

À travers l'expérience de la mise en place d'un nouveau service, nous faisons l'analyse qualitative des difficultés rencontrées et des réussites. Nous partageons notre vécu personnel à travers les différentes étapes de l'organisation et de la mise sur pied du service.

### **Résultats**

Les données sur les 6 premiers mois d'existence du service sont présentées ainsi que les difficultés rencontrées sur les plans organisationnel, relationnel et personnel. Des facteurs de réussite sont identifiés et des pistes de solutions sont présentées.

### **Conclusions**

L'HDRC est un nouveau service prometteur pour offrir des soins psychiatriques aigus dans le milieu de vie du patient âgé. Les défis sont de développer l'expertise et établir des liens étroits avec les partenaires dans un réseau de services en transformation.



## **Tau in Major Depressive Disorder**

Eric Brown, Yusuke Iwata, Jun Ku Chung, Philip Gerretsen, Ariel Graff-Guerrero

### **Background**

A lifetime history of major depressive disorder (MDD) increases the risk of developing Alzheimer's disease, of which neurofibrillary tangles due to abnormal tau proteins are a hallmark.

### **Methods**

We systematically reviewed the literature on tau in MDD and identified relevant articles spanning a number of modalities, including cerebrospinal fluid (CSF) analysis, positron emission tomography, and clinicopathological correlation. We conducted a meta-analysis to compare CSF tau in MDD compared to healthy controls.

### **Results**

We identified 10 studies that compared CSF total and phosphorylated tau proteins in MDD and controls. Using a meta-analytic approach, we found lower total tau in MDD (mean difference = 30,  $Z = 2.27$ ,  $P = 0.02$ ). However, there were significant age differences between the groups, with the depressed groups being younger on average. In a subgroup analysis excluding 3 studies due to age differences greater than 5 years, there was no difference between the groups (mean difference = 12.34,  $Z = 0.97$ ,  $P = 0.33$ ). We found no group difference in a meta-analysis containing the 7 studies that measured tau phosphorylated at threonine-181 (mean difference = 1.76,  $Z = 0.61$ ,  $P = 0.54$ ). Positron emission tomography studies lacked specificity. Clinicopathological studies failed to associate neurofibrillary tangles with MDD.

### **Conclusions**

The unexpected finding of lower total CSF tau in MDD than in healthy controls was likely due to group age differences. The available data on tau in MDD is limited. The involvement of tau in a subset of MDD cannot be ruled out and requires prospective exploration.

## Geriatric Mental Health Nurses: Gatekeepers for an Interprofessional Geriatric Community Mental Health Team

Dianne Dillon-Samson

### Background

The Geriatric Mental Health Community Team (GMHCT) provides specialized outpatient/outreach mental health services to adults with complex mental health needs who are generally 65 years of age and older. This is achieved through a collaborative mental health care model involving primary care physicians and community agencies throughout the Leeds and Grenville Counties. The goals of this service are to reduce symptom distress, improve daily functioning, optimize wellbeing among clients and their family members and provide recommendations to referring physicians with support for treatment implementation.

### Methods

As our population ages, there is an increasing need for seniors' mental health services. Increase in demand and finite financial and human resources requires a collaborative approach within interprofessional mental health teams and also with community partners, family/caregivers and the senior referred to the service. Our Interprofessional Geriatric Mental Health Community Team, comprised of professionals with complementary skills, strives to provide a rural, mobile service that helps seniors toward optimum health. Registered Nurses, specialized in geriatric mental health, are the gatekeepers to accessing the service/team. Registered Nurses triage all new referrals for degree of urgency and appropriateness and this helps to insure ease of access in a timely fashion. Once accepted, the referral source is notified of the acceptance and the referred senior is contacted usually within 7-14 days. A Registered Nurse completes an initial assessment. This includes a semistructured interview and the completion of standardized cognitive screening. The comprehensive bio-psycho-social-cultural assessment is then completed by a Geriatric Psychiatrist in collaboration with the Registered Nurse, the person and family member/caregiver. When required other members of the Geriatric Mental Health Community Team including a Neuropsychologist, Occupational Therapist and Social Worker may provide their specialized service. Input is solicited from team members, the referred person, family and community agencies and then a treatment plan that is ever-evolving is established collaboratively.

### Results

Self determination is key in the recovery process, recognizing that persons directing their own care and making choices are critical components in the collaborative care model that this community team has established.

### Conclusions



This hospital based but community based team, largely comprised of mental health nurses, collectively believes that the journey of collaboration, culture and change, starts with the person/senior.

## **End-of-life Care Preferences in Patients with Severe and Persistent Mental Illness and Chronic Physical Health Conditions: Project Presentation**

Dominique Elie

### **Background**

Patients with severe and persistent mental illness (SPMI) often present with poorer physical health and increased mortality compared to the general population. As severe or terminal illness are frequently associated with a destabilization or exacerbation of psychiatric symptoms, it may be difficult for SPMI patients to effectively communicate with the treating team their end-of-life care preferences. In light of the new Quebec end-of-life care legislation, we want to compare SPMI and chronic medically ill patients' end-of-life care preferences and interests in participating to an advance medical directives regime.

### **Methods**

A total of 100-200 capable individuals aged 40 years or above diagnosed with either a SPMI (schizophrenia, schizoaffective disorder, severe depression) or cardiometabolic diseases for at least 2 years will be recruited over a 4-month period at the Jewish General Hospital, Montreal (Canada). Patients' attitudes towards advance medical planning and end-of-life care preferences regarding artificial life support, pain management, and terminal palliative sedation will be collected through a semi-structured interview using the Health Care Preferences Questionnaire (modified). Chi-square, t-tests, and multivariate regression analyses will be performed to detect statistical differences between the 2 study groups (SPMI vs medically ill).

### **Results**

We expect SPMI and chronic medically ill patients to have similar end-of-life care preferences. We also expect older SPMI and chronic medically ill patients to show more interests in advance medical planning.

### **Conclusions**

We hope this study will encourage clinicians discussing advance medical planning with vulnerable populations, such as older SPMI patients.

## **Insight into Illness and Cognition in Schizophrenia in Earlier and Later Life**

Philip Gerretsen, Aristotle N. Voineskos, Ariel Graff-Guerrero, Mahesh Menon, Bruce G. Pollock, David C. Mamo, Benoit H. Mulsant, Tarek K. Rajji

### **Background**

Impaired insight into illness in schizophrenia is associated with illness severity, and deficits in premorbid intellectual function, executive function, and memory. In a previous study of patients aged 60 years or above, we found that illness severity and premorbid intellectual function accounted for variance in insight impairment.

### **Methods**

Using one large sample of participants ( $n=171$ ) with schizophrenia aged 18 to 79 years, we aimed to test whether similar relationships are observed in earlier life. We assessed insight into illness using the Positive and Negative Syndrome Scale (PANSS) item G12 and explored its relationship to illness severity (PANSS Total Modified), premorbid intellectual function (Wechsler Test of Adult Reading, WTAR) and cognition.

### **Results**

Insight impairment was more severe in later life ( $\geq 60$  years) than in earlier years ( $t=3.75$ ,  $p<0.001$ ). Across the whole sample, the variance of impaired insight was explained by PANSS Total Modified ( $\text{Exp}(B)=1.070$ ,  $p<0.001$ ) and WTAR scores ( $\text{Exp}(B)=0.970$ ,  $p=0.028$ ). Although age and cognition were correlated with impaired insight, they did not independently contribute to its variance. Age, however, strengthened the relationships between impaired insight and illness severity, and cognition, particularly working memory.

### **Conclusions**

These results suggest there may be opportunity for intervention with cognitive enhancing neurostimulation or medications to improve insight into illness in schizophrenia across the lifespan.

## **Creation of a Psychosocial Interventions Clinic for Elderly Patients With Schizophrenia**

Angela C. Golas, Tarek K. Rajji, Petal Abdool, J. Banerjee, CR. Bowie

### **Background**

Cognitive deficits are among the strongest predictors of function in individuals with schizophrenia. No pharmacological interventions reliably improve these impairments. As patients grow older, additional age-related declines are observed. Cognitive Remediation (CR) improves cognition in individuals with schizophrenia. Cognitive Behavioural Social Skills Training (CBSST) improves social and instrumental function by incorporating cognitive techniques and social skills training. This talk will discuss the implementation of CR together with CBSST into the clinical setting as part of a Psychosocial Interventions Clinic.

### **Methods**

We adapted a CR protocol involving restorative and strategy-based methods for older outpatients with schizophrenia. CR is provided in twelve, biweekly, two-hour didactic sessions with online clinic-based practice exercises. Computerized drill and practice exercises are used with bridging to activities of daily life. We modified computer lab ergonomics to accommodate mobility needs. CBSST is provided in 18-weekly, two-hour sessions covering cognitive, social skills and problem solving modules. Participants for both programs are assessed at baseline and end-of-study using clinical and cognitive assessments.

### **Results**

CBSST has been provided to two groups of participants; one group has received CR. All participants are over the age of 60 and have a diagnosis of schizophrenia. Qualitative feedback from participants and infrastructure accommodation suggest that the clinics are tolerable and feasible.

### **Conclusions**

These modalities are well tolerated by most older outpatients with schizophrenia and is a feasible addition to an integrated care plan. Further analysis is underway to assess for empirical improvements in cognition and social functioning with the current frequency and number of sessions.

## **Blending Online Learning with Live Webinar: A New Model for Promoting Continuing Education in Geriatric Mental Health**

Cindy Grief, Lisa Sokoloff, Keri-Leigh Cassidy, Robert Madan, Nasreen Khatri, Janet Murchison, Catalina Lopez de Lara, David K. Conn

### **Background**

Blended learning typically combines online education with a face-to-face or in-class component. Building on the benefits of e-learning that include cost and time efficiency, we explored the utility of a blended learning activity that paired online learning with live webinars, an approach that has not previously been described. Our objective was to pilot and assess a novel use of technology for continuing education in late-life anxiety.

### **Methods**

A free online learning module was offered to health professionals across Canada. This course was fully accredited with Canada's Royal College of Physicians and Surgeons and the College of Family Physicians. Recruitment was drawn from a database of individuals interested in continuing education in geriatric mental health. Knowledge and attitudes were assessed prior to the online module. Following self-directed learning during the online module, participants virtually attended a live, interactive, expert-facilitated webinar. Questionnaires were administered immediately and one month post-webinar to assess impact of learning on practice.

### **Results**

376 individuals completed the online module. Pre- and post- evaluations were completed. Eighty percent (80%) of respondents preferred the blended learning activity to either component alone. Findings post-activity demonstrated a positive trend for increased comfort working with anxiety disorders in older adults. Impact included increased confidence in using anxiety scales, use of boxed breathing and implementation in practice of standardized assessment tools.

### **Conclusions**

Blended learning through the pairing of an online module with a live webinar is a feasible and valued means for engaging learners and promoting continuing education in geriatric mental health. Follow-up data is being collected.

## Educating About End-of-Life Issues and Physician-Assisted Death: Using Blended Learning and Technology

Cindy Grief, Lisa Sokoloff, Daphna Grossman, Giulia Perri, David K. Conn

### Background

Legislation for physician-assisted death (PAD) raises questions for psychiatrists. Geriatric psychiatrists may see increased referrals to assess capacity of seniors with cognitive impairment and depression. Guiding policies are being drafted, however, professional roles and responsibilities still require elucidation. Baycrest Health Sciences broadcasts monthly national education sessions in geriatric mental health (GeMH) for healthcare professionals. A talk on PAD attracted a record 96 sites with requests for more dialogue. Subsequently we created a blended learning activity with the goal of increasing knowledge and confidence about depression and PAD.

### Methods

A free 2-part learning opportunity was offered to psychiatrists, family physicians & other healthcare professionals.

- 1) Online module on depression at end-of-life, including PAD. Simulation and interactive techniques engaged learners.
- 2) Live webinar hosted by a geriatric psychiatrist and palliative care physicians.

Pre- and post-knowledge and attitude questionnaires were administered immediately and one month later. Project was REB-approved.

### Results

- Participants=32; Pre- and post- evaluations completed=19 (59%).
- 94% of healthcare professionals indicated the blended learning activity would impact their practice.
- 100% stated blended learning was more effective than either modality alone.
- 88% noted the webinar helped consolidate material from the module.
- Overall improved confidence working with patients at end-of-life.
- One month follow up (n=9) comments:

“Discussed PAD with colleagues.”

“Used some resources...from the module...with patients.”

### Conclusions



Blended learning of online modules and live webinars is a feasible tool for engaging healthcare professionals on PAD. Content can be modified for updates and related topics.

## **The Association Between Depressive and Cognitive Symptoms in Prodromal Alzheimer's Disease Varies Whether Older Adults Present with Mild Cognitive Impairment or Late-Life Depression**

Carol Hudon, Isabelle Tremblay

### **Background**

Alzheimer's disease (AD) is preceded by a prodromal phase that may be identified in older adults with mild cognitive impairment (MCI) or late-life depression (LLD). Both MCI and LLD can present with cognitive and neuropsychiatric symptoms, alone or in combination. The objective of this study was to compare the cognitive profile of MCI patients with (MCI/D+ group) or without (MCI group) subclinical depression to that of patients with LLD.

### **Methods**

A cohort of 124 participants (81 women, 52 men) was recruited: 35 MCI, 31 MCI/D+, 35 DEP, and 23 elderly healthy (CTRL) individuals matched for age and education. The mean age of the sample was 71.1 years (SD = 7.2). Participants were administered comprehensive neuropsychological assessment. Performances on each measure were compared between groups using ANOVAs and post-hoc tests. The alpha level was 5%.

### **Results**

Compared to the CTRL group, verbal episodic memory was impaired in the MCI and MCI/D+ groups using both free and cued recall. On the other hand, the LLD group was impaired in the free recall task only. The MCI/D+ group showed additional deficits in tasks assessing general cognitive functioning, visual episodic memory, verbal fluency, and executive functioning. Besides their verbal episodic memory difficulties, patients of the MCI and DEP groups did not differ from CTRL in any other cognitive test.

### **Conclusions**

Depressive symptoms are associated with more extensive cognitive deficits in the context of MCI/D+ than in LLD. Overall, these findings could help identifying subgroups of patients at high risk for developing AD.

## **Un nouveau service d'hospitalisation à domicile et de résolution de crise (HDRC) en gériontopsychiatrie à l'Institut universitaire en santé mentale de Montréal : quelle est la clientèle cible?**

Claude Bergeron, Angela Geloso, Geneviève Létourneau, Cynthia Bellavance, Isabelle Paquette, Rosita Punti, Maryse Charron, Andrée Legendre

### **Contexte**

En 2015, le programme de gériontopsychiatrie de l'Institut universitaire en santé mentale de Montréal (IUSMM) a inauguré un service innovateur d'hospitalisation à domicile et résolution de crise (HDRC). Ce service vise à traiter rapidement les aînés souffrant de troubles mentaux dans leur milieu de vie, dans une optique de préservation de l'autonomie, et d'optimisation des soins et de la qualité de vie.

### **Méthodes**

Peu d'exemples semblables sont décrits dans la littérature notamment en ce qui concerne la clientèle cible d'un tel service. Les caractéristiques sociodémographiques et cliniques des patients référés à l'HDRC sont analysées.

### **Résultats**

Les données portant sur les six premiers mois d'existence du service sont présentées. Les caractéristiques cliniques et sociodémographiques des patients sont analysées, en tâchant d'identifier les facteurs associés à une meilleure utilisation de ce service. 62 patients dont 64% de femmes ont été suivis par l'HDRC. Plus de la moitié des patients souffraient d'un trouble de l'humeur.

### **Conclusions**

L'HDRC est un service innovateur en gériontopsychiatrie, pour lequel peu de données probantes sont disponibles. L'analyse après 6 mois d'activité permet de mieux connaître la clientèle cible du service et de proposer des ajustements afin d'en optimiser l'impact.

## **Développer un continuum de soins gérontopsychiatriques pour les aînés hébergés en CHSLD dans le CIUSSS de l'Est-de l'île-de-Montréal**

Genevieve Letourneau, Pierre Gélinas, Andréanne Berube-Beaudoin, Catherine Dupre, Laurence Melancon, Angela Geloso, Crystalia Papamarkakis, Rosita Punti

### **Contexte**

Le secteur du CIUSSS de l'Est-de-l'île-de-Montréal compte près de 4000 personnes âgées hébergées en CHSLD/RI. L'organisation de soins gérontopsychiatriques cohérents et efficaces auprès de cette population représente un défi important, dans le contexte de la réforme du réseau de la santé au Québec en 2015.

### **Méthodes**

L'IUSMM offre depuis plus de trente ans des consultations aux patients hébergés dans les ressources de son secteur géographique. Au cours des dernières années, et plus particulièrement depuis 2015, un travail impliquant tous les acteurs du réseau d'hébergement dans le CIUSSS de l'Est-de-l'île-de-Montréal est effectué, afin d'élaborer un continuum de soins pour les personnes hébergées souffrant de troubles mentaux (dont les symptômes neuropsychiatriques liés aux troubles neurocognitifs, ou SCPD). Plusieurs groupes de travail impliqués dans ce domaine ont été consultés pour supporter l'organisation des soins dans le CIUSSS de l'Est-de-l'île-de-Montréal, conformément aux recommandations ministérielles.

### **Résultats**

Nous présentons la cartographie proposée pour ce continuum de soins. La formation de l'ensemble du personnel travaillant en milieu d'hébergement, la disponibilité de personnes ressources et l'existence d'une équipe mobile surspécialisée en gérontopsychiatrie font partie des recommandations afin d'offrir des soins rapides et adaptés aux besoins de la population hébergée.

### **Conclusions**

La collaboration des cliniciens et des gestionnaires des milieux impliqués est nécessaire à l'élaboration d'un continuum de soins cohérent et efficace. La formation et l'intégrité des équipes de soins, la disponibilité de ressources matérielle et le soutien d'une équipe mobile surspécialisée représentent des conditions essentielles pour assurer les soins requis pour ces patients vulnérables.

## **Walking the Line: A Nursing Staff Perspective on Causal Attribution of Neuropsychiatric Symptoms and Their Management in Long-Term Care Residents**

Ovidiu Lungu, Marie-Andrée Bruneau, Philippe Voyer, Philippe Landreville, Matteo Peretti, Mabelle Wilchesky

### **Background**

Caregiver causal attributions of observed symptoms (i.e. the belief that personal traits or external factors are responsible for symptoms) may influence decisions and affect quality of care. We assessed the clinical understanding and beliefs held by clinical staff about agitation/aggression, a neuropsychiatric symptom of dementia. In addition, caregiver preferences for employing non-pharmacological strategies for behaviour management in long-term care (LTC) residents with dementia, as indicated by clinical guidelines as first line of intervention, was evaluated.

### **Methods**

We interviewed 36 nurses and 27 orderlies from 2 large LTC facilities. Social attributions about causes of agitation/aggression (AGIAGG) and staff perceptions (preference, efficacy, use) about four types of interventions (medication, one-on-one interaction, environmental changes and ignoring the symptom) were assessed using a socio-cognitive questionnaire based on Weiner's three dimensional model of social attributions. The Alzheimer's Disease Knowledge Scale (ADKS) was used to evaluate clinical understanding of the disease.

### **Results**

Clinical understanding of dementia was at levels similar to those reported in the literature and was not associated with social attributions of AGIAGG. While participants indicated their use and preference for one-on-one interaction and environmental changes over medication, they reported increased efficacy for medication over all other interventions (all  $p < 0.05$ ). Moreover, participants who made internal or controllable attributions for AGIAGG symptom reported increased use of medication over non-pharmacological approaches.

### **Conclusions**

Our results suggest a discrepancy between caregiver declarative knowledge about the disease and stated preference for non-pharmacological approaches versus the perceived efficacy and reported use of different intervention types, part of which may be mediated by social attributions.

## **Une intervention éducative pour réduire l'utilisation des benzodiazépines en soins de longue durée: une étude prospective interventionnelle**

Nicolas-Simon Tremblay, Andréanne Moreau, Juan Manuel Villalpando, Marie-Andrée Bruneau,

### **Contexte**

En soins de longue durée, 30 à 50% des personnes âgées consomment des benzodiazépines. Dans une étude de la qualité de l'acte réalisée au cours de l'année à l'IUGM, nous avons observé que 44% des résidents avaient au moins une prescription de benzodiazépine active. Plusieurs avaient une indication inappropriée (anxiété, agitation et insomnie). Nous avons décidé d'agir sur ce problème en concevant une intervention éducationnelle visant les préposés, les infirmières, les pharmaciens et les médecins de notre centre.

### **Méthodes**

(Projet en cours) Nous avons révisé la littérature concernant le sevrage des benzodiazépines chez la personne âgée pour créer une intervention éducationnelle multidisciplinaire. En particulier, des outils de décision clinique ont été créés pour aider les médecins à déterminer les traitements plus appropriés et les alternatives aux benzodiazépines pour l'agitation, l'anxiété et l'insomnie. Une formation a été donnée aux médecins, suivie le lendemain par un enseignement sous la forme de courtes capsules pour les préposés et les infirmières. Une collecte de données a été faite plus tôt en 2015 dans notre centre. En mars 2016, les dossiers de ces patients seront analysés à nouveau pour mesurer l'efficacité de notre intervention. Ce processus sera répété deux mois plus tard pour quantifier l'efficacité de notre programme à moyen terme.

### **Résultats**

Des résultats préliminaires seront disponibles au mois de mars (lors du suivi à 1 mois) et les résultats finaux seront collectés en mai 2015. L'ensemble des résultats pourront être discutés lors du congrès.

### **Conclusions**

À venir en juin 2015.

## **Utilisation des benzodiazépines en soins de longue durée : une étude de la qualité de l'acte**

Andréanne Moreau, Nicolas-Simon Tremblay, Juan Manuel Villalpando, Marie-Andrée Bruneau,

### **Contexte**

Les études ont démontré que 30 à 50% des personnes âgées en soins de longue durée consomment des benzodiazépines. Il est reconnu que ce type de médication possède de nombreux effets secondaires. Plusieurs organismes, comme les critères de Beers de 2015, ont d'ailleurs publié des guides pharmacologiques mentionnant ces dangers et encourageant les médecins à en limiter l'utilisation. En 2014, un sondage rapide à l'IUGM montrait que 28% des résidents consommaient ces médicaments, mais une étude plus approfondie est nécessaire pour décrire les caractéristiques de cette utilisation.

### **Méthodes**

Une étude de qualité de l'acte sur ce sujet a été menée en 2015 à l'IUGM. Les dossiers de patients en soins de longue durée ayant au moins une prescription active de benzodiazépine en date du 1er juin 2015 ont été analysés (140 patients inclus). Chaque dossier a été révisé pour documenter les conditions médicales, les informations démographiques, les caractéristiques de l'utilisation de la benzodiazépine ainsi que les effets secondaires associés.

### **Résultats**

Nous avons découvert que 44% des résidents en longue durée consommaient des benzodiazépines. La majorité avait une prescription seulement «au besoin». Les indications principales étaient l'agitation, l'anxiété, l'insomnie et la résistance aux soins. Ces résultats démontrent que plusieurs prescriptions sont potentiellement inappropriées (critères de Beers 2015).

### **Conclusions**

Plusieurs résidents des soins de longue durée de notre centre consomment des benzodiazépines sans avoir une indication reconnue. Une intervention éducative pour les médecins et les membres du personnel doit donc être faite pour les aider à choisir des traitements plus appropriés pour ces conditions.

## **Can Items in Psychiatric Self-Report Questionnaires Predict Future Psychiatric Emergency Visits and Hospitalizations in Older Adults with Mental Illness?**

Ghizlane Moussaoui

### **Background**

Resources available to meet the geriatric mental health service needs of our aging population are limited. This study aims to determine if items on psychiatric self-report questionnaires can predict whether patients are likely to require a psychiatric emergency room visit or hospitalization. We hypothesize that specific symptoms highlighted in self-report questionnaires could predict acute health service utilization outcomes.

### **Methods**

This is a one-year prospective cohort study of 85 geriatric psychiatry patients previously assessed using three self-report questionnaires: the Brief Symptom Inventory (BSI-53), Patient Health Questionnaire (PHQ-9) and Activities of Daily Living (ADL) Questionnaires. Baseline data was collected on iPad and paper questionnaires during summer 2015. Using stepwise logistic regression analyses, we will assess which items from the questionnaires (e.g.: “Feeling blue”) best predict our main outcomes: psychiatric hospitalizations and psychiatric emergency visits at 1-year follow up.

### **Results**

In summer 2016, 1-year follow-up will be completed and analyzed data will be presented at CAGP 2016.

### **Conclusions**

If questionnaire items from commonly used psychiatric scales can predict psychiatric hospitalizations and emergency visits at 1-year follow-up, then self-report psychiatric symptom monitoring systems could be tested in the future. If successful, such systems could allow tailored health service delivery (e.g. phone “check-ups” or home visits) based on future risk of hospitalization/emergency use, which may prevent acute geriatric mental health service utilization. This in turn could help improve patients’ overall quality of life and potentially reduce the cost of geriatric mental health care.



## **Bâtir un continuum de soins complet, intégré et fluide en gériontopsychiatrie : l'exemple du CIUSSS de l'Est-de l'île-de-Montréal**

Isabelle Paquette, Geneviève Létourneau, Angela Geloso, Rosita Punti, Maryse Charron, Andrée Legendre, Carole Murphy, Crystalia Papamarkakis

### **Contexte**

Dans le contexte de la réforme du réseau de la santé au Québec en 2015, les services de santé mentale aux personnes âgées font l'objet d'une réorganisation. Le secteur du CIUSSS de l'Est-de l'île-de-Montréal comprend près de 100000 aînés. Les personnes âgées atteintes de troubles mentaux requièrent un continuum de soins allant de la communauté à l'hospitalisation et l'hébergement, et la réorganisation des services qui leur sont destinés est un défi important.

### **Méthodes**

L'IUSMM offre des services surspécialisés en gériontopsychiatrie depuis près de 40 ans dans le secteur du CIUSSS de l'Est-de l'île-de-Montréal. L'éventail de services fait présentement l'objet d'un travail de réorganisation et d'intégration. Une cartographie de l'ensemble des services requis est effectuée, en cohérence avec les Lignes directrices pour la planification et la prestation de services complets en santé mentale pour les aînés canadiens (MacCourt, Wilson et Tourigny-Rivard, CSMC 2011).

### **Résultats**

Les résultats de ce travail de planification sont présentés en insistant sur les transformations requises pour tendre vers une organisation cohérente et fluide des services aux trois principales clientèles rencontrées en gériontopsychiatrie, soit les aînés qui présentent un troubles mental de novo, les personnes qui vieillissent avec un trouble présent de plus longue date, et les aînés souffrant de symptômes neuropsychiatriques (ou SCPD) associés à un trouble neurocognitif.

### **Conclusions**

Un travail concerté des différents milieux impliqués est essentiel au développement d'une programmation complète, intégrée et fluide en gériontopsychiatrie pour les aînés.

## **Barriers and Facilitators to Appropriate Antipsychotic Prescribing in Long-Term Care: A Review of the Literature**

Matteo Peretti, Jon Salsberg, Deniz Cetin-Sahin, Ovidiu Lungu, Machelles Wilchesky

### **Background**

Antipsychotics are frequently prescribed off-label in long-term care facilities (LTCFs), often as first-line treatment for the behavioral and psychological symptoms of dementia. These medications are only modestly effective, and are associated with serious adverse health events. Despite warnings from Health Canada and clinical guidance, which recommends against their use, LTC antipsychotic prevalence rates remain high, suggesting the presence of barriers to appropriate prescribing. In order to design effective antipsychotic reduction interventions, the factors influencing prescribing practices require elucidation. To address this knowledge gap, we began by conducting a review aimed at evaluating the published literature regarding barriers and facilitators to the appropriate prescribing of antipsychotics in LTCFs.

### **Methods**

Bibliographic databases, including MEDLINE, Google Scholar, and PsychINFO were searched. This search was then expanded to include the reference lists of retrieved publications, in addition to literature reviews. Subsequently, relevant information pertaining to barriers and facilitators of appropriate antipsychotic prescribing was extracted.

### **Results**

Two studies specifically pertaining to barriers and facilitators to appropriate antipsychotic prescribing in LTC were identified. The studies were conducted in the United States: one utilizing mixed methods, the other using qualitative methods. The results of these two studies were heterogeneous, though both reported that the additional time required to monitor residents undergoing antipsychotic deprescribing was a barrier. No studies identifying facilitators for appropriate antipsychotic prescribing in LTCFs were identified.

### **Conclusions**

It is unknown whether these results would apply within the Canadian context. This review will inform a study aimed at identifying barriers and facilitators to appropriate antipsychotic prescribing in Canadian LTCFs.

## **Early Clinical Exposure to Geriatric Psychiatry and Medical Students' Interest in Caring for Older Adults: A Randomized Controlled Trial – Preliminary Findings**

Klara Pokrzywko, Petal Abdool, Susana Gabriela Torres-Platas, Yara Moussa, Chloe Leon, Wayne Baici, Michael Wilkins-Ho, Paul Blackburn, Jess Friedland, NP Vasavan Nair, Karl Looper, Marilyn Segal, Tricia Woo, Tarek K. Rajji, Soham Rej

### **Background**

The population is rapidly aging and there is an increasing need for physicians to serve older adults. Few medical students are interested in caring for older adults, with even less students specializing in geriatric psychiatry or geriatric medicine. We hypothesize that early clinical exposure to elderly patients care could increase students' interest in caring for older adults during their future career.

### **Methods**

We are currently conducting a randomized controlled trial at the Jewish General Hospital and the Douglas Mental Health Institute, McGill University, Montréal, Canada. Medical students undergoing their 16-week half-time third-year clerkship rotation in psychiatry were randomized to the equivalent of 2-4 weeks full-time exposure to clinical geriatric psychiatry. This is an interim analysis of the first 30 students to complete the study.

### **Results**

Being randomized to geriatric psychiatry exposure ( $n=17/30$ ) was not significantly associated with change in "interest in caring for older adults in their future career" at 16-week follow-up (mean change of  $-0.18$  vs.  $+0.85$  points on a 10-point Likert scale where higher scores indicate more interest,  $U=78.0$ ,  $p=0.18$ ). Similarly, geriatric psychiatry exposure was not associated with change in "interest in becoming a geriatric psychiatrist" (mean change  $+0.35$  vs.  $-0.77$  points,  $U=87.0$ ,  $p=0.34$ ).

### **Conclusions**

Our initial results do not seem to suggest an association between geriatric psychiatry clinical exposure during psychiatry clerkship in medical school and interest in caring for older adults. This will be further assessed at the conclusion of the randomized trial ( $n>80-100$ ), as will any differential effects of length of exposure (2 vs. 4 weeks).

## **Mobile Health Technology in Late-Life Mental Illness: A Systematic Review**

Yara Moussa, Artin A. Mahdanian, Ching Yu, Marilyn Segal, Karl J. Looper, Ipsit Vahia, Soham Rej

### **Background**

In an era of rising geriatric mental health care needs worldwide, technological advances can help address care needs in a cost-effective fashion. Studies have been increasingly examining mobile health technologies, such as tablets and smartphones in late-life mental illness.

### **Methods**

We performed a systematic review of MEDLINE, PsychInfo, and Embase databases, including papers that specifically assessed the implementation of mobile health technologies: Electronic tablets (e.g. iPad), smartphones and other mobile computerized equipment in older adults (age $\geq$ 65) diagnosed with or at risk of a mental and/or cognitive disorder.

### **Results**

2079 records were assessed, of which 7 papers were of direct relevance. Studies investigated a broad variety of and almost all examined populations for dementia/cognitive dysfunction, exclusively examined the use of technologies in participant assessment.

### **Conclusions**

Overall, mobile health technologies were well-tolerated by patients and had promising reliability for the assessment of cognitive and mental illness domains in older adults. Studies to-date almost exclusively examined dementia or cognitive dysfunction. Future clinical trials will be necessary to assess whether interventions enabled by portable communication (e.g. symptom tracking) are associated with improved geriatric mental health outcomes.

## **The Clinical Profile of Patients with Dementia and Severe Behavioural and Psychological Symptoms of Dementia (BPSD) on a Specialized Care Unit: A Retrospective Pilot Study**

François Rousseau, Evelyn Keller, Massima Azouaou, Manel Jarboui, Lorraine Telleria, Johanne Duguay, Lucie Morel, Alexandra Simard

### **Background**

Approximately 90% of patients suffering from dementia will present with at least one BPSD during the course of their illness (1). BPSD represent a major challenge for caregivers as these symptoms are often extremely difficult to manage largely due to staff and environmental limitations. Randomized trials in nursing homes and recent systematic reviews suggest that individualized interventions are effective in managing agitation and aggressivity in these patients (2)(3)(4).

**Methods** An 8-bed special care unit for dementia patients with severe BPSD has been in operation since 2010 at the IUSMQ-CIUSS-CN. Our multidisciplinary team evaluates and treats patients using a combination of individually-tailored non-pharmacological and pharmacological interventions. We present preliminary results of a retrospective pilot study chart review describing the socio-demographic, clinical characteristics and treatment outcome of 99 patients admitted from nursing home and general hospital settings between 2010 and 2015.

### **Results**

76% of these patients were suffering from severe Alzheimer disease and mixed dementia. 85% of the group were improved at hospital discharge according to the chart review by a physician. A repeated standardized measure (Neuropsychiatric Inventory : NPI) was available for 25 patients and demonstrated a significant decline in NPI total mean scores between admission (Mean NPI total : 30,24) and discharge (Mean NPI total: 16,36) (paired T-test  $p \leq 0.0001$ ).

### **Conclusions**

This retrospective pilot study is the first phase of a prospective study which will further standardize evaluations of individualized interventions in BPSD in a specialized care unit for dementia. These preliminary results suggest benefits with an adapted multidisciplinary therapeutic intervention in this population of patients.

## **Mindfulness as a Coping Strategy for Caregivers of People with Dementia and Cognitive Impairment: A Literature Review**

Arany Shanmugalingam

### **Background**

The chronic nature of dementia places a heavy burden on caregivers, many of whom are family members. Existing literature documents the effects of caregiver stress including poor physical and psychological health, and increased mortality. Healthy coping strategies are crucial in reducing stress and maintaining caregiver health, which also impacts the experience of the care recipient. One such coping strategy may include mindfulness which has a robust body of evidence in support of positive outcomes in broader areas of healthcare. Purpose: To describe and evaluate peer-reviewed literature on the effect of mindfulness as a coping strategy for caregivers of people with dementia and cognitive impairment.

### **Methods**

Peer-reviewed scholarly articles were obtained from PubMed, PsycINFO, and MEDLINE databases, systematically searched from inception to March 2016.

### **Results**

A total of 9 articles reporting 9 separate studies were reviewed. All caregivers were informal and predominantly family members. In all 9 studies, mindfulness was taught in various formats to caregivers over a variable number of weeks. Results show that mindfulness training may help in several domains including caregiver stress, depression, quality-of-life, burden and overall mental health, while remaining cost-effective and with no known adverse effects.

### **Conclusions**

Mindfulness training for caregivers of people with dementia and cognitive impairment is a promising and feasible strategy to provide them with additional tools to preserve and maintain their health and wellbeing, while having no known adverse effects. However, additional support to maintain regular practice after initial training may be needed in order to ensure continued benefit.

## **Self-Reported Psychiatric Symptoms Associated with Anticipated Close Psychiatry Follow-Up and/or Hospitalization Status in Geriatric Psychiatry Patients: A Cross-Sectional Study**

Salam El-Majzoub, Behzadi A., Lis E., Yu C., Moussaoui G., Segal M., Looper K., Chachamovich E., Rej S.

### **Background**

Psychiatric hospitalizations and frequent outpatient visits are expensive and time-consuming. We wished to examine whether certain psychiatric symptoms were associated with increased need for health services.

### **Methods**

In this cross-sectional study, geriatric psychiatry outpatients (n=72) and inpatients (n=13) were recruited from the Jewish General Hospital, Montreal, Canada from May-August 2015. They filled three self-report instruments: the Brief Symptom Inventory, Patient Health Questionnaire, and Activities of Daily Living questionnaire. Univariate and Multivariate Stepwise logistic regression assessed whether individual psychiatric symptoms were associated with our main outcome: currently being hospitalized or needing a follow-up appointment within 1 month (as assessed by their clinician).

### **Results**

Several symptoms were associated with currently being hospitalized or needing follow-up in <1 month: “faintness or dizziness”, “nausea or upset stomach”, “numbness or tingling parts of your body”, “feeling weak in parts of your body”, “feelings of guilt” and “moving or speaking so slowly that other people could have noticed” (ORs>2.6, p-values<0.05). In multivariate analyses, the six items together explained 24.8% of the variance in our main outcome, however only “faintness or dizziness” survived Stepwise logistic regression and significantly correlated with hospitalization and follow-up <1 month (OR= 3.63, p=0.02) even after adjusting for clinical covariates such as age.

### **Conclusions**

Symptoms of depression (e.g. guilt feelings and psychomotor retardation), as well as non-specific physical symptoms of distress e.g. (faintness, dizziness, numbness and weakness) are associated with shorter time to psychiatric follow-up and hospitalization, as assessed by clinicians. Future longitudinal studies are needed to validate these findings.

## **OptimaMed: An Intervention to Reduce Medications of Questionable Benefits Among Long-Term Care Residents with Advanced Dementia**

Edeltraut Kröger, Machelles Wilchesky, Philippe Voyer, Nathalie Champoux, Johanne Monette, Anik Giguère, Michèle Aubin, Marcel Arcand

### **Background**

Long-term care (LTC) residents with severe dementia receive multiple medications. With disease progression care goals shift to palliative care and medications may need to be discontinued because of changes in their harm-benefit ratio. This study evaluated the feasibility and effects of an inter-professional knowledge exchange (KE) intervention to reduce use of medication of questionable benefit in these residents.

### **Methods**

A multidisciplinary Delphi panel agreed on lists of "mostly", "sometimes" or "exceptionally" appropriate medications. The lists were tailored for LTC facilities. A 4-month intervention was implemented in 3 LTC facilities. 1) families of participating residents received an information leaflet on optimal medication use in severe dementia; 2) the facilities' nurses, pharmacists and physicians participated in 2 KE sessions. The pharmacists performed 1 medication review for each participant using the tailored lists and discussed recommendations with nurses and physicians. Agitation and pain levels of participants were monitored using the CMAI and PACSLAC scales.

### **Results**

45 of 93 eligible residents were followed-up. 34/23 health professionals participated in the 1st/2nd second KE session. Medication lists were well accepted. The overall number of medications used by the participants and those classified as "sometimes appropriate" decreased significantly (from 422 to 389;  $p=0.02$ , and from 210 to 182;  $p<0.05$  respectively). Levels of agitation and comfort did not change noticeably.

### **Conclusions**

This interdisciplinary intervention among LTC residents with severe dementia was feasible and reduced overall medication use. Results need to be replicated in a cluster randomized trial; a stronger focus on psychotropic medications, improved KE with families and shared decision making will be integrated.



## **Harnessing the Potential of Smartphone Innovations for Caregivers of Persons Living with Dementia**

Melvyn Zhang

### **Background**

Recent statistics released by Alzheimer's disease International has highlighted how prevalent dementia will become in the next couple of years. Along with the increased incidence of individuals being diagnosed with dementia, there has also been an increment in the number of informal carers for people living with dementia. A recent report highlighted that in Australia, there are an estimated of 200,000 informal carers as of 2011. Caring for people who are living with dementia is not an easy task. Previous studies have highlighted that as much as 65% of caregivers do experience symptoms suggestive of depressive symptoms in the process of care. With the rapid advances in technology, it is of no surprise that information technology and its related innovations have been used in dementia care. A review of the existing literature shows that much of these innovations are focused on the care of patients affiliated with dementia. However, clearly interventions focusing on the needs of the dementia cohort of patient are limited. There are currently more emerging studies demonstrating the efficacy of web-based interventional toolkits for carers who are caring for individuals with dementia. Whilst there are previous studies demonstrating the effectiveness of smartphone interventions for dementia patients, there remains a paucity of smartphone based interventions for caregivers who are living with people with dementia.

### **Methods**

The authors made use of the latest advances in smartphone technologies to program both an IOS (Apple) application and an Android application within a short duration of time.

### **Results**

The Dementia Care-giver application has been developed and will be further evaluated in an Australia Cohort of patients.

### **Conclusions**

Whilst the potential of smartphone innovations has been previously utilized for dementia patients, the potential of smartphone based innovations has yet to be applied for caregivers of dementia patients. There has been recent literature supporting the clinical efficacy of online and personalized care interventions for caregivers. However, smartphone innovations are currently not looked into. Clinicians, researchers and developers need to recognize and be cognizant of the fact that smartphone interventions might be more appropriate and more feasible as an intervention, given that these devices are so much more portable. In addition, it is also pertinent to recognize that it is key to provide personalized intervention in such smartphone innovations, given the level of caregiver burden and stress that caregivers need to face with.

## **A Proposed Classification of a Newly Appointed Terminology (SCRB) for Behaviours in PwD**

Atul Sunny Luthra

### **Background**

Even the basic constructs of classification are yet to be applied to behaviors in PwD. Consequently, there is paucity of a classification system. This absence represents a huge gap and is the reason of our inability to understand the 'meaning' of behaviors in PwD.

### **Methods**

Criteria put forth by Davies et al (1997) were identified as the most acceptable way forward to classify behaviors in PwD.

These criteria included:

- 1) Identify target population (moderate to advanced dementia).
- 2) Collection of 'alike' or 'similar' symptoms into specific behavioral categories.
- 3) Defining the 'purpose' or 'meaning' of each new category.
- 4) Identification of 'Specification of Theoretical Constructs' (STC) to justify the existence of each behavioral category.

### **Results**

Twelve (12) new behavioral categories have been identified on the basis of following STC; Theories on Information Processing, Motivational and Need-Based Theories, Theories on Regulation of Emotions and Theories on Compliance and Aggression.

### **Conclusions**

Each of these behavioral categories is able to assist health care professions and family members to understand the 'meaning' of behaviors from PwD point of view. What is the PwD trying to express through expression of their behaviors.

## **Stage Congruent Responsive Behaviours (SCRB); Not BPSD. New Terminology to Label Behaviours in PwD**

Atul Sunny Luthra

### **Background**

There is a vast heterogeneity in use of terminology to label behaviors in PwD. Some of these terms are supported by constructs; while most are mere definitions. There is a conspicuous paucity of a 'comprehensive model' to support the presence of any terminology in clinical use. All existing models are dichotomized along 'Biological' and 'Psycho-social' paradigms.

### **Methods**

Review of existing literature has identified several variables being contributory to the generation of behaviors in PwD. These variables can be grouped into; Biological (stage of the disease, co-morbid mental illness, Circadian Rhythms, Intrinsic physiological needs), Personal or Psychological (intrinsic personality structure, use of congruent ego-defense mechanisms and acquired coping strategies) and Environmental or Social (Milieu structure-static and dynamic and Interpersonal Interactions - random and structured).

### **Results**

A complex, dynamic interplay amongst all of these variables exists in PwD. This dynamic interplay amongst these variables is explored. A new comprehensive BPS model is posited which ties all these variables into the generation of behaviors in PwD.

### **Conclusions**

Stage Congruent Responsive Behaviors (SCRB) is the first comprehensive model which will assist in development of a new classification system to help understand the 'meaning' of behaviors in PwD.

## Neural Mechanisms of Hypnosis, Yoga, Tai Chi, and Meditation in the Treatment of Mental Illness in Older Adults

Susana G. Torres-Platas, Soham Rej, Anthony Gifuni, Joseph Therriault

### Background

Our results will help us understand the biological differences and similarities between different forms of mind-body interventions (hypnosis, yoga, Tai Chi, and meditation). We will also provide an overview of the current data supporting the use of these interventions for the treatment and/or prevention of mental/cognitive disorders in older adults. The neuroscience of hypnosis and meditation can inform the application of these potential interventions and improve our understanding of the neurobiology of late-life mental illness.

### Methods

We will perform a systematic review of MEDLINE, PsychInfo, and Embase databases, including papers that specifically examine the neuroscience of hypnosis, yoga, Tai Chi, and meditation in older adults (aged  $\geq 65$ ). Additionally, we will include papers where the clinical effectiveness of mind-body interventions are investigated in older adults (age  $\geq 65$ ) diagnosed with or at risk for a mental and/or cognitive disorder.

### Results

We will present the results of our systematic review at CAGP 2016.

### Conclusions

Our results will help us understand the biological differences and similarities between different forms of mind-body interventions (hypnosis, yoga, Tai Chi, and meditation). We will also provide an overview of the current data supporting the use of these interventions for the treatment and/or prevention of mental/cognitive disorders in older adults. The neuroscience of hypnosis and meditation can inform the application of these potential interventions and improve our understanding of the neurobiology of late-life mental illness.

## **The Association of Leukoaraiosis and Neuropsychiatric Symptoms of Dementia.**

M. Gosk, CE Fischer, J Barfett, TA Schweizer, DG Munoz, W Qian

### **Background**

To study the association between volumetric measures of cerebral white matter hyperintensities (WMH) and burden of behavioural and psychological symptoms of dementia (BPSD) among patients with MCI and mild AD.

### **Methods**

Patients with MCI and mild AD underwent MRI brain imaging, cognitive testing and behavioral evaluations using the Neuropsychiatric Inventory Questionnaire (NPI-Q). BPSD was diagnosed based scores on the NPI-Q. WMH was quantified using ITK Snap software.

### **Results**

29 MCI/mild AD participants were studied. Nighttime behaviours, motor disturbances and anxiety were shown to be the most common symptoms in the sample population. WMH volumes were significantly correlated with increasing age. The severity of the NPI-Q score was not found to be associated with WMH lesion volumes even when controlled for age and MMSE.

### **Conclusions**

WMH does not appear to be associated with global severity of BPSD in MCI and mild AD. Further studies are needed to see whether there is an association between individual symptoms of BPSD and the severity of WHM.